UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

☒ QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

FOR THE QUARTERLY PERIOD ENDED MARCH 31, 2024

— OR —

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from __ to __

Commission File Number 001-38086

Vistra Corp.

(Exact name of registrant as specified in its charter)

Delaware	36-4833255
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
6555 Sierra Drive, Irving, Texas 75039	(214) 812-4600
(Address of principal executive offices) (Zip Code)	(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Trading Symbol(s)	Name of Each Exchange on Which Registered
Common stock, par value $0.01 per share	VST	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Indicate the number of shares outstanding of each of the registrant's classes of common stock, as of the latest practicable date.

Class	Outstanding as of May 3, 2024
Common stock, par value $0.01 per share	347,460,001

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GLOSSARY OF TERMS AND ABBREVIATIONS

When the following terms and abbreviations appear in the text of this report, they have the meanings indicated below.

Current and Former Related Entities:	
Ambit	Ambit Holdings, LLC, and/or its subsidiaries (d/b/a Ambit), depending on context
Dynegy	Dynegy Inc., and/or its subsidiaries, depending on context
Dynegy Energy Services	Dynegy Energy Services, LLC and Dynegy Energy Services (East), LLC (each d/b/a Dynegy, Better Buy Energy, Brighten Energy, Honor Energy and True Fit Energy), indirect subsidiaries of Vistra, that are REPs in certain areas of MISO and PJM, respectively, and are engaged in the retail sale of electricity to residential and business customers.
Energy Harbor	Energy Harbor Holdings LLC (formerly known as Energy Harbor Corp.), and/or its subsidiaries, depending on context
Homefield Energy	Illinois Power Marketing Company (d/b/a Homefield Energy), an indirect subsidiary of Vistra, a REP in certain areas of MISO that is engaged in the retail sale of electricity to municipal customers
Luminant	subsidiaries of Vistra engaged in competitive market activities consisting of electricity generation and wholesale energy sales and purchases as well as commodity risk management
Parent	Vistra Corp.
Public Power	Public Power, LLC (d/b/a Public Power), an indirect subsidiary of Vistra, a REP in certain areas of PJM, ISO-NE, NYISO and MISO that is engaged in the retail sale of electricity to residential and business customers
TCEH	Texas Competitive Electric Holdings Company LLC, a direct, wholly owned subsidiary of Energy Future Competitive Holdings Company LLC, and, prior to the Effective Date, the parent company of our predecessor, depending on context, that were engaged in electricity generation and wholesale and retail energy market activities, and whose major subsidiaries included Luminant and TXU Energy
TriEagle Energy	TriEagle Energy, LP (d/b/a TriEagle Energy, TriEagle Energy Services, Eagle Energy, Energy Rewards, Power House Energy and Viridian Energy), an indirect subsidiary of Vistra, a REP in certain areas of ERCOT and PJM that is engaged in the retail sale of electricity to residential and business customers
TXU Energy	TXU Energy Retail Company LLC (d/b/a TXU), an indirect subsidiary of Vistra that is a REP in competitive areas of ERCOT and is engaged in the retail sale of electricity to residential and business customers
U.S. Gas & Electric	U.S. Gas and Electric, LLC (d/b/a USG&E, Illinois Gas & Electric and ILG&E), an indirect subsidiary of Vistra, a REP in certain areas of PJM, ISO-NE, NYISO and MISO that is engaged in the retail sale of electricity to residential and business customers
Value Based Brands	Value Based Brands LLC (d/b/a 4Change Energy, Express Energy and Veteran Energy), an indirect subsidiary of Vistra that is a REP in competitive areas of ERCOT and is engaged in the retail sale of electricity to residential and business customers
Vistra	Vistra Corp., and/or its subsidiaries, depending on context
Vistra Intermediate	Vistra Intermediate Company LLC, a direct, wholly owned subsidiary of Vistra
Vistra Operations	Vistra Operations Company LLC, an indirect, wholly owned subsidiary of Vistra that is the issuer of certain series of notes (see Note 10 to the Financial Statements) and borrower under the Vistra Operations Credit Facilities
Vistra Vision	Vistra Vision LLC, an indirect subsidiary of Vistra
Vistra Zero	Vistra Zero Operating Company, LLC, an indirect subsidiary of Vistra Vision LLC
Transmission System Operators:	
CAISO	The California Independent System Operator
ERCOT	Electric Reliability Council of Texas, Inc.
ISO-NE	ISO New England Inc.
MISO	Midcontinent Independent System Operator, Inc.
NYISO	New York Independent System Operator, Inc.
PJM	PJM Interconnection, LLC
Authoritative Organizations:	
EPA	U.S. Environmental Protection Agency

FERC	U.S. Federal Energy Regulatory Commission
IEPA	Illinois Environmental Protection Agency
IPCB	Illinois Pollution Control Board
IRS	U.S. Internal Revenue Service
MSHA	U.S. Mine Safety and Health Administration
NRC	U.S. Nuclear Regulatory Commission
PUCT	Public Utility Commission of Texas
RCT	Railroad Commission of Texas, which among other things, has oversight of lignite mining activity in Texas, and has jurisdiction over oil and natural gas exploration and production, permitting and inspecting intrastate pipelines, and overseeing natural gas utility rates and compliance
SEC	U.S. Securities and Exchange Commission
TCEQ	Texas Commission on Environmental Quality
Rules and Regulations:	
Exchange Act	Securities Exchange Act of 1934, as amended
IRA	Inflation Reduction Act of 2022
Securities Act	Securities Act of 1933, as amended
General Terms:	
2023 Form 10-K	Vistra's annual report on Form 10-K for the year ended December 31, 2023, filed with the SEC on February 29, 2024
ARO	asset retirement and mining reclamation obligation
CCGT	combined cycle natural gas turbine
CCR	coal combustion residuals
CME	Chicago Mercantile Exchange
CO_2	carbon dioxide
EBITDA	earnings (net income) before interest expense, income taxes, depreciation and amortization
Effective Date	October 3, 2016, the date our predecessor completed its reorganization under Chapter 11 of the U.S. Bankruptcy Code
Emergence	emergence of our predecessor from reorganization under Chapter 11 of the U.S. Bankruptcy Code as subsidiaries of a newly formed company, Vistra, on the Effective Date
ERP	enterprise resource program
ESS	energy storage system
GAAP	generally accepted accounting principles
GHG	greenhouse gas
GWh	gigawatt-hours
Heat Rate	Heat Rate is a measure of the efficiency of converting a fuel source to electricity
ISO	independent system operator
ITC	investment tax credit
load	demand for electricity
LTSA	long-term service agreements for plant maintenance
MMBtu	million British thermal units
MW	megawatts
MWh	megawatt-hours
NO_X	nitrogen oxide
NYMEX	the New York Mercantile Exchange, a commodity derivatives exchange
Plan of Reorganization	Third Amended Joint Plan of Reorganization filed by the parent company of our predecessor in August 2016 and confirmed by the U.S. Bankruptcy Court for the District of Delaware in August 2016 solely with respect to our predecessor

PrefCo Preferred Stock Sale	as part of the tax-free spin-off from Energy Future Holdings Corp. (EFH Corp.), executed pursuant to the Plan of Reorganization on the Effective Date by our predecessor, the contribution of certain of the assets of our predecessor and its subsidiaries by a subsidiary of TEX Energy LLC to Vistra Preferred, LLC (PrefCo) in exchange for all of PrefCo's authorized preferred stock, consisting of 70,000 shares, par value $0.01 per share
PTC	production tax credit
REP	retail electric provider
RTO	regional transmission organization
S&P	Standard & Poor's Ratings (a credit rating agency)
Series A Preferred Stock	Vistra's 8.0% Series A Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock, $0.01 par value, with a liquidation preference of $1,000 per share
Series B Preferred Stock	Vistra's 7.0% Series B Fixed-Rate Reset Cumulative Green Redeemable Perpetual Preferred Stock, $0.01 par value, with a liquidation preference of $1,000 per share
Series C Preferred Stock	Vistra's 8.875% Series C Fixed-Rate Reset Cumulative Redeemable Perpetual Preferred Stock, $0.01 par value, with a liquidation preference of $1,000 per share
SO_2	sulfur dioxide
SOFR	Secured Overnight Financing Rate, the average rate at which institutions can borrow U.S. dollars overnight while posting U.S. Treasury Bonds as collateral
Tax Matters Agreement	Tax Matters Agreement, dated as of the Effective Date, by and among EFH Corp., Energy Future Intermediate Holding Company LLC, EFIH Finance Inc. and EFH Merger Co. LLC
TRA	Tax Receivable Agreement, containing certain rights (TRA Rights) to receive payments from Vistra related to certain tax benefits, including benefits realized as a result of certain transactions entered into at Emergence (see Note 13 to the Financial Statements)
U.S.	United States of America
Vistra Operations Commodity-Linked Credit Agreement	Credit agreement, dated as of February 4, 2022 (as amended, restated, amended and restated, supplemented, and/or otherwise modified from time to time) by and among Vistra Operations, Vistra Intermediate, the lenders party thereto, the other credit parties thereto, the administrative agent, the collateral agent, and the other parties named therein
Vistra Operations Credit Agreement	Credit agreement, dated as of October 3, 2016 (as amended, restated, amended and restated, supplemented and/or otherwise modified from time to time), by and among Vistra Operations, Vistra Intermediate, the lenders party thereto, the letter of credit issuers party thereto, the administrative agent, the collateral agent, and the other parties named therein
Vistra Operations Credit Facilities	Vistra Operations senior secured financing facilities (see Note 10 to the Financial Statements)
Vistra Zero Credit Agreement	Credit agreement, dated as of March 26, 2024 (as amended, restated, amended and restated, supplemented and/or otherwise modified from time to time), by and among Vistra Zero, the lenders party thereto, the administrative agent, and collateral agent, and the other parties named therein

FORWARD-LOOKING STATEMENTS

This quarterly report on Form 10-Q contains "forward-looking statements" that involve risk and uncertainties. All statements, other than statements of historical facts, that are included in this report, or made in presentations, in response to questions or otherwise, that address activities, events or developments that may occur in the future, including (without limitation) such matters as activities related to our financial or operational projections, capital allocation, capital expenditures, liquidity, dividend policy, business strategy, competitive strengths, goals, future acquisitions or dispositions, development or operation of power generation assets, market and industry developments and the growth of our businesses and operations (often, but not always, through the use of words or phrases such as "intends," "plans," "potential," "will likely," "unlikely," "believe," "expect," "anticipated," "estimate," "should," "could," "may," "projection," "forecast," "target," "goal," "objective" and "outlook"), are forward-looking statements. Although we believe that in making any such forward-looking statement our expectations are based on reasonable assumptions, any such forward-looking statement involves uncertainties and risks and is qualified in its entirety by reference to the discussion in (i) Item 1A. *Risk Factors* and Item 7. *Management's Discussion and Analysis of Financial Condition, and Results of Operations* in our 2023 Form 10-K and (ii) in Part I, Item 2 *Management's Discussion and Analysis of Financial Condition, and Results of Operations* in this quarterly report on Form 10-Q, that could cause our actual results to differ materially from those projected in or implied by such forward-looking statements:

Any forward-looking statement speaks only at the date on which it is made, and except as may be required by law, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date on which it is made or to reflect the occurrence of unanticipated events or circumstances. New factors emerge from time to time, and it is not possible for us to predict them. In addition, we may be unable to assess the impact of any such event or condition or the extent to which any such event or condition, or combination of events or conditions, may cause results to differ materially from those contained in or implied by any forward-looking statement. As such, you should not unduly rely on such forward-looking statements.

PART I. FINANCIAL INFORMATION

Item 1. FINANCIAL STATEMENTS

VISTRA CORP.
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(Unaudited) (Millions of Dollars, Except Share Data)

	Three Months Ended March 31,	
	2024	2023
Operating revenues (Note 4)	$ 3,054	$ 4,425
Fuel, purchased power costs and delivery fees	(1,716)	(2,170)
Operating costs	(498)	(421)
Depreciation and amortization	(403)	(366)
Selling, general and administrative expenses	(351)	(288)
Impairment of long-lived assets (Note 18)	—	(49)
Operating income	86	1,131
Other income (Note 18)	91	20
Other deductions (Note 18)	(4)	(3)
Interest expense and related charges (Note 18)	(170)	(207)
Impacts of Tax Receivable Agreement (Note 13)	(5)	(65)
Net income (loss) before income taxes	(2)	876
Income tax (expense) benefit (Note 5)	20	(178)
Net income	$ 18	$ 698
Net (income) loss attributable to noncontrolling interest	(53)	1
Net income (loss) attributable to Vistra	$ (35)	$ 699
Cumulative dividends attributable to preferred stock	(49)	(38)
Net income (loss) attributable to Vistra common stock	$ (84)	$ 661
Weighted average shares of common stock outstanding:		
Basic	348,966,197	383,631,369
Diluted	348,966,197	387,553,379
Net income (loss) per weighted average share of common stock outstanding:		
Basic	$ (0.24)	$ 1.72
Diluted	$ (0.24)	$ 1.71

See Notes to the Condensed Consolidated Financial Statements.

CONDENSED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(Unaudited) (Millions of Dollars)

	Three Months Ended March 31,	
	2024	2023
Net income	$ 18	$ 698
Other comprehensive income, net of tax effects:		
Effects related to pension and other retirement benefit obligations (net of tax expense (benefit) of $ — and $—)	—	1
Total other comprehensive income	—	1
Comprehensive income	$ 18	$ 699
Comprehensive (income) loss attributable to noncontrolling interest	(53)	1
Comprehensive income (loss) attributable to Vistra	$ (35)	$ 700

See Notes to the Condensed Consolidated Financial Statements.

VISTRA CORP.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited) (Millions of Dollars)

	Three Months Ended March 31,	
	2024	2023
Cash flows — operating activities:		
Net income	$ 18	$ 698
Adjustments to reconcile net income to cash provided by operating activities:		
Depreciation and amortization	555	477
Deferred income tax expense (benefit), net	(23)	181
Impairment of long-lived assets	—	49
Unrealized net (gain) loss from mark-to-market valuations of commodities	176	(1,085)
Unrealized net (gain) loss from mark-to-market valuations of interest rate swaps	(47)	41
Unrealized net gain from nuclear decommissioning trusts	(28)	—
Asset retirement obligation accretion expense	19	9
Impacts of Tax Receivable Agreement	5	65
Gain on TRA repurchase and tender offers	(10)	—
Bad debt expense	36	35
Stock-based compensation	21	22
Other, net	(23)	8
Changes in operating assets and liabilities:		
Margin deposits, net	128	1,227
Accrued interest	(3)	(47)
Accrued taxes	(111)	(91)
Accrued employee incentive	(169)	(79)
Other operating assets and liabilities	(232)	(75)
Cash provided by operating activities	312	1,435
Cash flows — investing activities:		
Capital expenditures, including nuclear fuel purchases and LTSA prepayments	(465)	(484)
Energy Harbor acquisition (net of cash acquired)	(3,070)	—
Proceeds from sales of nuclear decommissioning trust fund securities	214	119
Investments in nuclear decommissioning trust fund securities	(220)	(125)
Proceeds from sales of environmental allowances	17	35
Purchases of environmental allowances	(131)	(61)
Proceeds from sale of property, plant and equipment, including nuclear fuel	127	2
Other, net	—	1
Cash used in investing activities	(3,528)	(513)
Cash flows — financing activities:		
Issuances of long-term debt	700	—
Repayments/repurchases of debt	(756)	(7)
Net borrowings under accounts receivable financing	875	175
Borrowings under Revolving Credit Facility	—	100
Repayments under Revolving Credit Facility	—	(350)
Borrowings under Commodity-Linked Facility	500	—
Repayments under Commodity-Linked Facility	—	(400)
Stock repurchases	(291)	(301)
Dividends paid to common stockholders	(77)	(77)
TRA Repurchase and tender offer — return of capital	(122)	—
Other, net	(36)	(14)
Cash provided by (used in) financing activities	793	(874)

VISTRA CORP.
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(Unaudited) (Millions of Dollars)

	Three Months Ended March 31,	
	2024	2023
Net change in cash, cash equivalents and restricted cash	(2,423)	48
Cash, cash equivalents and restricted cash — beginning balance	3,539	525
Cash, cash equivalents and restricted cash — ending balance	$ 1,116	$ 573

See Notes to the Condensed Consolidated Financial Statements.

VISTRA CORP.
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited) (Millions of Dollars, Except Share Data)

	March 31, 2024	December 31, 2023
ASSETS		
Current assets:		
Cash and cash equivalents	$ 1,070	$ 3,485
Restricted cash (Note 18)	32	40
Trade accounts receivable — net (Note 18)	1,729	1,674
Income taxes receivable	1	6
Inventories (Note 18)	976	740
Commodity and other derivative contractual assets (Note 11)	3,557	3,645
Margin deposits related to commodity contracts	1,186	1,244
Margin deposits posted under affiliate financing agreement (Note 9)	443	439
Prepaid expense and other current assets	439	364
Total current assets	9,433	11,637
Restricted cash (Note 18)	14	14
Investments (Note 18)	4,219	2,035
Property, plant and equipment — net (Note 18)	18,014	12,432
Operating lease right-of-use assets	62	50
Goodwill (Note 7)	2,877	2,583
Identifiable intangible assets — net (Note 7)	2,278	1,864
Commodity and other derivative contractual assets (Note 11)	703	577
Accumulated deferred income taxes	—	1,223
Other noncurrent assets	578	551
Total assets	$ 38,178	$ 32,966
LIABILITIES AND EQUITY		
Current liabilities:		
Short-term borrowings (Note 10)	$ 500	$ —
Accounts receivable financing (Note 8)	875	—
Long-term debt due currently (Note 10)	54	2,286
Trade accounts payable	1,100	1,147
Commodity and other derivative contractual liabilities (Note 11)	5,214	5,258
Margin deposits related to commodity contracts	115	45
Accrued taxes other than income	118	203
Accrued interest	208	206
Asset retirement obligations (Note 14)	119	124
Operating lease liabilities	11	7
Other current liabilities	461	547
Total current liabilities	8,775	9,823
Margin deposits financing with affiliate (Note 9)	443	439
Long-term debt, less amounts due currently (Note 10)	14,693	12,116
Operating lease liabilities	56	48
Commodity and other derivative contractual liabilities (Note 11)	1,892	1,688
Accumulated deferred income taxes	118	1
Tax Receivable Agreement obligation (Note 13)	15	164
Asset retirement obligations (Note 14)	3,806	2,414

VISTRA CORP.
CONDENSED CONSOLIDATED BALANCE SHEETS
(Unaudited) (Millions of Dollars, Except Share Data)

	March 31, 2024	December 31, 2023
Other noncurrent liabilities and deferred credits (Note 18)	1,096	951
Total liabilities	30,894	27,644
Commitments and Contingencies (Note 15)		
Total equity (Note 16):		
Preferred stock, number of shares authorized — 100,000,000; Series A (liquidation preference — $1,000; shares outstanding: March 31, 2024 and December 31, 2023— 1,000,000); Series B (liquidation preference — $1,000; shares outstanding: March 31, 2024 and December 31, 2023 — 1,000,000); Series C (liquidation preference — $1,000; shares outstanding: March 31, 2024 and December 31, 2023 — 476,081)	2,476	2,476
Common stock (par value — $0.01; number of shares authorized — 1,800,000,000) (shares outstanding: March 31, 2024 — 348,733,986; December 31, 2023 — 351,457,016)	5	5
Treasury stock, at cost (shares: March 31, 2024 — 198,562,722; December 31, 2023 — 192,178,156)	(4,947)	(4,662)
Additional paid-in-capital	10,878	10,095
Retained deficit	(2,762)	(2,613)
Accumulated other comprehensive income	6	6
Stockholders' equity	5,656	5,307
Noncontrolling interest in subsidiary	1,628	15
Total equity	7,284	5,322
Total liabilities and equity	$ 38,178	$ 32,966

See Notes to the Condensed Consolidated Financial Statements.

VISTRA CORP.
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
(Millions of Dollars)

	Preferred Stock	Common Stock	Treasury Stock	Additional Paid-In Capital	Retained Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity	Noncontrolling Interest in Subsidiary	Total Equity
Balances at December 31, 2023	$ 2,476	$ 5	$ (4,662)	$ 10,095	$ (2,613)	$ 6	$ 5,307	$ 15	$ 5,322
Stock repurchases	—	—	(285)	—	—	—	(285)	—	(285)
Effects of stock-based incentive compensation plans	—	—	—	35	—	—	35	—	35
Equity issued in subsidiary to acquire Energy Harbor (a)	—	—	—	747	—	—	747	1,560	2,307
Net income (loss)	—	—	—	—	(35)	—	(35)	53	18
Dividends declared on common stock	—	—	—	—	(77)	—	(77)	—	(77)
Dividends declared on preferred stock	—	—	—	—	(37)	—	(37)	—	(37)
Other	—	—	—	1	—	—	1	—	1
Balances at March 31, 2024	$ 2,476	$ 5	$ (4,947)	$ 10,878	$ (2,762)	$ 6	$ 5,656	$ 1,628	$ 7,284

(a) Noncontrolling interest in subsidiary includes $811 million representing the fair value of the 15% noncontrolling interest in Energy Harbor and $ 749 million representing 15% of the carrying value of net assets of certain subsidiaries contributed to Vistra Vision. See Note 2.

See Notes to the Condensed Consolidated Financial Statements.

VISTRA CORP.
CONDENSED CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (CONTINUED)
(Millions of Dollars)

	Preferred Stock	Common Stock	Treasury Stock	Additional Paid-In Capital	Retained Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity	Noncontrolling Interest in Subsidiary	Total Equity
Balances at December 31, 2022	$ 2,000	$ 5	$ (3,395)	$ 9,928	$ (3,643)	$ 7	$ 4,902	$ 16	$ 4,918
Stock repurchases	—	—	(311)	—	—	—	(311)	—	(311)
Effects of stock-based incentive compensation plans	—	—	—	24	—	—	24	—	24
Net income (loss)	—	—	—	—	699	—	699	(1)	698
Dividends declared on common stock	—	—	—	—	(77)	—	(77)	—	(77)
Dividends declared on preferred stock	—	—	—	—	(37)	—	(37)	—	(37)
Change in accumulated other comprehensive income (loss)	—	—	—	—	—	1	1	—	1
Balances at March 31, 2023	$ 2,000	$ 5	$ (3,706)	$ 9,952	$ (3,058)	$ 8	$ 5,201	$ 15	$ 5,216

See Notes to the Condensed Consolidated Financial Statements.

VISTRA CORP.
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS
(Unaudited)

1. BUSINESS, BASIS OF PRESENTATION AND SIGNIFICANT ACCOUNTING POLICIES

Description of Business

References in this report to "we," "our," "us" and "the Company" are to Vistra and/or its subsidiaries, as apparent in the context. See *Glossary of Terms and Abbreviations* for defined terms.

Vistra is a holding company operating an integrated retail and electric power generation business primarily in markets throughout the U.S. Through our subsidiaries, we are engaged in competitive energy market activities including electricity generation, wholesale energy sales and purchases, commodity risk management and retail sales of electricity and natural gas to end users.

Vistra has six reportable segments: (i) Retail, (ii) Texas, (iii) East, (iv) West, (v) Sunset and (vi) Asset Closure. See Note 17 for further information concerning our reportable business segments.

Basis of Presentation

The condensed consolidated financial statements have been prepared in accordance with U.S. GAAP and on the same basis as the audited financial statements included in our 2023 Form 10-K. The condensed consolidated financial information herein reflects all adjustments which are, in the opinion of management, necessary to fairly state the results for the interim periods presented. All such adjustments are of a normal nature. All intercompany items and transactions have been eliminated in consolidation.

A noncontrolling interest in a consolidated subsidiary represents the portion of the equity in a subsidiary not attributable, directly or indirectly, to the Company. Noncontrolling interests are presented as a separate component of equity in the condensed consolidated balance sheets and the presentation of net income is modified to present earnings attributed to controlling and noncontrolling interests. Any change in ownership of a subsidiary while the controlling financial interest is retained is accounted for as an equity transaction between the controlling and noncontrolling interests.

Certain information and footnote disclosures normally included in annual consolidated financial statements prepared in accordance with U.S. GAAP have been omitted pursuant to the rules and regulations of the SEC. Because the condensed consolidated interim financial statements do not include all of the information and footnotes required by U.S. GAAP, they should be read in conjunction with the audited financial statements and related notes contained in our 2023 Form 10-K. The results of operations for an interim period may not give a true indication of results for a full year. All dollar amounts in the financial statements and tables in the notes are stated in millions of U.S. dollars unless otherwise indicated.

Significant Accounting Policies

Business Combinations

The Company accounts for its business combinations in accordance with ASC 805, *Business Combinations*, which requires an acquirer to recognize and measure in its financial statements the identifiable assets acquired, the liabilities assumed, and any noncontrolling interest in the acquiree at fair value as of the acquisition date. The excess of the purchase price over those fair values is recognized as goodwill (if any). During the measurement period, which may be up to one year from the acquisition date, we may record adjustments to the assets acquired and liabilities assumed in the period in which they are determined.

Nuclear Decommissioning Trusts (NDTs)

The NRC is responsible for regulating all nuclear power plants in the U.S. This regulatory oversight results in specific accounting considerations for nuclear plant decommissioning. Our NDTs hold funds primarily for the ultimate decommissioning of our nuclear power plants. Each unit has its own NDT and funds from one unit may not be used to fund decommissioning obligations of another unit.

Decommissioning costs associated with the Comanche Peak nuclear generation facility in Texas are being recovered from Oncor Electric Delivery Company LLC's (Oncor) customers as a delivery fee surcharge over the life of the plant and deposited by Vistra (and prior to the Effective Date, a subsidiary of TCEH) in the NDT. Income and expense, including gains and losses associated with the NDT assets and the related decommissioning liability are offset by a corresponding change in a regulatory asset/liability (currently a regulatory liability reported in other noncurrent liabilities and deferred credits) that will ultimately be settled through changes in Oncor's delivery fees rates.

The NDTs associated with our PJM nuclear facilities have been funded with amounts collected from the previous owners and their respective utility customers. Any shortfall of funds necessary for decommissioning the PJM nuclear facilities, determined for each generating station unit, are required to be funded by us. Investments in the PJM NDTs are carried at fair value and gains and losses are recognized as other income or other deductions in the condensed consolidated statements of operations. NDTs are invested in diversified portfolios of securities generally designed to achieve a return sufficient to fund the future decommissioning work. We retain any funds remaining in the trusts of the PJM nuclear facilities after all decommissioning has been completed.

Use of Estimates

Preparation of financial statements requires estimates and assumptions about future events that affect the reporting of assets and liabilities as of the balance sheet dates and the reported amounts of revenue and expense, including fair value measurements, estimates of expected obligations, judgments related to the potential timing of events and other estimates. In the event estimates and/or assumptions prove to be different from actual amounts, adjustments are made in subsequent periods to reflect more current information.

Adoption of Accounting Standards

Improvements to Reportable Segment Disclosures

In November 2023, the Financial Accounting Standards Board (FASB) issued ASU No. 2023-07, *Segment Reporting (Topic 280), Improvements to Reportable Segment Disclosures*, to improve the disclosures about reportable segments and add more detailed information about a reportable segment's expenses. The amendments in the ASU require public entities to disclose on an annual and interim basis significant segment expenses that are regularly provided to the chief operating decision maker (CODM) and included within each reported measure of segment profit or loss, other segment items by reportable segment, the title and position of the CODM, and an explanation of how the CODM uses the reported measures of segment profit or loss in assessing segment performance and deciding how to allocate resources. The ASU does not change the definition of a segment, the method for determining segments, the criteria for aggregating operating segments into reportable segments, or the current specifically enumerated segment expenses that are required to be disclosed. The Company will adopt the amendments in this ASU for its fiscal year ended December 31, 2024 and interim periods within its fiscal year ended December 31, 2025. The amendment will be applied retrospectively to all prior periods presented. We are currently evaluating the impact this ASU will have on our consolidated financial statements and related disclosures.

Improvements to Income Tax Disclosures

In December 2023, the FASB issued ASU No. 2023-09 (ASU 2023-09), *Income Taxes (Topic 740): Improvements to Income Tax Disclosures* to enhance the transparency and decision usefulness of income tax disclosures. ASU 2023-09 is effective for annual periods beginning after December 15, 2024 on a prospective basis. Early adoption is permitted. As the amendments apply to income tax disclosures only, the Company does not expect adoption to have a material impact on our consolidated financial statements.

Recent Developments

See Note 8 for information on the Receivables Program amendment increasing the purchase limit and Note 10 for information on the $ 1.5 billion principal amount of senior secured and unsecured senior notes issued in April 2024.

2. BUSINESS COMBINATIONS

On March 1, 2024 (Merger Date), pursuant to a transaction agreement dated March 6, 2023 (Transaction Agreement), (i) Vistra Operations transferred certain of its subsidiary entities into Vistra Vision, (ii) Black Pen Inc., a wholly owned subsidiary of Vistra, merged with and into Energy Harbor, (iii) Energy Harbor became a wholly-owned subsidiary of Vistra Vision, and (iv) affiliates of Nuveen Asset Management, LLC (Nuveen) and Avenue Capital Management II, L.P. (Avenue) exchanged a portion of the Energy Harbor shares held by Nuveen and Avenue for a 15% equity interest of Vistra Vision (collectively, Energy Harbor Merger). The Energy Harbor Merger combines Energy Harbor's and Vistra's nuclear and retail businesses and certain Vistra Zero renewables and energy storage facilities to provide diversification and scale across multiple carbon-free technologies (dispatchable and renewables/storage) and the retail business.

The Energy Harbor Merger was accounted for using the acquisition method in accordance with ASC 805, *Business Combinations* (ASC 805), which requires identifiable assets acquired and liabilities assumed to be recorded at their estimated fair values on the Merger Date. The combined results of operations are reported in our condensed consolidated financial statements beginning as of the Merger Date.

The following table summarizes the acquisition date fair value of Energy Harbor associated with the Energy Harbor Merger on the Merger Date:

(in millions)		**Consideration**
Cash consideration	$	3,100
15% of the fair value of net assets contributed to Vistra Vision by Vistra (a)		1,496
Total purchase price		4,596
Fair value of noncontrolling interest in Energy Harbor (b)		811
Acquisition date fair value of Energy Harbor	$	5,407

(a) Valued using a discounted cash flow analysis of the contributed subsidiaries including contributed debt.
(b) Represents 15% of the acquisition date fair value implied from the fair value of consideration transferred.

As a result of the Energy Harbor Merger, Vistra maintains an 85% ownership interest in Vistra Vision and records the remaining 15% equity interest as a noncontrolling interest in our condensed consolidated balance sheets as of the Merger Date. We reclassified the carrying value of assets contributed to Vistra Vision of $749 million from additional paid-in-capital of Vistra (the controlling interest) to the noncontrolling interest in subsidiary.

Provisional fair value measurements were made for acquired assets and liabilities, adjustments to those measurements may be made in subsequent periods (up to one year from the acquisition date) as information necessary to complete the fair value analysis is obtained. The provisional fair values assigned to assets acquired and liabilities assumed are as follows:

(in Millions)	Fair Value as of March 1, 2024
Cash and cash equivalents	$ 30
Trade accounts receivables, inventories, prepaid expenses and other current assets	538
Investments (a)	2,021
Property, plant and equipment (b)	5,620
Identifiable intangible assets (c)	428
Commodity and other derivative contractual assets (d)	140
Other noncurrent assets	8
Total identifiable assets acquired	8,785
Trade accounts payable and other current liabilities	263
Long-term debt, including amounts due currently	413
Commodity and other derivative contractual liabilities (d)	179
Accumulated deferred income taxes	1,364
Asset retirement obligations (e)	1,368
Identifiable intangible liabilities	73
Other noncurrent liabilities and deferred credits	12
Total identifiable liabilities assumed	3,672
Identifiable net assets acquired	5,113
Goodwill (f)	294
Net assets acquired	$ 5,407

(a) NDT assets are valued using a market approach (Level 1 or Level 2 depending on security).

(b) Acquired property, plant and equipment are valued using a combination of an income approach and a market approach. The income approach utilized a discounted cash flow analysis based upon a debt-free, free cash flow model (Level 3).

(c) Includes acquired nuclear fuel supply contracts valued based on contractual cash flow projections over approximately five years compared with cash flows based on current market prices with the resulting difference discounted to present value (Level 3). Also includes acquired retail customer relationships which are valued based on discounted cash flow analysis of acquired customers and estimated attrition rates (Level 3).

(d) Acquired derivatives are valued using the methods described in Note 12 (Level 1, Level 2 or Level 3). Contracts with terms that were not at current market prices are also valued using a discounted cash flow analysis (Level 3).

(e) Asset retirement obligations are valued using a discounted cash flow model which, on a unit-by-unit basis, considers multiple decommissioning methods and are based on decommissioning cost studies (Level 3).

(f) The excess of the consideration transferred over the fair value of identifiable assets acquired and liabilities assumed is recorded as goodwill. Goodwill represents expected synergies to be generated by Vistra Vision from combining operations of Energy Harbor with the contributed net assets of Vistra. None of the Goodwill is deductible for income tax purposes.

The following unaudited pro forma financial information for the three months ended March 31, 2024 and 2023 assumes that the Energy Harbor Merger occurred on January 1, 2023. The unaudited pro forma financial information is provided for informational purposes only and is not necessarily indicative of the results of operations that would have occurred had the Energy Harbor Merger been completed on January 1, 2023, nor is the unaudited pro forma financial information indicative of future results of operations, which may differ materially from the pro forma financial information presented here.

	Three Months Ended March 31,	
(in millions)	2024	2023
Revenues	$ 3,777	$ 4,891
Net income	$ 69	$ 466

The unaudited pro forma financial information presented above includes adjustments for incremental depreciation and amortization as a result of the fair value determination of the net assets acquired, interest expense on debt assumed in the Energy Harbor Merger, effects of the Energy Harbor Merger on tax expense (benefit), and other related adjustments. Determining the amounts of revenue and earnings of Energy Harbor since the acquisition date is impractical as operations have been integrated into our commercial platform which is managed at a portfolio level.

Acquisition costs incurred in the Energy Harbor Merger totaled $ 24 million and $ 6 million for the three months ended March 31, 2024 and 2023, respectively and are classified as selling, general and administrative expenses in our condensed consolidated statements of operations.

3. RETIREMENT OF GENERATION FACILITIES

Operational results for plants with defined retirement dates are included in our Sunset segment beginning in the quarter when a retirement plan is announced and move to the Asset Closure segment at the beginning of the calendar year the retirement is expected to occur.

Facility	Location	ISO/RTO	Fuel Type	Net Generation Capacity (MW)	Actual or Expected Retirement Date (a) (b)	Segment
Baldwin	Baldwin, IL	MISO	Coal	1,185	By the end of 2025	Sunset
Coleto Creek	Goliad, TX	ERCOT	Coal	650	By the end of 2027	Sunset
Kincaid	Kincaid, IL	PJM	Coal	1,108	By the end of 2027	Sunset
Miami Fort	North Bend, OH	PJM	Coal	1,020	By the end of 2027	Sunset
Newton	Newton, IL	MISO/PJM	Coal	615	By the end of 2027	Sunset
Edwards	Bartonville, IL	MISO	Coal	585	Retired January 1, 2023	Asset Closure
Joppa	Joppa, IL	MISO	Coal	802	Retired September 1, 2022	Asset Closure
Joppa	Joppa, IL	MISO	Natural Gas	221	Retired September 1, 2022	Asset Closure
Zimmer	Moscow, OH	PJM	Coal	1,300	Retired June 1, 2022	Asset Closure
Total				7,486		

(a) Generation facilities may retire earlier than expected dates disclosed if economic or other conditions dictate.
(b) Retirement dates represent the first full day in which a plant does not operate.

4. REVENUE

Revenue Disaggregation

Disaggregated revenue from contracts with customers, and other revenue included in total revenues in the condensed consolidated statements of operations is as follows:

	Three Months Ended March 31, 2024							
(in millions)	Retail (a)	Texas	East (a)	West	Sunset	Asset Closure	Eliminations	Consolidated
Revenue from contracts with customers:								
Retail energy charge in ERCOT	$ 1,702	$ —	$ —	$ —	$ —	$ —	$ —	$ 1,702
Retail energy charge in Northeast/Midwest	663	—	—	—	—	—	—	663
Wholesale generation revenue from ISO/RTO	—	60	261	88	80	—	—	489
Capacity revenue from ISO/RTO (b)	—	—	15	—	4	—	—	19
Revenue from other wholesale contracts	—	104	70	57	55	—	—	286
Total revenue from contracts with customers	2,365	164	346	145	139	—	—	3,159
Other revenues:								
Intangible amortization	—	—	—	—	(1)	—	—	(1)
Transferable PTC revenues	—	2	—	—	—	—	—	2
Hedging and other revenues (c)	123	(274)	(138)	139	44	—	—	(106)
Affiliate sales (d)	6	547	429	1	57	—	(1,040)	—
Total other revenues	129	275	291	140	100	—	(1,040)	(105)
Total revenues	$ 2,494	$ 439	$ 637	$ 285	$ 239	$ —	$ (1,040)	$ 3,054

(a) Includes revenues associated with March 2024 operations acquired in the Energy Harbor Merger.

(b) Represents net capacity sold in each ISO/RTO. The East segment includes $36 million of capacity sold offset by $ 21 million of capacity purchased. The Sunset segment includes $4 million of capacity sold. Net capacity purchased in each ISO/RTO included in fuel, purchased power costs and delivery fees in our condensed consolidated statement of operations includes capacity purchased of $7 million offset by $ 2 million of capacity sold within the East segment.

(c) Includes $347 million of unrealized net losses from mark-to-market valuations of commodity positions.

Three Months Ended	Retail	Texas	East	West	Sunset	Asset Closure	Corporate and Other	Eliminations (1)	Consolidated
March 31, 2024	$ (155)	$ (602)	$ (355)	$ 136	$ (156)	$ 4	$ —	$ 781	$ (347)

(1) Amounts attributable to generation segments offset in fuel, purchased power costs and delivery fees in the Retail segment, with no impact to consolidated results.

(d) Texas, East and Sunset segment includes $ 470 million, $255 million and $56 million, respectively, of affiliated unrealized net losses from mark-to-market valuations of commodity positions with the Retail segment.

	Three Months Ended March 31, 2023							
(in millions)	Retail	Texas	East	West	Sunset	Asset Closure	Eliminations	Consolidated
Revenue from contracts with customers:								
Retail energy charge in ERCOT	$ 1,568	$ —	$ —	$ —	$ —	$ —	$ —	$ 1,568
Retail energy charge in Northeast/Midwest	427	—	—	—	—	—	—	427
Wholesale generation revenue from ISO/RTO	—	50	220	193	67	—	—	530
Capacity revenue from ISO/RTO (a)	—	—	8	—	19	—	—	27
Revenue from other wholesale contracts	—	107	331	41	76	—	—	555
Total revenue from contracts with customers	1,995	157	559	234	162	—	—	3,107
Other revenues:								
Intangible amortization	(1)	—	(1)	—	(1)	—	—	(3)
Transferable PTC revenue	—	2	—	—	—	—	—	2
Hedging and other revenues (b)	356	112	386	(7)	472	—	—	1,319
Affiliate sales (c)	—	1,082	865	4	195	—	(2,146)	—
Total other revenues	355	1,196	1,250	(3)	666	—	(2,146)	1,318
Total revenues	$ 2,350	$ 1,353	$ 1,809	$ 231	$ 828	$ —	$ (2,146)	$ 4,425

(a) Represents net capacity sold in each ISO/RTO. The East segment includes $42 million of capacity sold offset by $ 34 million of capacity purchased. The Sunset segment includes $46 million of capacity sold offset by $ 27 million of capacity purchased. Net capacity purchased in each ISO/RTO included in fuel, purchased power costs and delivery fees in our condensed consolidated statement of operations includes capacity purchased of $31 million offset by $ 21 million of capacity sold within the East segment.

(b) Includes $1.277 billion of unrealized net gains from mark-to-market valuations of commodity positions.

Three Months Ended	Retail	Texas	East	West	Sunset	Asset Closure	Corporate and Other	Eliminations (1)	Consolidated
March 31, 2023	$ 140	$ 368	$ 943	$ 12	$ 477	$ 17	$ —	$ (680)	$ 1,277

(1) Amounts attributable to generation segments offset in fuel, purchased power costs and delivery fees in the Retail segment, with no impact to consolidated results.

(c) Texas, East and Sunset segments include $ 185 million, $394 million and $ 103 million, respectively, of affiliated unrealized net gains from mark-to-market valuations of commodity positions with the Retail segment.

Performance Obligations

As of March 31, 2024, we have future fixed fee performance obligations that are unsatisfied, or partially unsatisfied, relating to capacity auction volumes awarded through capacity auctions held by the ISO/RTO or contracts with customers for which the total consideration is fixed and determinable at contract execution. Capacity revenues will be recognized assuming the performance obligations are met and as capacity is made available to the related ISOs/RTOs or counterparties.

	Balance of 2024	2025	2026	2027	2028	2029 and Thereafter	Total
Remaining performance obligations	$ 401	$ 463	$ 329	$ 272	$ 122	$ 610	$ 2,197

Accounts Receivable

See Note 18 for details of accounts receivable relating to revenue from contracts with customers and other activities.

5. INCOME TAXES

Vistra files a U.S. federal income tax return that includes the results of its consolidated subsidiaries. Vistra serves as the corporate parent of the Vistra consolidated group. Pursuant to applicable U.S. Department of the Treasury regulations and published guidance of the IRS, corporations that are members of a consolidated group have joint and several liability for the taxes of such group.

Income Tax (Expense) Benefit

The components of our income tax (expense) benefit are as follows:

	Three Months Ended March 31,	
(in millions)	2024	2023
Net income (loss) before income taxes	$ (2)	$ 876
Income tax (expense) benefit	$ 20	$ (178)
Effective tax rate	1,000.0 %	20.3 %

We evaluate and update our annual effective income tax rate on an interim basis based on current and forecasted earnings and tax laws. The mix and timing of our actual earnings compared to annual projections, as well as the amount of pre-tax earnings in comparison to the required discrete items, can cause interim effective tax rate fluctuations.

For the three months ended March 31, 2024, the effective tax rate of 1,000.0% was higher than the U.S. federal statutory rate of 21% due primarily to the level of pre-tax earnings during the period and permanent differences recorded discretely related to stock-based compensation, partially offset by mark-to-market losses.

For the three months ended March 31, 2023, the effective tax rate of 20.3% was lower than the U.S. federal statutory rate of 21% due primarily to state income taxes.

Inflation Reduction Act of 2022 (IRA)

In August 2022, the U.S. enacted the IRA, which, among other things, implements substantial new and modified energy tax credits, including recognizing the value of existing carbon-free nuclear power by providing for a nuclear PTC, a solar PTC, a first-time stand-alone battery storage investment tax credit, a 15% corporate alternative minimum tax (CAMT) on book income of certain large corporations, and a 1% excise tax on net stock repurchases. The section 45U nuclear PTC provides a federal tax credit of up to $15/MWh, subject to phase out as power prices increase above $25/MWh, to existing nuclear facilities from 2024 through 2032. Treasury regulations are expected to further define the scope of the legislation in many important respects over the next twelve months, including critical guidance interpreting the nuclear PTC. The Company accounts for transferable ITCs and PTCs we expect to receive by analogy to the grant model within IAS 20, as U.S. GAAP does not address how to account for these tax credits. We do not expect Vistra to be subject to the CAMT in the 2024 tax year as it applies only to corporations with a three-year average annual adjusted financial statement income in excess of $1 billion. We have taken the CAMT and relevant extensions or expansions of existing tax credits applicable to projects in our immediate development pipeline into account when forecasting cash taxes.

Transferable ITCs

In June 2023, our 350 MW battery ESS at our Moss Landing Power Plant site (Moss Landing Phase III) commenced commercial operations. As a result of Moss Landing Phase III reaching commercial operations, in 2023 we recognized $154 million of transferable ITCs associated with the project within other noncurrent assets in the condensed consolidated balance sheets.

Final Section 163(j) Regulations

The final Section 163(j) regulations, which limits qualified deductions for business interest expense, were issued in July 2020 and provided a critical correction to the proposed regulations regarding the computation of adjusted taxable income. As of January 1, 2022, certain provisions in the final Section 163(j) regulations have sunset, including the addback of depreciation and amortization to adjusted taxable income. As a result, under the law as currently enacted, Vistra's deductible business interest expense was significantly limited for the 2023 tax year and will continue to be so limited under current law going forward. Vistra remains active in legislative monitoring and advocacy efforts to support a legislative solution to reinstate and make permanent the addback of depreciation and amortization to adjusted taxable income.

Liability for Uncertain Tax Positions

Vistra and its subsidiaries file income tax returns in U.S. federal, state and foreign jurisdictions and are, at times, subject to examinations by the IRS and other taxing authorities. There were no uncertain tax positions as of both March 31, 2024 and December 31, 2023.

6. EARNINGS PER SHARE

Basic earnings per share available to common stockholders are based on the weighted average number of common shares outstanding during the period. Diluted earnings per share is calculated using the treasury stock method and includes the effect of all potential issuances of common shares under stock-based incentive compensation arrangements.

	Three Months Ended March 31,	
(in millions, except share data)	**2024**	**2023**
Net income (loss) attributable to Vistra	$ (35)	$ 699
Less cumulative dividends attributable to Series A Preferred Stock	(20)	(20)
Less cumulative dividends attributable to Series B Preferred Stock	(18)	(18)
Less cumulative dividends attributable to Series C Preferred Stock	(11)	—
Net income (loss) attributable to common stock — basic and diluted	$ (84)	$ 661
Weighted average shares of common stock outstanding:		
Basic	348,966,197	383,631,369
Dilutive securities: Stock-based incentive compensation plan	—	3,922,010
Diluted	348,966,197	387,553,379
Net income (loss) per weighted average share of common stock outstanding:		
Basic	$ (0.24)	$ 1.72
Diluted	$ (0.24)	$ 1.71

Stock-based incentive compensation plan awards excluded from the calculation of diluted earnings per share because the effect would have been antidilutive totaled 7,954,878 and 3,859,165 shares for the three months ended March 31, 2024 and 2023, respectively.

7. GOODWILL AND IDENTIFIABLE INTANGIBLE ASSETS AND LIABILITIES

Goodwill

As of March 31, 2024 and December 31, 2023, the carrying value of goodwill totaled $ 2.877 billion and $2.583 billion, respectively.

	Retail Segment	Texas Segment	
(in millions)	Retail Reporting Unit (a)	Texas Generation Reporting Unit	Total Goodwill
Balance at December 31, 2023	$ 2,461	$ 122	$ 2,583
Goodwill recorded in connection with the Energy Harbor Merger (b)			294
Balance at March 31, 2024	$ 2,461	$ 122	$ 2,877

(a) Goodwill of $1.944 billion is deductible for tax purposes over 15 years on a straight line basis.
(b) Allocation of goodwill attributable to the Energy Harbor acquisition to reporting units is pending completion of purchase accounting measurement period.

Identifiable Intangible Assets and Liabilities

Identifiable intangible assets are comprised of the following:

	March 31, 2024			December 31, 2023		
Identifiable Intangible Asset (in millions)	Gross Carrying Amount	Accumulated Amortization	Net	Gross Carrying Amount	Accumulated Amortization	Net
Retail customer relationships	$ 2,170	$ 1,888	$ 282	$ 2,088	$ 1,866	$ 222
Software and other technology-related assets	545	249	296	536	315	221
Retail and wholesale contracts	503	218	285	233	217	16
LTSA	18	5	13	18	5	13
Other identifiable intangible assets (a)	73	12	61	62	11	51
Total identifiable intangible assets subject to amortization	$ 3,309	$ 2,372	937	$ 2,937	$ 2,414	523
Retail trade names (not subject to amortization)			1,341			1,341
Total identifiable intangible assets			$ 2,278			$ 1,864

(a) Includes environmental allowances (emissions allowances and renewable energy certificates) and mining development costs.

Identifiable intangible liabilities are comprised of the following:

Identifiable Intangible Liability (in millions)	March 31, 2024	December 31, 2023
LTSA	$ 121	$ 122
Power and fuel purchase contracts	62	9
Total identifiable intangible liabilities	$ 183	$ 131

Expense related to finite-lived identifiable intangible assets (including the classification in the condensed consolidated statements of operations) consist of:

		Three Months Ended March 31,	
Identifiable Intangible Assets (in millions)	**Condensed Consolidated Statements of Operations**	**2024**	**2023**
Retail customer relationships	Depreciation and amortization	$ 22	$ 28
Software and other technology-related assets	Depreciation and amortization	13	15
Retail and wholesale contracts	Operating revenues/fuel, purchased power costs and delivery fees	1	2
Other identifiable intangible assets	Fuel, purchased power costs and delivery fees	103	86
Total identifiable intangible assets expense (a)		$ 139	$ 131

(a) Amounts exclude LTSA. Amounts include all expenses associated with environmental allowances including expenses accrued to comply with emissions allowance programs and renewable portfolio standards which are presented in fuel, purchased power costs and delivery fees on our condensed consolidated statements of operations. Emissions allowance obligations are accrued as associated electricity is generated and renewable energy certificate obligations are accrued as retail electricity delivery occurs.

Estimated Amortization of Identifiable Intangible Assets

As of March 31, 2024, the estimated aggregate amortization expense of identifiable intangible assets for each of the next five fiscal years is as shown below.

Year	**Estimated Amortization Expense (in millions)**
2024	$ 167
2025	$ 141
2026	$ 77
2027	$ 49
2028	$ 32

8. ACCOUNTS RECEIVABLE FINANCING

Accounts Receivable Securitization Program

TXU Energy Receivables Company LLC (RecCo), an indirect subsidiary of Vistra, has an accounts receivable financing facility (Receivables Facility) provided by issuers of asset-backed commercial paper and commercial banks (Purchasers). The Receivables Facility was renewed in July 2023, extending the term of the Receivables Facility to July 2024 and adjusting the commitment of the purchasers to purchase interests in the receivables under the Receivables Facility during all periods to a fixed purchase limit of $750 million from seasonally adjusted commitment limits ranging from $ 600 million to $750 million. On April 8, 2024, the Receivables Facility was amended to increase the purchase limit from $750 million to $1.0 billion and to add Energy Harbor LLC, a direct, wholly owned subsidiary of Energy Harbor, as an Originator.

In connection with the Receivables Facility, TXU Energy, Dynegy Energy Services, Ambit Texas, Value Based Brands, Energy Harbor LLC and TriEagle Energy, each indirect subsidiaries of Vistra and originators under the Receivables Facility (Originators), each sell and/or contribute, subject to certain exclusions, all of its receivables (other than any receivables excluded pursuant to the terms of the Receivables Facility), arising from the sale of electricity to its customers and related rights (Receivables), to RecCo, a consolidated, wholly owned, bankruptcy-remote, direct subsidiary of TXU Energy. RecCo, in turn, is subject to certain conditions, and may draw under the Receivables Facility up to the limit described above to fund its acquisition of the Receivables from the Originators. RecCo has granted a security interest on the Receivables and all related assets for the benefit of the Purchasers under the Receivables Facility and Vistra Operations has agreed to guarantee the performance of the obligations of the Originators and TXU Energy, as the servicer, under the agreements governing the Receivables Facility. Amounts funded by the Purchasers to RecCo are reflected as short-term borrowings on the condensed consolidated balance sheets. Proceeds and repayments under the Receivables Facility are reflected as cash flows from financing activities in our condensed consolidated statements of cash flows. Receivables transferred to the Purchasers remain on Vistra's balance sheet and Vistra reflects a liability equal to the amount advanced by the Purchasers. The Company records interest expense on amounts advanced. TXU Energy continues to service, administer and collect the Receivables on behalf of RecCo and the Purchasers, as applicable.

As of March 31, 2024, outstanding borrowings under the Receivables Facility totaled $ 750 million and were supported by $ 913 million of RecCo gross receivables. As of December 31, 2023, there were no outstanding borrowings under the Receivables Facility.

Repurchase Facility

TXU Energy and the other Originators under the Receivables Facility have a repurchase facility (Repurchase Facility) that is provided on an uncommitted basis by a commercial bank as buyer (Buyer). In July 2023, the Repurchase Facility was renewed until July 2024 while maintaining the facility size of $125 million. The Repurchase Facility is collateralized by a subordinated note (Subordinated Note) issued by RecCo in favor of TXU Energy for the benefit of Originators under the Receivables Facility and representing a portion of the outstanding balance of the purchase price paid for the Receivables sold by the Originators to RecCo under the Receivables Facility. Under the Repurchase Facility, TXU Energy may request that Buyer transfer funds to TXU Energy in exchange for a transfer of the Subordinated Note, with a simultaneous agreement by TXU Energy to transfer funds to Buyer at a date certain or on demand in exchange for the return of the Subordinated Note (collectively, the Repo Transaction). Each Repo Transaction is expected to have a term of one month, unless terminated earlier on demand by TXU Energy or terminated by Buyer after an event of default.

TXU Energy and the other Originators have each granted Buyer a first-priority security interest in the Subordinated Note to secure its obligations under the agreements governing the Repurchase Facility, and Vistra Operations has agreed to guarantee the obligations under the agreements governing the Repurchase Facility. Unless earlier terminated under the agreements governing the Repurchase Facility, the Repurchase Facility will terminate concurrently with the scheduled termination of the Receivables Facility.

As of March 31, 2024, outstanding borrowings under the Repurchase Facility totaled $ 125 million. There were no outstanding borrowings under the Repurchase Facility as of December 31, 2023.

9. COLLATERAL FINANCING AGREEMENT WITH AFFILIATE

On June 15, 2023, Vistra Operations entered into a facility agreement (Facility Agreement) with a Delaware trust formed by the Company (the Trust) that sold 450,000 pre-capitalized trust securities (P-Caps) redeemable May 17, 2028 for an initial purchase price of $450 million. The Trust is not consolidated by Vistra. The Trust invested the proceeds from the sale of the P-Caps in a portfolio of either (a) U.S. Treasury securities (Treasuries) or (b) Treasuries and/or principal and interest strips of Treasuries (Treasury Strips, and together with the Treasuries and cash denominated in U.S. dollars, the Eligible Assets). At the direction of Vistra Operations, the Eligible Assets held by the Trust can be (i) delivered to one or more designated subsidiaries of Vistra Operations in order to allow such subsidiaries to use the Eligible Assets to meet certain posting obligations with counterparties, and/or (ii) pledged as collateral support for a letter of credit program.

Under the Facility Agreement, Vistra Operations has the right (Issuance Right), from time to time, to require the Trust to purchase from Vistra Operations up to $ 450 million aggregate principal amount of Vistra Operations' 7.233% Senior Secured Notes due 2028 (7.233% Senior Secured Notes) in exchange for the delivery of all or a portion of the Treasuries and Treasury Strips corresponding to the portion of the issuance right exercised at such time.

The Trust will terminate at any time prior to May 17, 2028 and distribute the 7.233% Senior Secured Notes to the holders of the P-Caps if its sole assets consist of 7.233% Senior Secured Notes that Vistra Operations is no longer entitled to repurchase.

Vistra Operations pays a facility fee (Facility Fee) to the Trust payable on each May 17 and November 17, commencing on November 17, 2023, to and including May 17, 2028 (each, a Distribution Date), and on certain other dates as provided in the Facility Agreement. The Facility Fee is generally calculated at a rate of 3.3608% per annum, applied to the maximum amount of 7.233% Senior Secured Notes that Vistra Operations could issue and sell to the Trust under the Facility Agreement as of the close of business on the business day immediately preceding the applicable Distribution Date.

As of March 31, 2024 and December 31, 2023, the fair value of Eligible Assets held by counterparties to satisfy current and future margin deposit requirements totaled $443 million and $439 million, respectively, and are reported in our condensed consolidated balance sheets as margin deposits posted under affiliate financing agreement and margin deposits financing with affiliate.

10. DEBT

Amounts in the table below represent the categories of long-term debt obligations, including amounts due currently, incurred by the Company.

(in millions)	March 31, 2024	December 31, 2023
Vistra Operations Credit Facilities, Term Loan B-3 Facility due December 20, 2030	$ 2,494	$ 2,500
Vistra Zero Credit Facility, Term Loan B Facility due April 30, 2031	700	—
Vistra Operations Senior Secured Notes:		
4.875% Senior Secured Notes, due May 13, 2024	342	400
3.550% Senior Secured Notes, due July 15, 2024	1,155	1,500
5.125% Senior Secured Notes, due May 13, 2025	744	1,100
3.700% Senior Secured Notes, due January 30, 2027	800	800
4.300% Senior Secured Notes, due July 15, 2029	800	800
6.950% Senior Secured Notes, due October 15, 2033	1,050	1,050
Total Vistra Operations Senior Secured Notes	4,891	5,650
Energy Harbor Revenue Bonds:		
3.375% Revenue Bond, due August 1, 2029	100	—
4.750% Revenue Bond, due June 1, 2033 and July 1, 2033	285	—
3.750% Revenue Bond, due October 1, 2047	46	—
Total Energy Harbor Revenue Bonds	431	—
Vistra Operations Senior Unsecured Notes:		
5.500% Senior Unsecured Notes, due September 1, 2026	1,000	1,000
5.625% Senior Unsecured Notes, due February 15, 2027	1,300	1,300
5.000% Senior Unsecured Notes, due July 31, 2027	1,300	1,300
4.375% Senior Unsecured Notes, due May 15, 2029	1,250	1,250
7.750% Senior Unsecured Notes, due October 15, 2031	1,450	1,450
Total Vistra Operations Senior Unsecured Notes	6,300	6,300
Other:		
Equipment Financing Agreements	67	67
Total other long-term debt	67	67
Unamortized debt premiums, discounts and issuance costs	(136)	(115)
Total long-term debt including amounts due currently	14,747	14,402
Less amounts due currently (a)	(54)	(2,286)
Total long-term debt less amounts due currently	$ 14,693	$ 12,116

(a) Excludes 4.875% Senior Secured Notes due May 2024 and 3.550% Senior Secured Notes due July 2024 as amounts will be refinanced on a long-term basis using net proceeds from the 6.000% Senior Secured Notes due 2034 and 6.875% Senior Unsecured Notes due 2032 (defined below) issued in April 2024.

Maturities

Long-term debt maturities as of March 31, 2024 are as follows:

(in millions)	March 31, 2024
Remainder of 2024	$ 1,532
2025	786
2026	1,038
2027	3,434
2028	35
Thereafter	8,058
Unamortized premiums, discounts and debt issuance costs	(136)
Total long-term debt, including amounts due currently	$ 14,747

Credit Facilities

Our credit facilities and related available capacity as of March 31, 2024 are presented below.

(in millions)		March 31, 2024				
Credit Facilities	Maturity Date	Facility Limit	Cash Borrowings (Short-Term)	Cash Borrowings (Long-Term)	Letters of Credit Outstanding	Available Capacity
Revolving Credit Facility	April 29, 2027	$ 3,175	$ —	$ —	$ 1,882	$ 1,293
Term Loan B-3 Facility	December 20, 2030	2,494	—	2,494	—	—
Total Vistra Operations Credit Facilities		$ 5,669	$ —	$ 2,494	$ 1,882	$ 1,293
Vistra Operations Commodity-Linked Facility	October 2, 2024	1,575	500	—	—	637
Vistra Zero Term Loan B Facility	April 30, 2031	700	—	700	—	—
Total credit facilities		$ 7,944	$ 500	$ 3,194	$ 1,882	$ 1,930

Vistra Operations Credit Facilities

As of March 31, 2024, the Vistra Operations Credit Facilities consisted of up to $ 5.669 billion in senior secured, first-lien revolving credit commitments and outstanding term loans, which consisted of revolving credit commitments of up to $3.175 billion (Revolving Credit Facility), including aggregate revolving letter of credit commitments of $3.105 billion, and term loans of $ 2.494 billion (Term Loan B-3 Facility). The Revolving Credit Facility is used for general corporate purposes.

Under the Vistra Operations Credit Agreement, (i) the interest applicable to the Revolving Credit Facility is based on the forward-looking term rate based on SOFR (Term SOFR Rate) plus a spread that will range from 1.25% to 2.00% and (ii) the fee on any undrawn amounts with respect to the Revolving Credit Facility will range from 17.5 basis points to 35.0 basis points. Letters of credit issued under the Revolving Credit Facility bear interest that ranges from 1.25% to 2.00%. Interest and fees on the Revolving Credit Facility are based on ratings of Vistra Operations' senior secured long-term debt securities. As of March 31, 2024, the applicable interest rate margins for the Revolving Credit Facility and the fee for undrawn amounts relating to such commitments were 1.70% and 26.5 basis points, respectively, and the applicable interest rate margin for the letters of credit issued under the Revolving Credit facility was 1.70%. The Vistra Operations Credit Facilities also provide for certain additional customary fees payable to the agents and lenders, including fronting fees with respect to outstanding letters of credit.

The Term Loan B-3 Facility bears interest based on the applicable Term SOFR Rate, plus a fixed spread of 2.00%, and the weighted average interest rates before taking into consideration interest rate swaps (see Note 11) on outstanding borrowings of $2.494 billion was 7.33% as of March 31, 2024. Cash borrowings under the Term Loan B-3 Facility are subject to required scheduled quarterly payments of $6.25 million. Amounts paid cannot be reborrowed.

Obligations under the Vistra Operations Credit Facilities are secured by liens covering substantially all of Vistra Operations' (and certain of its subsidiaries') consolidated assets, rights and properties, subject to certain exceptions set forth in the Vistra Operations Credit Facilities. The Vistra Operations Credit Agreement includes certain collateral suspension provisions that would take effect upon Vistra Operations achieving unsecured investment grade ratings from two ratings agencies, there being no Term Loans (under and as defined in the Vistra Operations Credit Agreement) then outstanding (or the holders thereof agreeing to release such security interests), and there being no outstanding revolving credit commitments the maturities of which have not been extended to April 29, 2027 (or the holders thereof agreeing to release such security interests), such collateral suspension provisions would continue to be in effect unless and until Vistra Operations no longer holds unsecured investment grade ratings from at least two ratings agencies, at which point collateral reversion provisions would take effect (subject to a 60-day grace period).

The Vistra Operations Credit Facilities also permit certain hedging agreements and cash management agreements to be secured on a pari-passu basis with the Vistra Operations Credit Facilities in the event those hedging agreements and cash management agreements meet certain criteria set forth in the Vistra Operations Credit Facilities.

The Vistra Operations Credit Facilities provide for affirmative and negative covenants applicable to Vistra Operations (and its restricted subsidiaries), including affirmative covenants requiring it to provide financial and other information to the agents under the Vistra Operations Credit Facilities and to not change its lines of business, and negative covenants restricting Vistra Operations' (and its restricted subsidiaries') ability to incur additional indebtedness, make investments, dispose of assets, pay dividends, grant liens or take certain other actions, in each case, except as permitted in the Vistra Operations Credit Facilities. Vistra Operations' ability to borrow under the Vistra Operations Credit Facilities is subject to the satisfaction of certain customary conditions precedent set forth therein.

The Vistra Operations Credit Facilities provide for certain customary events of default, including events of default resulting from non-payment of principal, interest or fees when due, material breaches of representations and warranties, material breaches of covenants in the Vistra Operations Credit Facilities or ancillary loan documents, cross-defaults under other agreements or instruments and the entry of material judgments against Vistra Operations. Solely with respect to the Revolving Credit Facility, and solely during a compliance period (which, in general, is applicable when the aggregate revolving borrowings and issued revolving letters of credit (in excess of $300 million) exceed 30% of the revolving commitments), the agreement includes a covenant that requires the consolidated first lien net leverage ratio, which is based on the ratio of net first lien debt compared to an EBITDA calculation defined under the terms of the Vistra Operations Credit Facilities, not to exceed 4.25 to 1.00 (or, during a collateral suspension period, the consolidated total net leverage ratio, which is based on the ratio of consolidated total debt compared to an EBITDA calculation defined under the terms of the Vistra Operations Credit Facilities, not to exceed 5.50 to 1.00). Upon the existence of an event of default, the Vistra Operations Credit Facilities provide that all principal, interest and other amounts due thereunder will become immediately due and payable, either automatically or at the election of specified lenders.

Vistra Operations Commodity-Linked Revolving Credit Facility

As of March 31, 2024, the Vistra Operations senior secured commodity-linked revolving credit facility (Commodity-Linked Facility) totaled $ 1.575 billion of aggregate available commitments. We have the flexibility, subject to our ability to obtain additional commitments, to further increase the size of the Commodity-Linked Facility to $3.0 billion. The Commodity-Linked Facility is used to support our hedging strategy. As of March 31, 2024, the borrowing base of $ 1.137 billion is lower than the facility limit which represents the aggregate commitments of $1.575 billion.

Under the Commodity-Linked Facility, the borrowing base is calculated on a weekly basis based on a set of theoretical transactions which approximate a portion of the hedge portfolio of Vistra Operations and certain of its subsidiaries in certain power markets, with availability thereunder not to exceed the aggregate available commitments nor be less than zero. Vistra Operations may, at its option, borrow an amount up to the borrowing base, as adjusted from time to time, provided that if outstanding borrowings at any time would exceed the borrowing base, Vistra Operations shall make a repayment to reduce outstanding borrowings to be less than or equal to the borrowing base. Vistra Operations intends to use any borrowings provided under the Commodity-Linked Facility to make cash postings as required under various commodity contracts to which Vistra Operations and its subsidiaries are parties as power prices increase from time-to time and for other working capital and general corporate purposes.

Under the Vistra Operations Commodity-Linked Credit Agreement, (i) the interest applicable to the Commodity-Linked Facility is based on the Term SOFR Rate plus a spread that will range from 1.25% to 2.00% and (ii) the fee on any undrawn amounts with respect to the Commodity-Linked Facility will range from 17.5 basis points to 35.0 basis points. Interest and fees on the Commodity-Linked Facility are based on ratings of Vistra Operations' senior secured long-term debt securities. As of March 31, 2024, the applicable interest rate margins for the Commodity-Linked Facility and the fee on any undrawn amounts with respect to the Commodity-Linked Facility were 1.70% and 26.5 basis points, respectively As of March 31, 2024, there were $500 million in outstanding borrowings under the Commodity-Linked Facility and the weighted average interest rate on outstanding borrowings was 7.03%.

The Vistra Operations Commodity-Linked Credit Agreement includes a covenant, solely during a compliance period (which, in general, is applicable when the aggregate revolving borrowings exceeds 30% of the revolving commitments), that requires the consolidated first lien net leverage ratio, which is based on the ratio of net first lien debt compared to an EBITDA calculation defined under the terms of the Commodity-Linked Facility, not to exceed 4.25 to 1.00 (or, during a collateral suspension period, the consolidated total net leverage ratio, which is based on the ratio of consolidated total debt compared to an EBITDA calculation defined under the terms of the Commodity-Linked Facility, not to exceed 5.50 to 1.00).

Vistra Zero Credit Agreement

On March 26, 2024, Vistra Zero entered into the Vistra Zero Credit Agreement. The Vistra Zero Credit Agreement provides for a senior secured term loan (Term Loan B Facility) of up to $700 million, which Vistra Zero borrowed in its entirety on March 26, 2024. Net proceeds of $690 million will be used (i) to pay issuance costs and (ii) for working capital and general corporate purposes. Vistra Zero's obligations under the Vistra Zero Credit Agreement are guaranteed by certain subsidiaries of Vistra Zero, but are otherwise non-recourse to Vistra Operations and its other subsidiaries.

Under the Vistra Zero Credit Agreement, the interest applicable to the Term Loan B Facility is Term SOFR plus 2.75% per annum. The Term Loan B Facility is not subject to a floor or credit spread adjustment but is subject to a 1.0% "soft call" prepayment premium prior to the date that is six months following March 26, 2024. The weighted average interest rates before taking into consideration interest rate swaps on outstanding borrowings of $700 million was 8.08% as of March 31, 2024. Cash borrowings under the Term Loan B Facility are subject to required scheduled quarterly payments of $1.75 million. Amounts paid cannot be reborrowed.

The Vistra Zero Credit Agreement contains customary covenants and warranties which are generally consistent in scope with the Vistra Operations Credit Agreement, except that there is no financial maintenance covenant in the Vistra Zero Credit Agreement.

Vistra Operations Secured Letter of Credit Facilities

In August and September 2020, Vistra entered into uncommitted standby letter of credit facilities that may be renewed annually and that are each secured by a first lien on substantially all of Vistra Operations' (and certain of its subsidiaries') assets (which ranks pari passu with the Vistra Operations Credit Facilities) (each, a Secured LOC Facility and collectively, the Secured LOC Facilities). The Secured LOC Facilities are used for general corporate purposes. In October 2021, September 2022 and October 2022, Vistra entered into additional Secured LOC Facilities which are used for general corporate purposes. As of March 31, 2024, $898 million of letters of credit were outstanding under the Secured LOC Facilities.

Each of the Secured LOC Facilities includes a covenant that requires the consolidated first lien net leverage ratio not to exceed 4.25 to 1.00 (or, for certain facilities that include a collateral suspension mechanism, during a collateral suspension period, the consolidated total net leverage ratio not to exceed 5.50 to 1.00).

Vistra Operations Unsecured Alternative Letter of Credit Facility

In March 2024, we entered into an unsecured alternative letter of credit facility (Alternative LOC Facility) to be used for general corporate purposes. As of March 31, 2024, the total capacity was $125 million and $100 million of letters of credit were outstanding under the Alternative LOC Facility. In April 2024, the capacity of the Alternative LOC Facility was increased to $300 million. The Alternative LOC Facility matures in December 2028. There are no financial maintenance covenants in the Alternative LOC Facility.

Energy Harbor Letter of Credit Facility

Energy Harbor and its subsidiaries were parties to a letter of credit facility that was secured by a first lien on the Energy Harbor assets (Energy Harbor LOC Facility). As of March 31, 2024, $115 million of letters of credit were outstanding under the Energy Harbor LOC Facility. As of April 24, 2024, the Energy Harbor LOC Facility was terminated.

Vistra Operations Senior Secured Notes

In April 2024, Vistra Operations issued $500 million aggregate principal amount of 6.000% senior secured notes due 2034 (6.000% Senior Secured Notes) in an offering to eligible purchasers under Rule 144A and Regulation S under the Securities Act. The 6.000% Senior Secured Notes provides for the full and unconditional guarantee by certain of Vistra Operations' current and future subsidiaries that also guarantee the Vistra Operations Credit Facilities, by and among the Issuer, as borrower, Vistra Intermediate Company LLC, the guarantors party thereto, and Citibank, N.A. as administrative and collateral agent. The 6.000% Senior Secured Notes mature in April 15, 2034, with interest payable in cash semiannually in arrears on April 15 and October 15 beginning October 15, 2024. Net proceeds totaling approximately $495 million, together with proceeds from the April 2024 issuance of 6.875% Senior Unsecured Notes discussed below and cash on hand, will be used for general corporate purposes, including to refinance outstanding indebtedness (including the upcoming 2024 senior secured debt maturities). Fees and expenses related to the offering, including commissions and the original issue discount, totaled $5 million and were capitalized as a reduction in the carrying amount of the debt.

In January 2024, Vistra Operations used the net proceeds from the December 2023 issuances of 6.950% senior secured notes due 2033 and 7.750% senior unsecured notes due 2031 discussed below and cash on hand to fund a cash tender offer (Senior Secured Notes Tender Offer) to purchase for cash $759 million aggregate principal amount of certain notes, including $58 million of 4.875% senior secured notes due 2024, $345 million of 3.550% senior secured notes due 2024 and $356 million of the 5.125% senior secured notes due 2025. We recorded an extinguishment gain of $6 million on the transaction in the first quarter of 2024.

Since 2019, Vistra Operations issued and sold $5.65 billion aggregate principal amount of senior secured notes in offerings to eligible purchasers under Rule 144A and Regulation S under the Securities Act. The indenture (as may be amended or supplemented from time to time, the Vistra Operations Senior Secured Indenture) governing the 4.875% senior secured notes due 2024, the 3.550% senior secured notes due 2024, the 5.125% senior secured notes due 2025, the 3.700% senior secured notes due 2027, the 4.300% senior secured notes due 2029 and the 6.950% Senior Secured Notes (collectively, as each may be amended or supplemented from time to time, the Senior Secured Notes) provides for the full and unconditional guarantee by certain of Vistra Operations' current and future subsidiaries that also guarantee the Vistra Operations Credit Facilities. The Senior Secured Notes are secured by a first-priority security interest in the same collateral that is pledged for the benefit of the lenders under the Vistra Operations Credit Facilities, which consists of a substantial portion of the property, assets and rights owned by Vistra Operations and certain direct and indirect subsidiaries of Vistra Operations as subsidiary guarantors (collectively, the Guarantor Subsidiaries) as well as the stock of Vistra Operations held by Vistra Intermediate. The collateral securing the Senior Secured Notes will be released if Vistra Operations' senior, unsecured long-term debt securities obtain an investment grade rating from two out of the three rating agencies, subject to reversion if such rating agencies withdraw the investment grade rating of Vistra Operations' senior, unsecured long-term debt securities or downgrade such rating below investment grade. The Vistra Operations Senior Secured Indenture contains certain covenants and restrictions, including, among others, restrictions on the ability of Vistra Operations and its subsidiaries, as applicable, to create certain liens, merge or consolidate with another entity, and sell all or substantially all of their assets.

Energy Harbor Revenue Bonds

Various governmental entities in Ohio and Pennsylvania have previously issued six different tranches of revenue bonds for the benefit of Energy Harbor Generation LLC (EHG) or Energy Harbor Nuclear Generation LLC (EHNG); (collectively, the EH entities), in an aggregate principal amount of $431 million (each such tranche, a revenue bond and collectively, the revenue bonds). Funds from the issuance of the revenue bonds were on-lent by the relevant governmental authority, as lender, to each of EHG or EHNG, as applicable, pursuant to individual loan agreements between the relevant governmental entity and EH entity (each such loan agreement, an on-lending agreement and collectively, the on-lending agreements). Under those on-lending agreements the relevant EH entity is obligated to provide contractual payments to service the principal and interest on the revenue bonds via payments on the loans. The repayment of the loans is not directly secured by the assets of the EH entities; rather such repayment is secured by a pledge of certain mortgage bonds issued by the EH entities to the relevant trustees under the respective revenue bonds. The mortgage bonds are issued by the relevant EH entity pursuant to an open-ended mortgage indenture (the base indenture), and supplemented by supplemental indentures adding the relevant tranche of mortgage bonds backing the related revenue bonds to the base indenture (as so supplemented, the mortgage indentures). The obligations under the mortgage bonds issued pursuant to the mortgage indentures are secured by substantially all assets of the EH entities, including their plants and related real estate. The obligations under mortgage indentures are cross-collateralized to each other, and provide that payments of principal and interest by the relevant EH entity under its on-lending agreement with the governmental authority constitute a dollar-for-dollar credit against the payment obligations of such EH entity under the mortgage indentures, such that the EH entities are never expected to make any payments under the bonds governed by the mortgage indentures. In the event of a default under the on-lending agreements (which are not cross-defaulted to each other), the trustee of the revenue bonds would be able to call the mortgage bonds due and, if unpaid, foreclose on the assets securing the mortgage bonds. The obligations of the EH entities under the on-lending agreements and the related mortgage indentures are guaranteed on an unsecured basis by Energy Harbor. Neither the EH entities nor Energy Harbor provides credit support for any of the debt obligations of Vistra Operations.

Vistra Operations Senior Unsecured Notes

In April 2024, Vistra Operations issued $ 1.0 billion aggregate principal amount of 6.875% senior unsecured notes due 2032 (6.875% Senior Unsecured Notes) in an offering to eligible purchasers under Rule 144A and Regulation S under the Securities Act. The 6.875% Senior Unsecured Notes provides for the full and unconditional guarantee by certain of Vistra Operations' current and future subsidiaries that also guarantee the Vistra Operations Credit Facilities, by and among the Issuer, as borrower, Vistra Intermediate Company LLC, the guarantors party thereto, and Citibank, N.A. as administrative and collateral agent. The 6.875% Senior Secured Notes mature in April 15, 2032, with interest payable in cash semiannually in arrears on April 15 and October 15 beginning October 15, 2024. Net proceeds totaling approximately $990 million, together with proceeds from the April 2024 issuance of 6.000% Senior Secured Notes discussed above and cash on hand, will be used for general corporate purposes, including to refinance outstanding indebtedness (including the upcoming 2024 senior secured debt maturities). Fees and expenses related to the offering totaled $10 million and were capitalized as a reduction in the carrying amount of the debt.

Since 2018, Vistra Operations has issued and sold $ 6.30 billion aggregate principal amount of senior unsecured notes in offerings to eligible purchasers under Rule 144A and Regulation S under the Securities Act. The indentures (as may be amended or supplemented from time to time, the Vistra Operations Senior Unsecured Indentures) governing the 5.500% senior unsecured notes due 2026, the 5.625% senior unsecured notes due 2027, the 5.000% senior unsecured notes due 2027, the 4.375% senior unsecured notes due 2029 and the 7.750% Senior Unsecured Notes (collectively, as each may be amended or supplemented from time to time, the Senior Unsecured Notes) provide for the full and unconditional guarantee by the Guarantor Subsidiaries of the punctual payment of the principal and interest on such notes. The Vistra Operations Senior Unsecured Indentures contain certain covenants and restrictions, including, among others, restrictions on the ability of Vistra Operations and its subsidiaries, as applicable, to create certain liens, merge or consolidate with another entity, and sell all or substantially all of their assets.

Debt Repurchase Program

In January 2024, we settled the Senior Secured Notes Tender Offer. In April 2024, the Board authorized the voluntary repayment or repurchase of up to $ 1.0 billion of outstanding debt, with such authorization expiring on December 31, 2024.

11. COMMODITY AND OTHER DERIVATIVE CONTRACTUAL ASSETS AND LIABILITIES

We transact in derivative instruments, such as options, swaps, futures and forward contracts, to manage our exposure to commodity price and interest rate volatility. Although we do engage in economic hedging activities to manage our exposure related to commodity price fluctuations through the use of financial and physical derivative contracts, we have no derivative positions accounted for as cash flow or fair value hedges as of March 31, 2024. All changes in the fair values of our derivative contracts, excluding contracts which are considered normal purchases and sales (NPNS), are recognized as gains or losses in the earnings of the periods in which they occur. See Note 12 for a discussion of the fair value of derivatives.

Commodity Hedging and Trading Activity

We utilize natural gas and electricity derivatives to (i) reduce exposure to changes in electricity prices primarily to hedge future revenues from electricity sales from our generation assets, and (ii) to hedge future purchased power costs for our retail operations. We also utilize short-term electricity, natural gas, coal, and emissions derivative instruments for fuel hedging and other purposes. Counterparties to these transactions include energy companies, financial institutions, electric utilities, independent power producers, fuel oil and natural gas producers, local distribution companies and energy marketing companies. Unrealized gains and losses arising from changes in the fair value of derivative instruments as well as realized gains and losses upon settlement of the instruments are reported in our condensed consolidated statements of operations in either operating revenues or fuel, purchased power costs and delivery fees.

Interest Rate Swaps

Interest rate swap agreements are used to reduce volatility in interest costs and related cash flows associated with our variable rate debt obligations. Unrealized gains and losses arising from changes in the fair value of the interest rate swaps as well as realized gains and losses upon settlement are reported in our condensed consolidated statements of operations in interest expense and related charges.

As of March 31, 2024, Vistra has entered into the following interest rate swaps:

(in millions, except percentages)	Notional Amount	Expiration Date	Rate Range (c)
Swapped to fixed (a)	$3,000	July 2026	4.89 % - 4.97%
Swapped to variable (a)	$700	July 2026	3.44 % - 3.49%
Swapped to fixed (b)	$1,625	December 2030	5.20 % - 5.37%

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(a) The $700 million of pay variable rate and receive fixed rate swaps match the terms of a portion of the $ 3.0 billion pay fixed rate and receive variable rate swaps. These matched swaps will settle over time and effectively offset the hedged position. These offsetting swaps expiring in July 2026 hedge our exposure on $2.3 billion of variable rate debt through July 2026.

(b) Effective from July 2026 through December 2030.

(c) The rate ranges reflect the fixed leg of each swap at a Term SOFR rate plus an interest margin of 2.00%.

Financial Statement Effects of Derivatives

Substantially all derivative contractual assets and liabilities are accounted for under mark-to-market accounting consistent with accounting standards related to derivative instruments and hedging activities. The following tables provide detail of derivative contractual assets and liabilities as reported in our condensed consolidated balance sheets as of March 31, 2024 and December 31, 2023. Derivative asset and liability totals represent the net value of the contract, while the balance sheet totals represent the gross value of the contract.

(in millions)	March 31, 2024				
	Derivative Assets		Derivative Liabilities		
	Commodity Contracts	Interest Rate Swaps	Commodity Contracts	Interest Rate Swaps	Total
Current assets	$ 3,479	$ 59	$ 19	$ —	$ 3,557
Noncurrent assets	653	48	2	—	703
Current liabilities	(14)	—	(5,176)	(24)	(5,214)
Noncurrent liabilities	(5)	—	(1,866)	(21)	(1,892)
Net assets (liabilities)	$ 4,113	$ 107	$ (7,021)	$ (45)	$ (2,846)

(in millions)	December 31, 2023				
	Derivative Assets		Derivative Liabilities		
	Commodity Contracts	Interest Rate Swaps	Commodity Contracts	Interest Rate Swaps	Total
Current assets	$ 3,585	$ 53	$ 7	$ —	$ 3,645
Noncurrent assets	565	11	1	—	577
Current liabilities	(1)	—	(5,233)	(24)	(5,258)
Noncurrent liabilities	(5)	—	(1,659)	(24)	(1,688)
Net assets (liabilities)	$ 4,144	$ 64	$ (6,884)	$ (48)	$ (2,724)

The following table presents the pre-tax effect of derivative gains (losses) on net income, including both the realized and unrealized effects. Amount represents changes in fair value of positions in the derivative portfolio during the period, as realized amounts related to positions settled are assumed to equal reversals of previously recorded unrealized amounts.

Derivative (condensed consolidated statements of operations presentation) (in millions)	Three Months Ended March 31,	
	2024	2023
Commodity contracts (Operating revenues)	$ (608)	$ 669
Commodity contracts (Fuel, purchased power costs and delivery fees)	45	(295)
Interest rate swaps (Interest expense and related charges)	58	(28)
Net gain (loss)	$ (505)	$ 346

Balance Sheet Presentation of Derivatives

We elect to report derivative assets and liabilities in our condensed consolidated balance sheets on a gross basis without taking into consideration netting arrangements we have with counterparties to those derivatives. We maintain standardized master netting agreements with certain counterparties that allow for the right to offset assets and liabilities and collateral in order to reduce credit exposure between us and the counterparty. These agreements contain specific language related to margin requirements, monthly settlement netting, cross-commodity netting and early termination netting, which is negotiated with the contract counterparty.

Generally, margin deposits that contractually offset these derivative instruments are reported separately in our condensed consolidated balance sheets, with the exception of certain margin amounts related to changes in fair value on CME transactions that are legally characterized as settlement of forward exposure rather than collateral. Margin deposits received from counterparties are primarily used for working capital or other general corporate purposes.

The following tables reconcile our derivative assets and liabilities on a contract basis to net amounts after taking into consideration netting arrangements with counterparties and financial collateral:

	March 31, 2024				December 31, 2023			
(in millions)	Derivative Assets and Liabilities	Offsetting Instruments (a)	Cash Collateral (Received) Pledged (b)	Net Amounts	Derivative Assets and Liabilities	Offsetting Instruments (a)	Cash Collateral (Received) Pledged (b)	Net Amounts
Derivative assets:								
Commodity contracts	$ 4,113	$ (3,392)	$ (84)	$ 637	$ 4,144	$ (3,519)	$ (26)	$ 599
Interest rate swaps	107	(35)	—	72	64	(28)	—	36
Total derivative assets	4,220	(3,427)	(84)	709	4,208	(3,547)	(26)	635
Derivative liabilities:								
Commodity contracts	(7,021)	3,392	914	(2,715)	(6,884)	3,519	970	(2,395)
Interest rate swaps	(45)	35	—	(10)	(48)	28	—	(20)
Total derivative liabilities	(7,066)	3,427	914	(2,725)	(6,932)	3,547	970	(2,415)
Net amounts	$ (2,846)	$ —	$ 830	$ (2,016)	$ (2,724)	$ —	$ 944	$ (1,780)

(a) Amounts presented exclude trade accounts receivable and payable related to settled financial instruments.
(b) Represents cash amounts received or pledged pursuant to a master netting arrangement, including fair value-based margin requirements, and to a lesser extent, initial margin requirements.

Derivative Volumes

The following table presents the gross notional amounts of derivative volumes, by commodity, excluding those derivatives that qualified for the NPNS scope exception, as of March 31, 2024 and December 31, 2023:

	March 31, 2024	December 31, 2023	
Derivative type	Notional Volume		Unit of Measure
Natural gas (a)	5,277	5,335	Million MMBtu
Electricity	793,133	800,001	GWh
Financial transmission rights (b)	235,014	250,895	GWh
Coal	31	35	Million U.S. tons
Fuel oil	7	3	Million gallons
Emissions	29	24	Million U.S. tons
Renewable energy certificates	29	29	Million certificates
Interest rate swaps – variable/fixed (c)	$ 4,625	$ 5,225	Million U.S. dollars
Interest rate swaps – fixed/variable (c)	$ 700	$ 1,300	Million U.S. dollars

(a) Represents gross notional forward sales, purchases and options transaction, locational basis swaps and other natural gas transactions.
(b) Represents gross forward purchases associated with instruments used to hedge electricity price differences between settlement points within regions.
(c) Includes notional amounts of interest rate swaps with maturity dates varying between July 2026 through December 2030.

Credit Risk-Related Contingent Features of Derivatives

Our derivative contracts may contain certain credit risk-related contingent features that could trigger liquidity requirements in the form of cash collateral, letters of credit or some other form of credit enhancement. Certain of these agreements may require the posting of additional collateral if our credit rating is downgraded by one or more credit rating agencies or include cross-default contractual provisions that could result in the settlement of such contracts if there was a failure under other financing arrangements related to payment terms or other covenants.

The following table presents the commodity derivative liabilities subject to credit risk-related contingent features that are not fully collateralized:

(in millions)	March 31, 2024	December 31, 2023
Fair value of derivative contract liabilities (a)	$ (2,115)	$ (1,890)
Offsetting fair value under netting arrangements (b)	707	692
Cash collateral and letters of credit	985	854
Liquidity exposure	$ (423)	$ (344)

(a) Excludes fair value of contracts that contain contingent features that do not provide specific amounts to be posted if features are triggered, including provisions that generally provide the right to request additional collateral (material adverse change, performance assurance and other clauses).

(b) Amounts include the offsetting fair value of in-the-money derivative contracts and net accounts receivable under master netting arrangements.

Concentrations of Credit Risk Related to Derivatives

We have concentrations of credit risk with the counterparties to our derivative contracts. As of March 31, 2024, total credit risk exposure to all counterparties related to derivative contracts totaled $4.599 billion (including associated accounts receivable). The net exposure to those counterparties totaled $732 million as of March 31, 2024, after taking into effect netting arrangements, setoff provisions and collateral, with the largest net exposure from any single counterparty totaling $248 million. As of March 31, 2024, the credit risk exposure to the banking and financial sector represented 83% of the total credit risk exposure and 36% of the net exposure.

This concentration of credit risk increases the risk that a default by any of our counterparties could have a material effect on our financial condition, results of operations and liquidity. We maintain credit risk policies with regard to our counterparties to minimize overall credit risk. These policies authorize specific risk mitigation procedures including, but not limited to, (i) requiring counterparties to have investment grade credit ratings, (ii) use of standardized master agreements with our counterparties that allow for netting of positive and negative exposures, and that detail credit enhancements (such as parent guarantees, letters of credit, surety bonds, liens on assets and margin deposits) required in the event of a material downgrade in their credit rating.

12. FAIR VALUE MEASUREMENTS

Fair value measurements are based upon inputs that market participants use in pricing an asset or liability, which are characterized according to a hierarchy that prioritizes those inputs based on the degree to which they are observable. Observable inputs represent market data obtained from independent sources, whereas unobservable inputs reflect our own market assumptions. We categorize our assets and liabilities recorded at fair value based upon the following fair value hierarchy as defined by GAAP:

- Level 1 valuations use quoted prices in active markets for identical assets or liabilities that are accessible at the measurement date.
- Level 2 valuations use over-the-counter broker quotes, quoted prices for similar assets or liabilities that are corroborated by correlations or other mathematical means, and other valuation inputs such as interest rates and yield curves observable at commonly quoted intervals.
- Level 3 valuations use unobservable inputs for the asset or liability, typically reflecting our estimate of assumptions that market participants would use in pricing the asset or liability. The fair value is therefore determined using model-based techniques, including discounted cash flow models.

The fair value input hierarchy level to which an asset or liability measurement in its entirety falls is determined based on the lowest level input that is significant to the measurement.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Assets and liabilities measured at fair value on a recurring basis consisted of the following at the respective balance sheet dates shown below:

	March 31, 2024					December 31, 2023				
(in millions)	Level 1	Level 2	Level 3	Reclass (a)	Total	Level 1	Level 2	Level 3	Reclass (a)	Total
Assets:										
Commodity contracts (b)	$ 2,827	$ 571	$ 715	$ 40	$ 4,153	$ 2,886	$ 628	$ 630	$ 14	$ 4,158
Interest rate swaps (c)	—	107	—	—	107	—	64	—	—	64
NDTs – equity securities (d) (e)	1,398	—	—	—	1,398	638	—	—		638
NDTs – debt securities (d) (f)	101	1,908	—		2,009	—	734	—		734
Sub-total	$ 4,326	$ 2,586	$ 715	$ 40	7,667	$ 3,524	$ 1,426	$ 630	$ 14	5,594
Assets measured at net asset value (g):										
NDTs – equity securities (d) (e) (g)					728					579
Total assets					$ 8,395					$ 6,173
Liabilities:										
Commodity contracts	$ 3,619	$ 1,538	$ 1,864	$ 40	$ 7,061	$ 3,815	$ 1,395	$ 1,674	$ 14	$ 6,898
Interest rate swaps	—	45	—	—	45	—	48	—	—	48
Total liabilities	$ 3,619	$ 1,583	$ 1,864	$ 40	$ 7,106	$ 3,815	$ 1,443	$ 1,674	$ 14	$ 6,946

(a) Fair values for each level are determined on a contract basis, but certain contracts are in both an asset and a liability position. This reclassification represents the adjustment needed to reconcile to the gross amounts presented on our condensed consolidated balance sheets.

(b) Commodity contracts consist primarily of natural gas, electricity, coal and emissions agreements and include financial instruments entered into for economic hedging purposes as well as physical contracts that have not been designated as NPNS.

(c) Interest rate swaps are used to reduce exposure to interest rate changes by converting floating-rate interest to fixed rates.

(d) NDT assets represent securities held for the purpose of funding the future retirement and decommissioning of our nuclear generation facilities. These investments include equity, debt and other fixed-income securities consistent with investment rules established by the NRC and the PUCT. The NDT investments are included in Investments in the condensed consolidated balance sheets.

(e) The investment objective for NDT equity securities is to invest tax efficiently and to match the performance of the S&P 500 Index for U.S. equity investments and the MSCI EAFE Index for non-U.S. equity investments.

(f) The investment objective for NDT debt securities is to invest in a diversified, high quality, tax efficient portfolio. The debt securities are weighted with government and investment grade corporate bonds. Other investable debt securities include, but are not limited to, municipal bonds, high yield bonds, securitized bonds, non-U.S. developed bonds, emerging market bonds, loans and treasury inflation-protected securities. The debt securities had an average coupon rate of 3.69% and 3.19% as of March 31, 2024 and December 31, 2023, respectively, and an average maturity of 8 years and 11 years as of both March 31, 2024 and December 31, 2023. NDT debt securities held as of March 31, 2024 mature as follows: $1.042 billion in one to five years, $528 million in five to 10 years and $439 million after 10 years.

(g) Net asset value is a practical expedient used for the classification of assets that do not have readily determinable fair values and therefore are not classified in the fair value hierarchy. This amount is presented to permit reconciliation of this table to the amounts presented in our condensed consolidated balance sheets.

The following tables present the fair value of the Level 3 assets and liabilities by major contract type and the significant unobservable inputs used in the valuations as of March 31, 2024 and December 31, 2023:

March 31, 2024

Contract Type (a)	Fair Value (in millions) Assets	Liabilities	Total	Valuation Technique	Significant Unobservable Input	Range (b)	Average (b)
Electricity purchases and sales	$ 516	$ (1,523)	$ (1,007)	Income Approach	Hourly price curve shape (c)	$— to $95 MWh	$47
					Illiquid delivery periods for hub power prices and Heat Rates (d)	$35 to $105 MWh	$72
Options	—	(253)	(253)	Option Pricing Model	Natural gas to power correlation (e)	10% to 100%	55%
					Power and natural gas volatility (e)	5% to 870%	439%
Financial transmission rights/Congestion revenue rights	173	(33)	140	Market Approach (f)	Illiquid price differences between settlement points (g)	$(60) to $20 MWh	$(19)
Natural gas	14	(46)	(32)	Income Approach	Natural gas basis (h)	$— to $15 MMBtu	$6
					Illiquid delivery periods (i)	$— to $5 MMBtu	$4
Other (j)	12	(9)	3				
Total	$ 715	$ (1,864)	$ (1,149)				

December 31, 2023

Contract Type (a)	Fair Value (in millions) Assets	Liabilities	Total	Valuation Technique	Significant Unobservable Input	Range (b)	Average (b)
Electricity purchases and sales	$ 449	$ (1,273)	$ (824)	Income Approach	Hourly price curve shape (c)	$— to $85 MWh	$44
					Illiquid delivery periods for hub power prices and Heat Rates (d)	$30 to $110 MWh	$71
Options	1	(237)	(236)	Option Pricing Model	Natural gas to power correlation (e)	10% to 100%	55%
					Power and natural gas volatility (e)	10% to 870%	441%
Financial transmission rights/Congestion revenue rights	157	(34)	123	Market Approach (f)	Illiquid price differences between settlement points (g)	$(85) to $25 MWh	$(30)
Natural gas	9	(112)	(103)	Income Approach	Natural gas basis (h)	$— to $15 MMBtu	$6
					Illiquid delivery periods (i)	$— to $5 MMBtu	$4
Other (j)	14	(18)	(4)				
Total	$ 630	$ (1,674)	$ (1,044)				

(a) (i) Electricity purchase and sales contracts include power and Heat Rate positions in ERCOT, PJM, ISO-NE, NYISO, MISO and CAISO regions, (ii) Options consist of physical electricity options, spread options and natural gas options, (iii) Forward purchase contracts (swaps and options) used to hedge electricity price differences between settlement points are referred to as congestion revenue rights (CRRs) in ERCOT and financial transmission rights (FTRs) in PJM, ISO-NE, NYISO and MISO regions, and (iv) Natural gas contracts include swaps and forward contracts.

(b) The range of the inputs may be influenced by factors such as time of day, delivery period, season and location. The average represents the arithmetic average of the underlying inputs and is not weighted by the related fair value or notional amount.
(c) Primarily based on the historical range of forward average hourly ERCOT North Hub and ERCOT South and West Zone prices.
(d) Primarily based on historical forward ERCOT and PJM power prices and ERCOT Heat Rate variability.
(e) Primarily based on the historical forward correlation and volatility within ERCOT and PJM.
(f) While we use the market approach, there is insufficient market data for the inputs to the valuation to consider the valuation liquid.
(g) Primarily based on the historical price differences between settlement points within ERCOT hubs and load zones.
(h) Primarily based on the historical forward PJM and Northeast natural gas basis prices and fixed prices.
(i) Primarily based on the historical forward natural gas fixed prices.
(j) Other includes contracts for coal and environmental allowances.

The following table presents the changes in fair value of the Level 3 assets and liabilities. All Level 3 assets and liabilities are commodity contracts, therefore, substantially all changes in fair value detailed below are reported as Operating Revenues in the condensed consolidated statements of operations:

	Three Months Ended March 31,	
(in millions)	**2024**	**2023**
Net liability balance at beginning of period	$ (1,044)	$ (1,219)
Total unrealized valuation losses	(269)	(76)
Purchases, issuances and settlements (a):		
Purchases	70	49
Issuances	(3)	(5)
Settlements	99	17
Transfers into Level 3 (b)	3	(14)
Transfers out of Level 3 (b)	8	23
Net liabilities assumed in connection with the Energy Harbor Merger	(13)	—
Net change	(105)	(6)
Net liability balance at end of period	$ (1,149)	$ (1,225)
Unrealized valuation losses relating to instruments held at end of period	$ (325)	$ (159)

(a) Settlements reflect reversals of unrealized mark-to-market valuations previously recognized in net income. Purchases and issuances reflect option premiums paid or received, including CRRs and FTRs.
(b) Includes transfers due to changes in the observability of significant inputs. All Level 3 transfers during the periods presented are in and out of Level 2. For the three months ended March 31, 2024, transfers into Level 3 primarily consist of power derivatives where forward pricing inputs have become unobservable and transfers out of Level 3 primarily consist of coal and natural gas derivatives where forward pricing inputs have become observable. For the three months ended March 31, 2023, transfers into Level 3 primarily consist of power derivatives where forward pricing inputs have become unobservable and transfers out of Level 3 primarily consist of power derivatives where forward pricing inputs have become observable.

Assets and Liabilities Recorded on a Non-Recurring Basis

Certain assets and liabilities are measured at fair value on a nonrecurring basis. These assets and liabilities are not measured at fair value on an ongoing basis, but are subject to fair value adjustments in certain circumstances. These assets and liabilities can include inventories, assets acquired and liabilities assumed in business combinations, goodwill and other long-lived assets that are written down to fair value when they are determined to be impaired or held for sale.

The Energy Harbor Merger was accounted for under the acquisition method which requires all assets acquired and liabilities assumed in the acquisition be recorded at fair value at the acquisition date. See Note 2 for additional information.

13. TAX RECEIVABLE AGREEMENT OBLIGATION

On the Effective Date, Vistra entered into the TRA with a transfer agent on behalf of certain former first-lien creditors of TCEH, whereby we issued TRA rights to these former first-lien creditors of TCEH entitled to receive them under the Plan of Reorganization (TRA Rights). The TRA generally provides for the payment by us to holders of TRA Rights of 85% of the amount of cash savings, if any, in U.S. federal and state income tax that we realize in periods after Emergence as a result of (i) certain transactions consummated pursuant to the Plan of Reorganization (including the step-up in tax basis in our assets resulting from the PrefCo Preferred Stock Sale), (ii) the tax basis of all assets acquired in connection with the acquisition of two CCGT natural gas-fueled generation facilities in April 2016 and (iii) tax benefits related to imputed interest deemed to be paid by us as a result of payments under the TRA, plus interest accruing from the due date of the applicable tax return.

Vistra began a series of repurchases of TRA Rights (Repurchase) from certain registered holders of the TRA Rights (Selling Holders) in December 2023. In connection with the Repurchase, holders of approximately 74% of the outstanding TRA Rights consented to certain amendments to the TRA which were effected in an Amended and Restated Tax Receivables Agreement (A&R TRA), dated as of December 29, 2023. Such amendments to the TRA included (i) the removal of the Company's obligation to provide registered holders of the TRA Rights (Holders) with regular reporting and access to information, (ii) limitations on the transferability of the TRA Rights, (iii) removal of certain obligations of the Company in the event it incurs indebtedness and (iv) a change to the definition of "Change of Control."

The following table details our repurchases of TRA Rights during the periods indicated:

	Number of TRA Rights
TRA Rights issued on the Effective Date and outstanding as of January 1, 2023 and March 31, 2023	426,369,370
The December 31, 2023 Repurchase (a)	(317,387,412)
TRA Rights outstanding as of January 1, 2024	108,981,958
The January 11, 2024 Repurchase (b)	(43,494,944)
The February 13, 2024 Repurchase (c)	(55,056,931)
The February 28, 2024 Repurchase (c)	(2,235,020)
TRA Rights outstanding as of March 31, 2024 (d)	8,195,063

(a) On December 31, 2023, we repurchased TRA Rights in exchange for consideration of $ 1.50 per TRA Right totaling an aggregate purchase price of $ 476 million. The consideration for the December 31, 2023 Repurchase was conveyed through the issuance of 476,081 shares of Vistra Series C Preferred Stock to the Selling Holders.

(b) On January 11, 2024, we Repurchased TRA Rights in exchange for consideration of $ 1.50 per TRA Right totaling an aggregate purchase price of $ 65 million using cash on hand.

(c) On January 31, 2024, we announced a cash tender offer to purchase any and all outstanding TRA Rights in exchange for consideration of $ 1.50 per tendered TRA Right accepted for purchase prior to close of business of February 13, 2024 (Early Tender Date), which included an early tender premium of $0.05 per TRA Right accepted for purchase. On the Early Tender Date the Company Repurchased TRA Rights in exchange for total consideration of $ 83 million and on February 28, 2024 additional TRA Rights were repurchased under the cash tender offer for total consideration of $3 million or $ 1.45 per TRA Right accepted for purchase.

(d) Represents TRA Rights outstanding following Repurchases of an aggregate of 98% of the TRA Rights initially issued upon Emergence.

The following table summarizes the changes to the TRA obligation, reported as other current liabilities and Tax Receivable Agreement obligation in our condensed consolidated balance sheets:

	Three Months Ended March 31,	
(in millions)	2024	2023
TRA obligation at the beginning of the period	$ 171	$ 522
Accretion expense	6	20
Changes in tax assumptions impacting timing of payments	(1)	45
Impacts of Tax Receivable Agreement	5	65
Repurchase/tender of TRA Rights	(161)	—
TRA obligation at the end of the period	15	587
Less amounts due currently	—	(9)
Noncurrent TRA obligation at the end of the period	$ 15	$ 578

14. ASSET RETIREMENT OBLIGATIONS

Our asset retirement obligations (ARO) primarily relate to nuclear generation plant decommissioning, land reclamation related to lignite mining, remediation or closure of coal ash basins, and generation plant disposal costs. AROs are based on legal obligations associated with enacted law, regulatory, or contractual retirement requirements for which decommissioning timing and cost estimates are reasonably estimable. See Note 15 for a discussion of proposed regulations which could result in additional AROs if enacted as proposed and/or if decommissioning timing and cost estimates are revised based on new interpretations of the rules.

The following table summarizes the changes to our current and noncurrent ARO liabilities:

	Three Months Ended March 31, 2024			Three Months Ended March 31, 2023		
(in millions)	Nuclear Plant Decommissioning	Land Reclamation, Coal Ash and Other	Total	Nuclear Plant Decommissioning	Land Reclamation, Coal Ash and Other	Total
Liability at beginning of period	$ 1,742	$ 796	$ 2,538	$ 1,688	$ 749	$ 2,437
Additions:						
Accretion (a)	23	10	33	13	9	22
Adjustment for change in estimates	—	3	3	—	6	6
Adjustment for obligations assumed through acquisition	1,368	—	1,368	—	—	—
Reductions:						
Payments	—	(17)	(17)	—	(18)	(18)
Liability at end of period	3,133	792	3,925	1,701	746	2,447
Less amounts due currently	—	(119)	(119)	—	(139)	(139)
Noncurrent liability at end of period	$ 3,133	$ 673	$ 3,806	$ 1,701	$ 607	$ 2,308

(a) For the three months ended March 31, 2024, nuclear plant decommissioning accretion includes $ 9 million of accretion expense recognized in operating costs in our condensed statements of operations and $14 million reflected as a change in regulatory liability in our condensed consolidated balance sheets. For the three months ended March 31, 2023, nuclear plant decommissioning accretion reflected as a change in regulatory liability in our condensed consolidated balance sheets.

Nuclear Decommissioning AROs

AROs for nuclear generation decommissioning relate to the Comanche Peak plant in ERCOT and the facilities acquired from Energy Harbor which include the Beaver Valley, Perry and Davis-Besse plants in PJM (the PJM nuclear facilities). To estimate our nuclear decommissioning obligations we use a discounted cash flow model which, on a unit-by-unit basis, considers multiple decommissioning methods and are based on decommissioning cost studies, cost escalation rates, probabilistic cash flow models, and discount rates.

As of March 31, 2024, the carrying value of our ARO related to our Comanche Peak plant decommissioning estimate totaled $ 1.756 billion, which is lower than the fair value of the assets contained in the Comanche Peak NDT of $2.078 billion. The difference between the carrying value of the ARO and the NDT represents a regulatory liability of $322 million that has been recorded to our condensed consolidated balance sheets in other noncurrent liabilities and deferred credits since any excess funds in the NDT after decommissioning our Comanche Peak plant would be refunded through Oncor's delivery fees.

The carrying value of our ARO for our PJM nuclear facilities was recorded at fair value on the Merger Date. ARO accretion expense attributable to the PJM nuclear facilities is reflected in operating costs in our condensed consolidated statements of operations. ARO estimates for the PJM nuclear facilities will be evaluated on an individual unit basis at least annually unless triggering events warrant a more frequent review. Any changes in ARO estimates are recorded as an increase or decrease in ARO liability along with a corresponding change to asset retirement cost asset within property, plant and equipment on the condensed consolidated balance sheets; however, if the ARO estimate decreases by more than the remaining ARO asset, the balance of the change is recorded as a reduction to operating costs in our condensed consolidated statement of operations.

15. COMMITMENTS AND CONTINGENCIES

Guarantees

We have entered into contracts that contain guarantees to unaffiliated parties that could require performance or payment under certain conditions. Material guarantees are discussed below.

Letters of Credit

As of March 31, 2024, we had outstanding letters of credit totaling $ 2.995 billion as follows:

- $2.634 billion to support commodity risk management and collateral requirements in the normal course of business, including over-the-counter and exchange-traded transactions and collateral postings with ISOs/RTOs;
- $186 million to support battery and solar development projects;
- $27 million to support executory contracts and insurance agreements;
- $95 million to support our REP financial requirements with the PUCT, and
- $53 million for other credit support requirements.

Surety Bonds

As of March 31, 2024, we had outstanding surety bonds totaling $ 1.5 billion to support performance under various contracts and legal obligations in the normal course of business.

Litigation and Regulatory Proceedings

Our material legal proceedings and regulatory proceedings affecting our business are described below. We believe that we have valid defenses to the legal proceedings described below and intend to defend them vigorously. We also intend to participate in the regulatory processes described below. We record reserves for estimated losses related to these matters when information available indicates that a loss is probable and the amount of the loss, or range of loss, can be reasonably estimated. As applicable, we have established an adequate reserve for the matters discussed below. In addition, legal costs are expensed as incurred. Management has assessed each of the following legal matters based on current information and made a judgment concerning its potential outcome, considering the nature of the claim, the amount and nature of damages sought, and the probability of success. Unless specified below, we are unable to predict the outcome of these matters or reasonably estimate the scope or amount of any associated costs and potential liabilities, but they could have a material impact on our results of operations, liquidity, or financial condition. As additional information becomes available, we adjust our assessment and estimates of such contingencies accordingly. Because litigation and rulemaking proceedings are subject to inherent uncertainties and unfavorable rulings or developments, it is possible that the ultimate resolution of these matters could be at amounts that are different from our currently recorded reserves and that such differences could be material.

Litigation

Natural Gas Index Pricing Litigation — We, through our subsidiaries, and another company remain named as defendants in one consolidated putative class action lawsuit pending in federal court in Wisconsin claiming damages resulting from alleged price manipulation through false reporting of natural gas prices to various index publications, wash trading and churn trading from 2000-2002. The plaintiffs in these cases allege that the defendants engaged in an antitrust conspiracy to inflate natural gas prices during the relevant time period and seek damages under the respective state antitrust statutes. In April 2023, the U.S. Court of Appeals for the Seventh Circuit (Seventh Circuit Court) heard oral argument on an interlocutory appeal challenging the district court's order certifying a class.

Illinois Attorney General Complaint Against Illinois Gas & Electric (IG&E) — In May 2022, the Illinois Attorney General filed a complaint against IG&E, a subsidiary we acquired when we purchased Crius Energy Trust in July 2019. The complaint filed in Illinois state court alleges, among other things, that IG&E engaged in improper marketing conduct and overcharged customers. The vast majority of the conduct in question occurred prior to our acquisition of IG&E. In July 2022, we moved to dismiss the complaint, and in October 2022, the district court granted in part our motion to dismiss, barring all claims asserted by the Illinois Attorney General that were outside of the 5-year statute of limitations period, which now limits the period during which claims may be made to start in May 2017 rather than extending back to 2013 as the Illinois Attorney General had alleged in its complaint.

Ohio House Bill 6 ("HB6") — In July 2019, Ohio adopted a law referred to as HB6, which, among other things, provided subsidies for two nuclear power plants which we acquired in March 2024 upon the closing of our merger with Energy Harbor. We had opposed enactment of that subsidy legislation at the time, and the nuclear subsidies were repealed in 2021 prior to any subsidies being distributed. The U.S. Attorney's Office conducted an investigation into the activities related to the passage of HB6, and Energy Harbor received a grand jury subpoena in July 2020 requiring production of certain information related to that investigation. Energy Harbor completed its responses to that subpoena by December 2021. In August 2020, the Ohio Attorney General filed a civil Racketeer Influenced and Corrupt Organizations Act (RICO) complaint against FirstEnergy Corp. and various Energy Harbor companies related to passage of HB6 (*State of Ohio ex rel. Dave Yost, Ohio Attorney General v. FirstEnergy Corp., et al.* , Franklin County, Ohio Common Pleas Court Case No. 20CV006281 and *State of Ohio ex rel. Dave Yost, Ohio Attorney General v. Energy Harbor Corp.* , et al., Franklin County, Ohio Common Pleas Court Case No. 20CV007386). Motions to dismiss those cases remain pending and the case is currently stayed.

Winter Storm Uri Legal Proceedings

Repricing Challenges — In March 2021, we filed an appeal in the Third Court of Appeals in Austin, Texas (Third Court of Appeals), challenging the PUCT's February 15 and February 16, 2021 orders governing ERCOT's determination of wholesale power prices during load-shedding events. Other parties also supported our challenge to the PUCT's orders. In March 2023, the Third Court of Appeals issued a unanimous decision and agreed with our arguments that the PUCT's pricing orders constituted de facto competition rules and exceeded the PUCT's statutory authority. The Third Court of Appeals vacated the pricing orders and remanded the matter to the PUCT for further proceedings. In March 2023, the PUCT appealed the Third Court of Appeals' ruling to the Texas Supreme Court. In September 2023, the Texas Supreme Court granted the PUC and its intervenors petitions for review of the Third Court of Appeals' decision and the Court heard oral argument in January 2024. In addition, we have also submitted settlement disputes with ERCOT over power prices and other issues during Winter Storm Uri. Following an appeal of the PUCT's March 5, 2021 verbal order and other statements made by the PUCT, the Texas Attorney General, on behalf of the PUCT, its client, represented in a letter agreement filed with the Third Court of Appeals that we and other parties may continue disputing the pricing during Winter Storm Uri through the ERCOT process and, to the extent the outcome of that process comes before the PUCT for review, the PUCT has not prejudged or made a final decision on that matter. We are not able to reasonably estimate the financial statement impact of a repricing as, among other things, the matter is subject to ongoing legal proceedings and, even if we were ultimately successful in the current legal proceeding, the price at which the market would be resettled is not reasonably estimable because that would be subject to further proceedings at ERCOT and the PUCT.

Regulatory Investigations and Other Litigation Matters — Following the events of Winter Storm Uri, various regulatory bodies, including ERCOT, the ERCOT Independent Market Monitor, the Texas Attorney General, the FERC and the NRC initiated investigations or issued requests for information of various parties related to the significant load shed event that occurred during the event as well as operational challenges for generators arising from the event, including performance and fuel and supply issues. We responded to all those investigatory requests. In addition, a large number of personal injury and wrongful death lawsuits related to Winter Storm Uri have been, and continue to be, filed in various Texas state courts against us and numerous generators, transmission and distribution utilities, retail and electric providers, as well as ERCOT. We and other defendants requested that all pretrial proceedings in these personal injury cases be consolidated and transferred to a single multi-district litigation (MDL) pretrial judge. In June 2021, the MDL panel granted the request to consolidate all these cases into an MDL for pretrial proceedings. Additional personal injury cases that have been, and continue to be, filed on behalf of additional plaintiffs have been consolidated with the MDL proceedings. In addition, in January 2022, an insurance subrogation lawsuit was filed in Austin state court by over one hundred insurance companies against ERCOT, Vistra and several other defendants. The lawsuit seeks recovery of insurance funds paid out by these insurance companies to various policyholders for claims related to Winter Storm Uri, and that case has also now been consolidated with the MDL proceedings. In the summer of 2022, various defendant groups filed motions to dismiss five so-called bellwether cases, and the MDL court heard oral argument on those motions in October 2022. In January 2023, the MDL court ruled on the various motions to dismiss and denied the motions to dismiss of the generator defendants and the transmission distribution utilities defendants, but granted the motions of some of the other defendant groups, including the retail electric providers and ERCOT. In February 2023, the generator defendants filed a mandamus petition with the First Court of Appeals in Houston, Texas (First Court of Appeals) to review the MDL court's denial of the motion to dismiss. In December 2023, the First Court of Appeals in a unanimous decision granted our mandamus petition and instructed the MDL court to grant the motions to dismiss in full filed by the generator defendants. In January 2024, the plaintiffs filed a request with the full Court of Appeals to review that panel ruling. We believe we have strong defenses to these lawsuits and intend to defend against these cases vigorously.

Greenhouse Gas Emissions (GHG)

In July 2019, the EPA finalized a rule that repealed the Clean Power Plan (CPP) that had been finalized in 2015 and established new regulations addressing GHG emissions from existing coal-fueled electric generation units, referred to as the Affordable Clean Energy (ACE) rule. The ACE rule developed emission guidelines that states must use when developing plans to regulate GHG emissions from existing coal-fueled electric generation units. In response to challenges brought by environmental groups and certain states, the U.S. Court of Appeals for the District of Columbia Circuit (D.C. Circuit Court) vacated the ACE rule, including the repeal of the CPP, in January 2021 and remanded the rule to the EPA for further action. In June 2022, the U.S. Supreme Court issued an opinion reversing the D.C. Circuit Court's decision, and finding that the EPA exceeded its authority under Section 111 of the Clean Air Act when the EPA set emission requirements in the CPP based on generation shifting. In October 2022, the D.C. Circuit Court issued an amended judgment, denying petitions for review of the ACE rule and challenges to the repeal of the CPP. In May 2023, the EPA released a new proposal regulating power plant GHG emissions, while also proposing to repeal the ACE rule. In April 2024, the EPA released a final GHG rule that repealed the ACE rule and sets limits for (a) new natural gas-fired combustion turbines and (b) existing coal-, oil- and natural gas-fired steam generation units. The standards are based on technologies such as carbon capture and sequestration/storage (CCS) and natural gas co-firing. Starting in 2030, the rule would begin to require more CO_2 emissions control at certain existing fossil fuel-fired steam generating units, with more stringent standards beginning in 2032 for coal-fired units that plan to operate for a longer period of time. For new natural gas combustion turbines that operate more frequently, the rule would phase in increasingly stringent CO_2 requirements over time. Under the rule, states would be required to submit plans to the EPA within 24 months of the rule's publication in the Federal Register that provide for the establishment, implementation, and enforcement of standards of performance for existing sources. These state plans must generally establish standards that are at least as stringent as the EPA's emission guidelines. Under the rule, existing coal-fired steam generation units that will operate on or after January 1, 2039 must start complying with their standards of performance (based on application of CCS with 90 percent capture) by January 1, 2032. Units that are permanently retiring before January 1, 2039, but after December 31, 2031, must start complying with their standards of performance (based on co-firing with 40 percent natural gas on a heat input basis) beginning on January 1, 2030. Units permanently retiring by January 1, 2032 are exempt from the rule. Given our previously announced coal unit retirement commitments, our Martin Lake and Oak Grove plants are the only coal units that are subject to this rule. Our Graham, Lake Hubbard, Stryker Creek and Trinidad oil/natural gas facilities are also regulated under this rule. None of our existing large or small combustion turbines are subject to this rule. The rule also regulates any new gas units. For new combustion turbine units, the rule establishes three different categories depending on how intensively those units are operated, with immediate compliance obligations for all three categories but more stringent standards beginning in 2032 only for the category of units operating the most intensively. In May 2024, a group of 27 states filed petitions challenging the final rule in the D.C. Circuit Court.

Cross-State Air Pollution Rule (CSAPR)

In October 2015, the EPA revised the primary and secondary ozone National Ambient Air Quality Standards (NAAQS) to lower the 8-hour standard for ozone emissions during ozone season (May to September). As required under the CAA, in October 2018, the State of Texas submitted a State Implementation Plan (SIP) to the EPA demonstrating that emissions from Texas sources do not contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to the revised ozone NAAQS. In February 2023, the EPA disapproved Texas' SIP and the State of Texas, Luminant, certain trade groups, and others challenged that disapproval in the U.S. Court of Appeals for the Fifth Circuit (Fifth Circuit Court). In March 2023, those same parties filed motions to stay the EPA's SIP disapproval in the Fifth Circuit Court, and the EPA moved to transfer our challenges to the D.C. Circuit Court or have those challenges dismissed.

In April 2022, prior to the EPA's disapproval of Texas' SIP, the EPA proposed a Federal Implementation Plan (FIP) to address the 2015 ozone NAAQS. We, along with many other companies, trade groups, states and ISOs, including ERCOT, PJM and MISO, filed responsive comments to the EPA's proposal in June 2022, expressing concerns about certain elements of the proposal, particularly those that may result in challenges to electric reliability under certain conditions. In March 2023, the EPA administrator signed its final FIP. The FIP applies to 22 states beginning with the 2023 ozone seasons. States where Vistra operates generation units that would be subject to this rule are Illinois, New Jersey, New York, Ohio, Pennsylvania, Texas, Virginia and West Virginia. Texas would be moved into the revised (and more restrictive) Group 3 trading program previously established in the Revised CSAPR Update Rule that includes emission budgets for 2023 that the EPA says are achievable through existing controls installed at power plants. Allowances will be limited under the program and will be further reduced beginning in ozone season 2026 to a level that is intended to reduce operating time of coal-fueled power plants during ozone season or force coal plants to retire, particularly those that do not have selective catalytic reduction systems such as our Martin Lake power plant.

In May 2023, the Fifth Circuit Court granted our motion to stay the EPA's disapproval of Texas' SIP pending a decision on the merits and denied the EPA's motion to transfer our challenge to the D.C. Circuit Court. As a result of the stay, we do not believe the EPA has authority to implement the FIP as to Texas sources pending the resolution of the merits, meaning that Texas will remain in Group 2 and not be subject to any requirements under the FIP at least until the Fifth Circuit Court rules on the merits. Oral argument was heard in December 2023 before the Fifth Circuit Court. In June 2023, the EPA published the final FIP in the Federal Register, which included requirements as to Texas despite the stay of the SIP disapproval by the Fifth Circuit Court. In June 2023, the State of Texas, Luminant and various other parties also filed challenges to the FIP in the Fifth Circuit Court, filed a motion to stay the FIP and confirm venue for this dispute in the Fifth Circuit Court. After the motion to stay and to confirm venue was filed, the EPA signed an interim final rule on June 29, 2023 that confirms the FIP as to Texas is stayed. In July 2023, the Fifth Circuit Court ruled that the FIP challenge would be held in abeyance pending the resolution of the litigation on the SIP disapproval and denied the motion to stay as not needed given the EPA's administrative stay.

Regional Haze — Reasonable Progress and Best Available Retrofit Technology (BART) for Texas

In October 2017, the EPA issued a final rule addressing BART for Texas electricity generation units, with the rule serving as a partial approval of Texas' 2009 SIP and a partial FIP. For SO_2, the rule established an intrastate Texas emission allowance trading program as a "BART alternative" that operates in a similar fashion to a CSAPR trading program. The program includes 39 generation units (including the Martin Lake, Big Brown, Monticello, Sandow 4, Coleto Creek, Stryker 2 and Graham 2 plants). The compliance obligations in the program started on January 1, 2019. For NO_X, the rule adopted the CSAPR's ozone program as BART and for particulate matter, the rule approved Texas' SIP that determines that no electricity generation units are subject to BART for particulate matter. In August 2020, the EPA issued a final rule affirming the prior BART final rule but also included additional revisions that were proposed in November 2019. Challenges to both the 2017 rule and the 2020 rules have been consolidated in the D.C. Circuit Court, where we have intervened in support of the EPA. We are in compliance with the rule, and the retirements of our Monticello, Big Brown and Sandow 4 plants have enhanced our ability to comply. The EPA is in the process of reconsidering the BART rule, and the challenges in the D.C. Circuit Court have been held in abeyance pending the EPA's final action on reconsideration. In May 2023, a proposed BART rule was published in the Federal Register that would withdraw the trading program provisions of the prior rule and would establish SO_2 limits on six facilities in Texas, including Martin Lake and Coleto Creek. Under the current proposal, compliance would be required within 3 years for Martin Lake and 5 years for Coleto Creek. Due to the announced shutdown for Coleto Creek, we do not anticipate any impacts at that facility, and we are evaluating potential compliance options at Martin Lake should this proposal become final. We submitted comments to the EPA on this proposal in August 2023.

SO_2 Designations for Texas

In November 2016, the EPA finalized its nonattainment designations for counties surrounding our Martin Lake generation plant and our now retired Big Brown and Monticello plants. The final designations require Texas to develop nonattainment plans for these areas. In February 2017, the State of Texas and Luminant filed challenges to the nonattainment designations in the Fifth Circuit Court. In August 2019, the EPA issued a proposed Error Correction Rule for all three areas, which, if finalized, would have revised its previous nonattainment designations and each area at issue would be designated unclassifiable. In May 2021, the EPA finalized a "Clean Data" determination for the areas surrounding the retired Big Brown and Monticello plants, redesignating those areas as attainment based on monitoring data supporting an attainment designation. In June 2021, the EPA published two notices; one that it was withdrawing the August 2019 Error Correction Rule and a second separate notice denying petitions from Luminant and the State of Texas to reconsider the original nonattainment designations. We, along with the State of Texas, challenged that EPA action and have consolidated it with the pending challenge in the Fifth Circuit Court, and this case was argued before the Fifth Circuit Court in July 2022. In September 2021, the TCEQ considered a proposal for its nonattainment SIP revision for the Martin Lake area and an agreed order to reduce SO_2 emissions from the plant. The proposed agreed order associated with the SIP proposal reduces emission limits as of January 2022. Emission reductions required are those necessary to demonstrate attainment with the NAAQS. The TCEQ's SIP action was finalized in February 2022 and has been submitted to the EPA for review and approval. In January 2024, in a split decision, the Fifth Circuit Court denied the petitions for review we and the State of Texas filed over the EPA's 2016 nonattainment designation for SO_2 for the area around Martin Lake. As a result of this decision the EPA's nonattainment designation - originally made in 2016 - remains in place. We anticipate the EPA will likely move forward with either proposing a federal plan for the area in light of an approved consent decree, between the Sierra Club and the EPA that requires the EPA taking final action promulgating a FIP for the nonattainment area by December 13, 2024, or the EPA may approve Texas' SIP submittal discussed above. In February 2024, we filed a petition asking the full Fifth Circuit Court to review the panel decision issued in January 2024.

Particulate Matter

In February 2024, the EPA issued a rule addressing the annual health-based national ambient air quality standards for fine particulate matter (or PM2.5). In general, the rule lowers the level of the annual PM2.5 standard from 12.0 micrograms per cubic meter (µg/m3) to 9.0 µg/m3. The effective date of the rule is 60 days from publication in the Federal Register, and the earliest attainment date for areas exceeding the new standard is 2032. At this time, we are still determining what impact, if any, this rule will have on our existing plants or any plants we may build in the future. Based on 2020-2022 design value associated with the rule, we have just five plants (Oakland (California), Calumet (Illinois), Liberty (Pennsylvania), Miami Fort (Ohio) and Lake Hubbard (Texas)) operating in areas where the air quality monitoring data are currently exceeding the new PM2.5 standard. We have previously announced that our Miami Fort generation facility will close by the end of 2027. States will have to develop a plan (by late 2027 at the earliest) to get those areas into attainment and there would be a possibility that additional controls would be required for those sites. However, before the state begins this planning process, the designation process will occur within two years from the issuance of the final rule. The states develop recommendations about the boundaries of the nonattainment counties and the EPA must finalize the designations including the boundaries of each nonattainment area.

Effluent Limitation Guidelines (ELGs)

In November 2015, the EPA revised the ELGs for steam electricity generation facilities, which will impose more stringent standards (as individual permits are renewed) for wastewater streams, such as flue gas desulfurization (FGD), fly ash, bottom ash and flue gas mercury control wastewaters. Various parties filed petitions for review of the ELG rule, and the petitions were consolidated in the Fifth Circuit Court. In April 2017, the EPA granted petitions requesting reconsideration of the ELG rule and administratively stayed the rule's compliance date deadlines. In April 2019, the Fifth Circuit Court vacated and remanded portions of the EPA's ELG rule pertaining to effluent limitations for legacy wastewater and leachate. The EPA published a final rule in October 2020 that extends the compliance date for both FGD and bottom ash transport water to no later than December 2025, as negotiated with the state permitting agency. Additionally, the final rule allows for a retirement exemption that exempts facilities certifying that units will retire by December 2028 provided certain effluent limitations are met. In November 2020, environmental groups petitioned for review of the new ELG revisions, and Vistra subsidiaries filed a motion to intervene in support of the EPA in December 2020. Notifications were made to Texas, Illinois and Ohio state agencies on the retirement exemption for applicable coal plants by the regulatory deadline of October 13, 2021. On April 25, 2024, the EPA issued the final ELG rule revisions, which contains new requirements for legacy wastewater and combustion residual leachate. The final rule also leaves in place the subcategory for facility that permanently cease coal combustion by 2028. We are reviewing the rule for impact but believe it will require additional treatment costs for legacy wastewaters during pond closure activities and combustion residual leachate.

Coal Combustion Residuals (CCR)/Groundwater

In August 2018, the D.C. Circuit Court issued a decision that vacates and remands certain provisions of the 2015 CCR rule, including an applicability exemption for legacy impoundments. In August 2020, the EPA issued a final rule establishing a deadline of April 11, 2021 to cease receipt of waste and initiate closure at unlined CCR impoundments. The final rule allows a generation plant to seek the EPA's approval to extend this deadline if no alternative disposal capacity is available and either a conversion to comply with the CCR rule is underway or retirement will occur by either 2023 or 2028 (depending on the size of the impoundment at issue). Prior to the November 2020 deadline, we submitted applications to the EPA requesting compliance extensions under both conversion and retirement scenarios. In 2022 and 2023, we withdrew the applications for Coffeen, Martin Lake, Joppa and Zimmer stations because extensions were no longer needed. In November 2020, environmental groups petitioned for review of this rule in the D.C. Circuit Court, and Vistra subsidiaries filed a motion to intervene in support of the EPA in December 2020. Also, in November 2020, the EPA finalized a rule that would allow an alternative liner demonstration for certain qualifying facilities. In November 2020, we submitted an application for an alternate liner demonstration for one CCR unit at Martin Lake, however, we withdrew the application for an alternate liner demonstration in November 2023 after determining the pond was no longer needed for CCR. In August 2021, we submitted a request to transfer our conversion application for the Zimmer facility to a retirement application following the announcement that Zimmer will close by May 31, 2022. In January 2022, the EPA determined that our conversion and retirement applications for our CCR facilities were complete but has not yet proposed action on any of those applications. In addition, in January 2022, the EPA also made a series of public statements, including in a press release, that purported to impose new, more onerous closure requirements for CCR units. The EPA issued these new purported requirements without prior notice and without following the legal requirements for adopting new rules. These new purported requirements announced by the EPA are contrary to existing regulations and the EPA's prior positions. In April 2022, we, along with the Utility Solid Waste Activities Group (USWAG), a trade association of over 130 utility operating companies, energy companies, and certain other industry associations, filed petitions for review with the D.C. Circuit Court and have asked the court to determine that the EPA cannot implement or enforce the new purported requirements because the EPA has not followed the required procedures. The State of Texas and the TCEQ have intervened in support of the petitions filed by the Vistra subsidiaries and USWAG, and various environmental groups have intervened on behalf of the EPA. The D.C. Circuit Court heard argument in March 2024.

In April 2024, the EPA issued a final rule that expands coverage of groundwater monitoring and closure requirements to the following two new categories of units: (a) legacy CCR surface impoundments which are CCR surface impoundments that no longer receive CCR but contained both CCR and liquids on or after October 19, 2015 and (b) "CCR management units" (CCRMUs) which generally could encompass noncontainerized ash deposits greater than one ton and impoundments and landfills that closed prior to October 19, 2015. As part of the rule, the EPA identified numerous CCR management units across the country, including ten of our potential units. The Vermilion ash ponds discussed below are the only unit which we believe qualify as a legacy CCR surface impoundment and given our closure plan for that site we do not believe rule will have any impact on that site. CCRMUs with 1,000 or more tons of CCR must comply with the CCR's groundwater monitoring, corrective action, closure and post-closure requirements. For CCRMUs, complete facility evaluation reports are due within 33 months after publication of the rule, initial groundwater reports are due January 31, 2029, and the deadline to initiate closure, if needed, will start in 2029. Closure of the CCRMUs may also be deferred beyond those dates depending on certain factors, including where the CCRMU is located beneath critical infrastructure. In addition, certain closures may not be required when closure was previously approved under a state program.

MISO — In 2012, the Illinois Environmental Protection Agency (IEPA) issued violation notices alleging violations of groundwater standards onsite at our Baldwin and Vermilion facilities' CCR surface impoundments. These violation notices remain unresolved; however, in 2016, the IEPA approved our closure and post-closure care plans for the Baldwin old east, east, and west fly ash CCR surface impoundments. We have completed closure activities at those ponds at our Baldwin facility.

At our retired Vermilion facility, which was not potentially subject to the EPA's 2015 CCR rule until the aforementioned D.C. Circuit Court decision in August 2018, we submitted proposed corrective action plans involving closure of two CCR surface impoundments (*i.e.*, the old east and the north impoundments) to the IEPA in 2012, and we submitted revised plans in 2014. In May 2017, in response to a request from the IEPA for additional information regarding the closure of these Vermilion surface impoundments, we agreed to perform additional groundwater sampling and closure options and riverbank stabilizing options. In June 2018, the IEPA issued a violation notice for alleged seep discharges claimed to be coming from the surface impoundments at our retired Vermilion facility, which is owned by our subsidiary DMG, and that notice was referred to the Illinois Attorney General. In June 2021, the Illinois Attorney General and the Vermilion County State Attorney filed a complaint in Illinois state court with an agreed interim consent order which the court subsequently entered. Given the violation notices and the enforcement action, the unique characteristics of the site, and the proximity of the site to the only national scenic river in Illinois, we agreed to enter into the interim consent order to resolve this matter. Per the terms of the agreed interim consent order, DMG is required to evaluate the closure alternatives under the requirements of the newly implemented Illinois Coal Ash regulation (discussed below) and close the site by removal. In addition, the interim consent order requires that during the impoundment closure process, impacted groundwater will be collected before it leaves the site or enters the nearby Vermilion river and, if necessary, DMG will be required to install temporary riverbank protection if the river migrates within a certain distance of the impoundments. The interim order was modified in December 2022 to require certain amendments to the Safety Emergency Response Plan. In June 2023, the Illinois state court approved and entered the final consent order, which included the terms above and a requirement that when IEPA issues a final closure permit for the site, DMG will demolish the power station and submit for approval to construct an on-site landfill within the footprint of the former plant to store and manage the coal ash. These proposed closure costs are reflected in the ARO in our condensed consolidated balance sheets (see Note 18).

In 2012, the IEPA issued violation notices alleging violations of groundwater standards at the Newton and Coffeen facilities' CCR surface impoundments. We are addressing these CCR surface impoundments in accordance with the federal CCR rule.

In July 2019, coal ash disposal and storage legislation in Illinois was enacted. The legislation addresses state requirements for the proper closure of coal ash ponds in the state of Illinois. The law tasks the IEPA and the IPCB to set up a series of guidelines, rules and permit requirements for closure of ash ponds. Under the final rule, which was finalized and became effective in April 2021, coal ash impoundment owners would be required to submit a closure alternative analysis to the IEPA for the selection of the best method for coal ash remediation at a particular site. The rule does not mandate closure by removal at any site. In May 2021, we, along with other industry petitioners, filed an appeal in the Illinois Fourth Judicial District over certain provisions of the final rule. In March 2024, the Illinois Fourth Judicial District issued a decision denying the industry petitions. We do not anticipate any impacts from this decision. In October 2021, we filed operating permit applications for 18 impoundments as required by the Illinois coal ash rule, and filed construction permit applications for three of our sites in January 2022 and five of our sites in July 2022. One additional closure construction application was filed for our Baldwin facility in August 2023.

For all of the above matters, if certain corrective action measures, including groundwater treatment or removal of ash, are required at any of our coal-fueled facilities, we may incur significant costs that could have a material adverse effect on our financial condition, results of operations and cash flows. The Illinois coal ash rule was finalized in April 2021 and does not require removal. However, the rule required us to undertake further site-specific evaluations required by each program. We will not know the full range of decommissioning costs, including groundwater remediation, if any, that ultimately may be required under the Illinois rule until permit applications have been approved by the IEPA and as such, an estimate of such costs cannot be made. The CCR surface impoundment and landfill closure costs currently reflected in our existing ARO liabilities reflect the costs of closure methods that our operations and environmental services teams determined were appropriate based on then existing closure requirements, and is reasonably possible to increase once the IEPA determines final closure requirements. Once the IEPA acts on our permit applications, we will reassess the decommissioning costs and adjust our ARO liabilities accordingly.

MISO 2015-2016 Planning Resource Auction

In May 2015, three complaints were filed at the FERC regarding the Zone 4 results for the 2015-2016 planning resource auction (PRA) conducted by MISO. Dynegy is a named party in one of the complaints. The complainants, Public Citizen, Inc., the Illinois Attorney General and Southwestern Electric Cooperative, Inc. (Complainants), challenged the results of the PRA as unjust and unreasonable, requested rate relief/refunds, and requested changes to the MISO planning resource auction structure going forward. Complainants also alleged that Dynegy may have engaged in economic or physical withholding in Zone 4 constituting market manipulation in the PRA. The Independent Market Monitor for MISO (MISO IMM), which was responsible for monitoring the PRA, determined that all offers were competitive and that no physical or economic withholding occurred. The MISO IMM also stated, in a filing responding to the complaints, that there is no basis for the remedies sought by the Complainants. We filed our answer to these complaints explaining that we complied fully with the terms of the MISO tariff in connection with the PRA and disputing the allegations. The Illinois Industrial Energy Consumers filed a related complaint at the FERC against MISO in June 2015 requesting prospective changes to the MISO tariff. Dynegy also responded to this complaint with respect to Dynegy's conduct alleged in the complaint.

In October 2015, the FERC issued an order of nonpublic, formal investigation (the investigation) into whether market manipulation or other potential violations of the FERC orders, rules and regulations occurred before or during the PRA.

In December 2015, the FERC issued an order on the complaints requiring a number of prospective changes to the MISO tariff provisions effective as of the 2016-2017 planning resource auction. The order did not address the arguments of the Complainants regarding the PRA and stated that those issues remained under consideration and would be addressed in a future order.

In July 2019, the FERC issued an order denying the remaining issues raised by the complaints and noted that the investigation into Dynegy was closed. The FERC found that Dynegy's conduct did not constitute market manipulation and the results of the PRA were just and reasonable because the PRA was conducted in accordance with MISO's tariff. A request for rehearing was denied by the FERC in March 2020. The order was appealed by Public Citizen, Inc. to the D.C. Circuit Court in May 2020, and Vistra, Dynegy and Illinois Power Marketing Company intervened in the case in June 2020. In August 2021, the D.C. Circuit Court issued a ruling denying Public Citizen, Inc.'s arguments that the FERC failed to meet its obligation to ensure just and reasonable rates because it did not review the prices resulting from the auction before those prices went into effect and that the FERC was arbitrary and capricious in failing to adequately explain its decision to close its investigation into whether Dynegy engaged in market manipulation. The D.C. Circuit Court of Appeals granted Public Citizen, Inc.'s petition in part finding that the FERC's decision that the auction results were just and reasonable solely because the auction process complied with the filed tariff was unreasoned and remanded the case back to the FERC for further proceedings on that issue. On February 4, 2022 the Illinois Attorney General and Public Citizen, Inc. filed a motion at the FERC requesting that the FERC on remand reverse its prior decision and either find that auction results were not just and reasonable and order Dynegy to pay refunds to Illinois or, in the alternative, initiate an evidentiary hearing and discovery. We filed a response to this motion and will continue to vigorously defend our position. In June 2022, the FERC issued an order on remand establishing paper hearing procedures and directing the Office of Enforcement to file a remand report within 90 days providing the Office of Enforcement's assessment of Dynegy's actions with regard to the 2015-2016 planning resource auction. Although the FERC directed the Office of Enforcement to file a remand report, the FERC stated in the June 2022 order that it is not reopening the Office of Enforcement investigation. In September 2022, the Office of Enforcement filed its remand report stating that the Office of Enforcement staff found during its investigation that Dynegy knowingly engaged in manipulative behavior to set the Zone 4 price in the 2015-2016 PRA. In June 2023, the Company filed its initial brief and response to the remand report, and in August 2023 the Company filed a reply to the initial briefs from other parties. We will continue to vigorously defend our position.

Other Matters

We are involved in various legal and administrative proceedings and other disputes in the normal course of business, the ultimate resolutions of which, in the opinion of management, are not anticipated to have a material effect on our results of operations, liquidity or financial condition.

Nuclear Insurance

Nuclear insurance includes nuclear liability coverage, property damage, nuclear accident decontamination and accidental premature decommissioning coverage and accidental outage and/or extra expense coverage. We maintain nuclear insurance that meets or exceeds requirements promulgated by Section 170 (Price-Anderson) of the Atomic Energy Act (the Act) and Title 10 of the Code of Federal Regulations. We intend to maintain insurance against nuclear risks as long as such insurance is available. We are self-insured to the extent that losses (i) are within the policy deductibles, (ii) are not covered per policy exclusions, terms and limitations, (iii) exceed the amount of insurance maintained, or (iv) are not covered due to lack of insurance availability. Any such self-insured losses could have a material adverse effect on our results of operations, liquidity or financial condition.

With regard to nuclear liability coverage, the Act provides for financial protection for the public in the event of a significant nuclear generation plant incident. The Act sets the statutory limit of public liability for a single nuclear incident at $16.2 billion and requires nuclear generation plant operators to provide financial protection for this amount. However, the U.S. Congress could impose revenue-raising measures on the nuclear industry to pay claims that exceed the $16.2 billion limit for a single incident. As required, we insure against a possible nuclear incident at our nuclear facilities resulting in public nuclear-related bodily injury and property damage through a combination of private insurance and an industry-wide retrospective payment plan known as Secondary Financial Protection (SFP).

Under the SFP, in the event of any single nuclear liability loss in excess of $ 500 million at any nuclear generation facility in the U.S., each operating licensed reactor in the U.S. is subject to an assessment of up to $165.9 million. This approximately $165.9 million maximum assessment is subject to increases for inflation every five years, with the next expected adjustment scheduled to occur by November 2028. Assessments are currently limited to $24.7 million per operating licensed reactor per year per incident. As of March 31, 2024, our maximum potential assessment under the industry retrospective plan would be approximately $995.4 million per incident but no more than $ 148.2 million in any one year for each incident. The potential assessment is triggered by a nuclear liability loss in excess of $500 million per accident at any nuclear facility.

The United States Nuclear Regulatory Commission (NRC) requires that nuclear generation plant license holders maintain at least $ 1.06 billion of nuclear accident decontamination and reactor damage stabilization insurance, and requires that the proceeds thereof be used to place a plant in a safe and stable condition, to decontaminate a plant pursuant to a plan submitted to, and approved by, the NRC prior to using the proceeds for plant repair or restoration, or to provide for premature decommissioning. We maintain nuclear accident decontamination and reactor damage stabilization insurance for our Comanche Peak facility in the amount of $2.25 billion and non-nuclear accident related property damage in the amount of $1.0 billion (subject to a $5 million deductible per accident except for natural hazards which are subject to a $ 9.5 million deductible per accident), and losses excluded or above such limits are self-insured. We maintain nuclear accident decontamination and reactor damage stabilization insurance and non-nuclear accident related property damage for our Beaver Valley, Davis-Besse and Perry facilities in the amount of $1.5 billion (subject to a $20 million deductible per accident), and losses excluded or above such limits are self-insured.

We also maintain Accidental Outage insurance to help cover the additional costs of obtaining replacement electricity from another source if the units are out of service for more than twelve weeks as a result of covered direct physical damage. Coverage at Comanche Peak provides for weekly payments per unit up to $4.5 million for the first 52 weeks and up to $2.7 million for a remaining 21 weeks for non-nuclear and up to $ 3.6 million for a remaining 71 weeks for nuclear property damage outages. The total maximum coverage is $291 million for non-nuclear property damage and $ 490 million for nuclear property damage outages. Coverage at Beaver Valley, Davis-Besse and Perry facilities provide for weekly payments per unit up to $2.5 million for the first 52 weeks and up to $ 1.5 million for a remaining 52 weeks for non-nuclear and up to $ 2 million for a remaining 110 weeks for nuclear property damage outages. The total maximum coverage is $208 million for non-nuclear property damage and $ 350 million for nuclear damage outages. There are two units at Comanche Peak and Beaver Valley, and coverage amounts applicable to each unit will reduce to 80% if both units are out of service at the same time as a result of the same accident.

16. EQUITY

Share Repurchase Program

In October 2021, we announced that the Board authorized a share repurchase program (Share Repurchase Program) under which up to $ 2.0 billion of our outstanding shares of common stock may be repurchased. The Share Repurchase Program became effective on October 11, 2021. In August 2022, March 2023 and February 2024, the Board authorized incremental amounts of $1.25 billion, $1.0 billion and $1.5 billion, respectively, for repurchases to bring the total authorized under the Share Repurchase Program to $5.75 billion.

In the three months ended March 31, 2024, 6,138,773 shares of our common stock were repurchased for approximately $ 284 million at an average price of $ 46.21 per share of common stock. Shares repurchased include 72,839 of unsettled shares for $ 5 million as of March 31, 2024. In the three months ended March 31, 2023, 13,308,465 shares of our common stock were repurchased for approximately $308 million at an average price of $ 23.11 per share of common stock. As of March 31, 2024, approximately $1.966 billion was available for additional repurchases under the Share Repurchase Program.

Under the Share Repurchase Program, shares of the Company's common stock may be repurchased in open-market transactions at prevailing market prices, in privately negotiated transactions, pursuant to plans complying with the Exchange Act, or by other means in accordance with federal securities laws. The actual timing, number and value of shares repurchased under the Share Repurchase Program or otherwise will be determined at our discretion and will depend on a number of factors, including our capital allocation priorities, the market price of our stock, general market and economic conditions, applicable legal requirements and compliance with the terms of our debt agreements and the certificates of designation of the Series A Preferred Stock, the Series B Preferred Stock, and the Series C Preferred Stock, respectively.

Preferred Stock

The Series A Preferred Stock, the Series B Preferred Stock, and the Series C Preferred Stock are not convertible into or exchangeable for any other securities of the Company and have limited voting rights. The Series A Preferred Stock may be redeemed at the option of the Company at any time after the Series A First Reset Date (defined below) and in certain other circumstances prior to the Series A First Reset Date. The Series B Preferred Stock may be redeemed at the option of the Company at any time after the Series B First Reset Date (defined below) and in certain other circumstances prior to the Series B First Reset Date. The Series C Preferred Stock may be redeemed at the option of the Company at any time after the Series C First Reset Date (defined below) and in certain other circumstances prior to the Series C First Reset Date.

Dividends

Common Stock Dividends

In February 2024, the Board declared a quarterly dividend of $ 0.2150 per share that was paid in March 2024. In February 2023, the Board declared a quarterly dividend of $0.1975 per share that was paid in March 2023.

Preferred Stock Dividends

The annual dividend rate on each share of Series A Preferred Stock is 8.0% from the Series A Issuance Date to, but excluding October 15, 2026 (Series A First Reset Date). On and after the Series A First Reset Date, the dividend rate on each share of Series A Preferred Stock shall equal the five-year U.S. Treasury rate as of the most recent reset dividend determination date (subject to a floor of 1.07%), plus a spread of 6.93% per annum. The Series A Preferred Stock has a liquidation preference of $ 1,000 per share, plus accumulated but unpaid dividends. Cumulative cash dividends on the Series A Preferred Stock are payable semiannually, in arrears, on each April 15 and October 15, commencing on April 15, 2022, when, as and if declared by the Board.

The annual dividend rate on each share of Series B Preferred Stock is 7.0% from the Series B Issuance Date to, but excluding December 15, 2026 (Series B First Reset Date). On and after the Series B First Reset Date, the dividend rate on each share of Series B Preferred Stock shall equal the five-year U.S. Treasury rate as of the most recent reset dividend determination date (subject to a floor of 1.26%), plus a spread of 5.74% per annum. The Series B Preferred Stock has a liquidation preference of $1,000 per share, plus accumulated but unpaid dividends. Cumulative cash dividends on the Series B Preferred Stock are payable semiannually, in arrears, on each June 15 and December 15, commencing on June 15, 2022, when, as and if declared by the Board.

The annual dividend rate on each share of Series C Preferred Stock is 8.875% from the Series C Issuance Date to, but excluding January 15, 2029 (Series C First Reset Date). On and after the Series C First Reset Date, the dividend rate on each share of Series C Preferred Stock shall equal the five-year U.S. Treasury rate as of the most recent reset dividend determination date (subject to a floor of 3.83%), plus a spread of 5.045% per annum. The Series C Preferred Stock has a liquidation preference of $1,000 per share, plus accumulated but unpaid dividends. Cumulative cash dividends on the Series C Preferred Stock are payable semiannually, in arrears, on each July 15 and January 15, commencing on July 15, 2024, when, as and if declared by the Board.

Dividend Restrictions

The Vistra Operations Credit Agreement generally restricts the ability of Vistra Operations to make distributions to any direct or indirect parent unless such distributions are expressly permitted thereunder. As of March 31, 2024, Vistra Operations can distribute approximately $6.6 billion to Parent under the Vistra Operations Credit Agreement without the consent of any party. The amount that can be distributed by Vistra Operations to Parent was partially reduced by distributions made by Vistra Operations to Parent of approximately $490 million and $350 million for the three months ended March 31, 2024 and 2023, respectively. Additionally, Vistra Operations may make distributions to Parent in amounts sufficient for Parent to make any payments required under the TRA or the Tax Matters Agreement or, to the extent arising out of Parent's ownership or operation of Vistra Operations, to pay any taxes or general operating or corporate overhead expenses. As of March 31, 2024, certain of the restricted net assets of Vistra Operations may be distributed to Parent.

In addition to the restrictions under the Vistra Operations Credit Agreement, under applicable Delaware law, we are only permitted to make distributions either out of "surplus," which is defined as the excess of our net assets above our capital (the aggregate par value of all outstanding shares of our stock), or out of net profits for the fiscal year in which the distribution is declared or the prior fiscal year.

Under the terms of the Series A Preferred Stock, the Series B Preferred Stock, and the Series C Preferred Stock, unless full cumulative dividends have been or contemporaneously are being paid or declared and a sum sufficient for the payment thereof set apart for payment on all outstanding Series A Preferred Stock (and any parity securities), Series B Preferred Stock (and any parity securities), and Series C Preferred Stock (and any parity securities), respectively, with respect to dividends through the most recent dividend payment dates, (i) no dividend may be declared or paid or set apart for payment on any junior security (other than a dividend payable solely in junior securities with respect to both dividends and the liquidation, winding-up and dissolution of our affairs), including our common stock, and (ii) we may not redeem, purchase or otherwise acquire any parity security or junior security, including our common stock, in each case subject to certain exceptions as described in the certificate of designation of the Series A Preferred Stock, the Series B Preferred Stock, and the Series C Preferred Stock, respectively.

17. SEGMENT INFORMATION

The operations of Vistra are aligned into six reportable business segments: (i) Retail, (ii) Texas, (iii) East, (iv) West, (v) Sunset and (vi) Asset Closure.

Our Chief Executive Officer is our Chief Operating Decision Maker (CODM). Our CODM reviews the results of these segments separately and allocates resources to the respective segments as part of our strategic operations. A measure of assets is not applicable, as segment assets are not regularly reviewed by the CODM for evaluating performance or allocating resources.

The Retail segment is engaged in retail sales of electricity and natural gas to residential, commercial and industrial customers. Substantially all of these activities are conducted by TXU Energy, Ambit, Dynegy Energy Services, Homefield Energy, Energy Harbor and U.S. Gas & Electric across 19 states in the U.S.

The Texas and East segments are engaged in electricity generation, wholesale energy sales and purchases, commodity risk management activities, fuel production and fuel logistics management. The Texas segment represents results from Vistra's electricity generation operations in the ERCOT market, other than assets that are now part of the Sunset or Asset Closure segments. The East segment represents results from Vistra's electricity generation operations in the Eastern Interconnection of the U.S. electric grid, other than assets that are now part of the Sunset or Asset Closure segments, and includes operations in the PJM, ISO-NE and NYISO markets. We determined it was appropriate to aggregate results from these markets into one reportable segment, East, given similar economic characteristics. The West segment represents results from the CAISO market, including our battery ESS projects at our Moss Landing power plant site.

The Sunset segment consists of generation plants with announced retirement dates after December 31, 2024. Separately reporting the Sunset segment differentiates operating plants with announced retirement plans from our other operating plants in the Texas, East and West segments. We have allocated unrealized gains and losses on the commodity risk management activities to the Sunset segment for the generation plants that have announced retirement dates after December 31, 2024.

The Asset Closure segment is engaged in the decommissioning and reclamation of retired plants and mines (see Note 3). Upon movement of generation plant assets to either the Sunset or Asset Closure segments, prior year results are retrospectively adjusted, if the effects are material, for comparative purposes. Separately reporting the Asset Closure segment provides management with better information related to the performance and earnings power of Vistra's ongoing operations and facilitates management's focus on minimizing the cost associated with decommissioning and reclamation of retired plants and mines.

Corporate and Other represents the remaining non-segment operations consisting primarily of general corporate expenses, interest, taxes and other expenses related to our support functions that provide shared services to our operating segments.

The accounting policies of the business segments are the same as those described in the summary of significant accounting policies in Note 1 of our 2023 Form 10-K, as well as those disclosed in Note 1 of this quarterly report on Form 10-Q. Our CODM uses more than one measure to assess segment performance, but primarily focuses on Adjusted EBITDA. While we believe this is a useful metric in evaluating operating performance, it is not a metric defined by U.S. GAAP and may not be comparable to non-GAAP metrics presented by other companies. Adjusted EBITDA is most comparable to consolidated net income (loss) prepared based on U.S. GAAP. We account for intersegment sales and transfers as if the sales or transfers were to third parties, that is, at market prices. Certain shared services costs are allocated to the segments.

Three Months Ended (in millions)	Retail	Texas	East	West	Sunset	Asset Closure	Corporate and Other (a)	Eliminations	Consolidated
Operating revenues:									
March 31, 2024	$ 2,494	$ 439	$ 637	$ 285	$ 239	$ —	$ —	$ (1,040)	$ 3,054
March 31, 2023	2,350	1,353	1,809	231	828	—	—	(2,146)	4,425
Depreciation and amortization:									
March 31, 2024	$ (23)	$ (132)	$ (192)	$ (21)	$ (20)	$ —	$ (15)	$ —	$ (403)
March 31, 2023	(29)	(130)	(161)	(15)	(14)	—	(17)	—	(366)
Operating income (loss):									
March 31, 2024	$ 568	$ (343)	$ (223)	$ 163	$ 8	$ (22)	$ (65)	$ —	$ 86
March 31, 2023	(588)	569	744	47	425	(29)	(37)	—	1,131
Net income (loss):									
March 31, 2024	$ 561	$ (331)	$ (185)	$ 164	$ 7	$ (21)	$ (177)	$ —	$ 18
March 31, 2023	(595)	584	745	52	424	(27)	(485)	—	698
Capital expenditures, including nuclear fuel and excluding LTSA prepayments and development and growth expenditures:									
March 31, 2024	$ —	$ 268	$ 39	$ 4	$ 6	$ —	$ 11	$ —	$ 328
March 31, 2023	1	102	23	2	15	—	14	—	157

(a) Income tax (expense) benefit is generally not reflected in net income (loss) of the segments but is reflected almost entirely in Corporate and Other net income (loss).

18. SUPPLEMENTARY FINANCIAL INFORMATION

Impairment of Long-Lived Assets

In the first quarter of 2023, we recognized an impairment loss of $ 49 million related to our Kincaid generation facility in Illinois as a result of a significant decrease in the projected operating margins of the facility, primarily driven by a decrease in projected power prices. The impairment is reported in our Sunset segment and includes write-downs of property, plant and equipment of $45 million, write-downs of inventory of $ 2 million and write-downs of operating lease right-of-use assets of $ 2 million.

In determining the fair value of the impaired asset group, we utilized the income approach described in ASC 820, *Fair Value Measurement*.

Interest Expense and Related Charges

	Three Months Ended March 31,	
(in millions)	**2024**	**2023**
Interest expense	$ 208	$ 156
Unrealized mark-to-market net (gains) losses on interest rate swaps	(47)	41
Amortization of debt issuance costs, discounts and premiums	7	6
Facility Fee expense	4	—
Debt extinguishment gain	(6)	—
Capitalized interest	(12)	(10)
Other	16	14
Total interest expense and related charges	$ 170	$ 207

The weighted average interest rate applicable to the Vistra Operations Credit Facilities, taking into account the interest rate swaps discussed in Note 11, was 5.56% and 4.70% as of March 31, 2024 and 2023.

Other Income and Deductions

	Three Months Ended March 31,	
(in millions)	**2024**	**2023**
Other income:		
NDT net income (a)	$ 35	$ —
Insurance settlements (b)	1	1
Gain on sale of land	1	—
Gain on TRA repurchases (c)	10	—
Interest income	23	14
All other	21	5
Total other income	$ 91	$ 20
Other deductions:		
All other	$ 4	$ 3
Total other deductions	$ 4	$ 3

(a) Includes interest, dividends, and net realized and unrealized gains and losses associated with the NDTs of the PJM nuclear facilities. Reported in the East segment.
(b) Reported in the West segment.
(c) Reported in Corporate and Other.

Restricted Cash

(in millions)	March 31, 2024		December 31, 2023	
	Current Assets	Noncurrent Assets	Current Assets	Noncurrent Assets
Amounts related to remediation escrow accounts	$ 32	$ 14	$ 40	$ 14
Total restricted cash	$ 32	$ 14	$ 40	$ 14

Trade Accounts Receivable

(in millions)	March 31, 2024	December 31, 2023
Wholesale and retail trade accounts receivable	$ 1,790	$ 1,735
Allowance for uncollectible accounts	(61)	(61)
Trade accounts receivable — net	$ 1,729	$ 1,674
Trade accounts receivable from contracts with customers — net	$ 1,313	$ 1,239
Other trade accounts receivable — net	416	435
Trade accounts receivable — net	$ 1,729	$ 1,674

Gross trade accounts receivable as of March 31, 2024 and December 31, 2023 include unbilled retail revenues of $ 618 million and $614 million, respectively.

Allowance for Uncollectible Accounts Receivable

(in millions)	Three Months Ended March 31, 2024	2023
Allowance for uncollectible accounts receivable at beginning of period	$ 61	$ 65
Increase for bad debt expense	36	35
Decrease for account write-offs	(36)	(47)
Allowance for uncollectible accounts receivable at end of period	$ 61	$ 53

Inventories by Major Category

(in millions)	March 31, 2024	December 31, 2023
Materials and supplies	$ 507	$ 289
Fuel stock	443	420
Natural gas in storage	26	31
Total inventories	$ 976	$ 740

Investments

(in millions)	March 31, 2024	December 31, 2023
Nuclear decommissioning trusts (Note 14)	$ 4,135	$ 1,951
Assets related to employee benefit plans	29	28
Land investments	42	42
Other investments	13	14
Total investments	$ 4,219	$ 2,035

Property, Plant and Equipment

(in millions)	March 31, 2024	December 31, 2023
Power generation and structures	$ 22,160	$ 17,297
Land	605	572
Office and other equipment	161	159
Total	22,926	18,028
Less accumulated depreciation	(6,962)	(6,657)
Net of accumulated depreciation	15,964	11,371
Finance lease right-of-use assets (net of accumulated depreciation)	165	160
Nuclear fuel (net of accumulated amortization of $ 169 million and $120 million)	1,151	379
Construction work in progress	734	522
Property, plant and equipment — net	$ 18,014	$ 12,432

Depreciation expenses totaled $367 million and $323 million for three months ended March 31, 2024 and 2023, respectively.

Other Noncurrent Liabilities and Deferred Credits

The balance of other noncurrent liabilities and deferred credits consists of the following:

(in millions)	March 31, 2024	December 31, 2023
Retirement and other employee benefits	$ 243	$ 247
Winter Storm Uri impact (a)	25	26
Identifiable intangible liabilities (Note 7)	183	131
Regulatory liability (b)	322	209
Finance lease liabilities	231	227
Liability for third-party remediation	17	17
Accrued severance costs	36	36
Other accrued expenses	39	58
Total other noncurrent liabilities and deferred credits	$ 1,096	$ 951

(a) Includes future bill credits related to large commercial and industrial customers that curtailed during Winter Storm Uri.

(b) As of March 31, 2024 and December 31, 2023, the fair value of the assets contained in the Comanche Peak NDT was higher than the carrying value of our ARO related to our nuclear generation plant decommissioning and recorded as a regulatory liability of $322 million and $209 million, respectively, in other noncurrent liabilities and deferred credits.

Fair Value of Debt

(in millions)		March 31, 2024		December 31, 2023	
Long-term debt (see Note 10):	Fair Value Hierarchy	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Long-term debt under the Vistra Operations Credit Facilities	Level 2	$ 2,451	$ 2,491	$ 2,456	$ 2,500
Vistra Zero Term Loan B Facility	Level 2	688	700	—	—
Vistra Operations Senior Notes	Level 2	11,130	11,022	11,881	11,752
Energy Harbor Secured Notes	Level 2	413	427	—	—
Equipment Financing Agreements	Level 3	65	63	65	62

We determine fair value in accordance with accounting standards as discussed in Note 12. We obtain security pricing from an independent party who uses broker quotes and third-party pricing services to determine fair values. Where relevant, these prices are validated through subscription services, such as Bloomberg.

Supplemental Cash Flow Information

The following table reconciles cash, cash equivalents and restricted cash reported in our condensed consolidated statements of cash flows to the amounts reported in our condensed consolidated balance sheets as of March 31, 2024 and December 31, 2023:

(in millions)	March 31, 2024	December 31, 2023
Cash and cash equivalents	$ 1,070	$ 3,485
Restricted cash included in current assets	32	40
Restricted cash included in noncurrent assets	14	14
Total cash, cash equivalents and restricted cash	$ 1,116	$ 3,539

The following table summarizes our supplemental cash flow information for the three months ended March 31, 2024 and 2023. See Note 2 for other non cash investing and financing activity.

	Three Months Ended March 31,	
(in millions)	2024	2023
Cash payments related to:		
Interest paid	$ 214	$ 212
Capitalized interest	(12)	(10)
Interest paid (net of capitalized interest)	$ 202	$ 202

For the three months ended March 31, 2024 and 2023, we paid state income taxes of $ 3 million and $1 million respectively, and received state tax refunds of $ 1 million and $7 million, respectively.

Item 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION, AND RESULTS OF OPERATIONS

The following discussion and analysis of our financial condition and results of operations should be read together with our condensed consolidated financial statements and the notes included in Part I, Item 1 *Financial Statements*.

Significant Activities and Events and Items Influencing Future Performance

Merger with Energy Harbor

On March 1, 2024 (Merger Date), pursuant to a transaction agreement dated March 6, 2023 (Transaction Agreement), (i) Vistra Operations transferred certain of its subsidiary entities into Vistra Vision, (ii) Black Pen Inc., a wholly owned subsidiary of Vistra, merged with and into Energy Harbor, (iii) Energy Harbor became a wholly-owned subsidiary of Vistra Vision, and (iv) affiliates of Nuveen Asset Management, LLC (Nuveen) and Avenue Capital Management II, L.P. (Avenue) exchanged a portion of the Energy Harbor shares held by Nuveen and Avenue for a 15% equity interest of Vistra Vision (collectively, Energy Harbor Merger). The Energy Harbor Merger combines Energy Harbor's and Vistra's nuclear and retail businesses and certain Vistra Zero renewables and energy storage facilities to provide diversification and scale across multiple carbon-free technologies (dispatchable and renewables/storage) and the retail business. The cash consideration for Energy Harbor Merger was funded by Vistra Operations using a combination of cash on hand and borrowings under the Commodity-Linked Facility, the Receivables Facility and the Repurchase Facility. See Note 2 to the Financial Statements for more information concerning the Energy Harbor Merger.

Inflation Reduction Act of 2022

In August 2022, the U.S. enacted the IRA, which, among other things, implements substantial new and modified energy tax credits, including recognizing the value of existing carbon-free nuclear power by providing for a nuclear PTC, a solar PTC, a first-time stand-alone battery storage investment tax credit, a 15% corporate alternative minimum tax (CAMT) on book income of certain large corporations, and a 1% excise tax on net stock repurchases. The section 45U nuclear PTC provides a federal tax credit of up to $15/MWh, subject to phase out as power prices increase above $25/MWh, to existing nuclear facilities from 2024 through 2032. Treasury regulations are expected to further define the scope of the legislation in many important respects over the next twelve months, including critical guidance interpreting the nuclear PTC. The Company accounts for transferable ITCs and PTCs we expect to receive by analogy to the grant model within IAS 20, as U.S. GAAP does not address how to account for these tax credits. We do not expect Vistra to be subject to the CAMT in the 2024 tax year as it applies only to corporations with a three-year average annual adjusted financial statement income in excess of $1 billion. We have taken the CAMT and relevant extensions or expansions of existing tax credits applicable to projects in our immediate development pipeline into account when forecasting cash taxes.

Repurchase of TRA Rights and Preferred Stock Issuance

On the Effective Date, Vistra entered into the TRA with a transfer agent on behalf of certain former first-lien creditors of TCEH, whereby we issued TRA rights to these former first-lien creditors of TCEH entitled to receive them under the Plan of Reorganization (TRA Rights). The TRA generally provides for the payment by us to holders of TRA Rights of 85% of the amount of cash savings, if any, in U.S. federal and state income tax that we realize in periods after Emergence as a result of (i) certain transactions consummated pursuant to the Plan of Reorganization (including the step-up in tax basis in our assets resulting from the PrefCo Preferred Stock Sale), (ii) the tax basis of all assets acquired in connection with the acquisition of two CCGT natural gas-fueled generation facilities in April 2016 and (iii) tax benefits related to imputed interest deemed to be paid by us as a result of payments under the TRA, plus interest accruing from the due date of the applicable tax return.

Vistra began a series of repurchases of TRA Rights (Repurchase) from certain registered holders of the TRA Rights (Selling Holders) in December 2023. In connection with the Repurchase, holders of approximately 74% of the outstanding TRA Rights consented to certain amendments to the TRA which were effected in an Amended and Restated Tax Receivables Agreement (A&R TRA), dated as of December 29, 2023. Such amendments to the TRA included (i) the removal of the Company's obligation to provide registered holders of the TRA Rights (Holders) with regular reporting and access to information, (ii) limitations on the transferability of the TRA Rights, (iii) removal of certain obligations of the Company in the event it incurs indebtedness and (iv) a change to the definition of "Change of Control."

During December 2023, we repurchased approximately 317 million TRA Rights in exchange for consideration of $1.50 per TRA Right totaling an aggregate purchase price of $476 million. The consideration for the December 31, 2023 Repurchase was conveyed through the issuance of 476,081 shares of Vistra Series C Preferred Stock to the Selling Holders.

On January 11, 2024, we Repurchased TRA Rights in exchange for consideration of $1.50 per TRA Right totaling an aggregate purchase price of $65 million using cash on hand.

On January 31, 2024, we announced a cash tender offer to purchase any and all outstanding TRA Rights in exchange for consideration of $1.50 per tendered TRA Right accepted for purchase prior to close of business of February 13, 2024 (Early Tender Date), which included an early tender premium of $0.05 per TRA Right accepted for purchase. On the Early Tender Date the Company Repurchased TRA Rights in exchange for total consideration of $83 million and on February 28, 2024 additional TRA Rights were repurchased under the cash tender offer for total consideration of $3 million or $1.45 per TRA Right accepted for purchase.

As of March 31, 2024, we have repurchased an aggregate 98% of the initial issuance of TRA Rights upon Emergence, of which 8,195,063 TRA Rights remain outstanding. See Note 13 to the Financial Statements for details of the TRA and Note 16 to the Financial Statements for details of the Series C Preferred Stock.

Macroeconomic Conditions

Historically, the base case assumption for U.S. electricity demand was for modest growth driven by the interplay of growth in population, industrial activity and new demand sources (like electric vehicles), partially offset by continued advancements in energy efficiency. Multiple demand drivers such as emergence of large load data centers and electrification of oil field operations (specifically the Permian Basin of west Texas), have accelerated load growth in the geographic regions we serve. We continue to monitor the impact of load growth on electricity demand and our operations.

The industry continues to experience supply chain constraints and labor shortages that have reduced the availability of certain equipment and supply relevant to construction of renewables projects, and increased (i) the lead time to procure certain materials necessary to maintain, and (ii) the labor costs associated with maintenance activity on our natural gas, nuclear and coal fleet. We are proactively managing the increased costs of materials and supply chain disruptions and continuing to prudently re-evaluate the business cases and timing of our planned development projects, which has resulted in a deferral of some of our planned capital spend for our renewables projects. In addition, we have proactively engaged our suppliers to secure key materials needed to maintain our existing generation facilities prior to future planned outages, and our Vistra Zero operational and development projects are anticipated to benefit from the impact of the IRA. The inflationary environment continues to drive elevated interest rates, resulting in increased refinancing or borrowing costs, including recently completed and expected future non-recourse financing for our development projects, recently completed corporate debt refinancing activities, and refinancing expected in connection with debt due in 2025 and beyond.

We are closely monitoring developments in the Russia and Ukraine conflict, specifically with regards to, (i) sanctions (or potential sanctions) against Russian energy exports and Russian nuclear fuel supply and enrichment activities, and (ii) actions by Russia to limit energy deliveries, which may further impact commodity prices in Europe and globally. On April 30, 2024, the Prohibiting Russian Uranium Imports Act (PRUI Act) was approved by Congress and is expected to be submitted to and signed by President Biden. The PRUI Act would become effective 90 days after the President's signature. If the PRUI Act becomes effective, it would prohibit importation of Russian uranium; however, the Department of Energy can issue waivers (subject to decreasing annual caps) until 2027 if there is no alternate source of low-enriched uranium available to keep U.S. nuclear reactors operating or is in the national interest. Additionally, the PRUI Act would release $2.72 billion in federal funding to ramp up production of domestic uranium fuel. We are monitoring the status of the PRUI Act and evaluating the potential impacts of the PRUI Act on our operations. Our 2024 refueling plans have not been affected by the Russia and Ukraine conflict, nor have we seen any disruption to the delivery of nuclear fuel. We are taking affirmative action by building strategic inventory and deploying mitigating strategies in our procurement portfolio to ensure we can secure the nuclear fuel needed to continue to operate our nuclear facility through potential Russian supply disruption. We work with a diverse set of global nuclear fuel cycle suppliers to procure our nuclear fuel years in advance, and therefore, we have enough nuclear fuel contracted to support all our refueling needs, including the Energy Harbor facilities acquired, through 2027.

Critical Accounting Policies and Estimates

The Company's discussion and analysis of its financial position and results of operations is based upon its condensed consolidated financial statements. The preparation of these condensed consolidated financial statements requires estimation and judgment that affect the reported amounts of revenue, expenses, assets and liabilities. The Company bases its estimates on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the accounting for assets and liabilities that are not readily apparent from other sources. If the estimates differ materially from actual results, the impact on the condensed consolidated financial statements may be material. Except as discussed below, the Company's critical accounting policies are disclosed in our 2023 Form 10-K.

Business Combinations

Determining fair values of assets acquired and liabilities assumed in the Energy Harbor Merger requires significant estimates and judgments. We determine fair value based on the estimated price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. See Note 2 to the Financial Statements. The acquired assets and liabilities that involved the most subjectivity in determining fair value consisted of property, plant and equipment and asset retirement obligations:

Property, Plant and Equipment

The fair value of each power plant acquired was estimated using a combination of an income approach and a market approach. The income approach is based on the discounted cash flow method that uses (i) our estimates of forecasted future growth and long term prices of electricity, capacity and nuclear fuel, and (ii) financial performance including revenues, gross margins, operating expenses, and taxes, as well as working capital and capital asset requirements. Projected cash flows are then discounted to a present value employing a discount rate that properly accounts for the estimated market weighted-average cost of capital, as well as any risks unique to the subject cash flows. These estimates are subjective in nature and require judgement to interpret market data. The market valuation method used prices paid for a reasonably similar asset by other purchasers in the relevant market, with adjustments relating to physical differences in the asset as well as their locations.

Nuclear Decommissioning Asset Retirement Obligation

To estimate our nuclear decommissioning asset retirement obligation on assets acquired from Energy Harbor, we used a discounted cash flow model based on our estimates of cost escalation factors and discount rates, and considered multiple decommissioning scenarios: (i) DECON, which assumes major decommissioning activities begin shortly after the facility ceases operations, and (ii) SAFSTOR, which assumes the nuclear facility is placed and maintained in a condition during decommissioning that allows the nuclear facility to be safely stored until subsequently decontaminated within 60 years after the facility ceases operations. The probability-weighted estimated future cash flows were discounted using our specific credit-adjusted, risk-free rates which reflected the secured nature of the obligation due to acquired investments in NDTs which are intended to fund the future decommissioning obligations.

RESULTS OF OPERATIONS

Net income decreased $680 million to Net income of $18 million for the three months ended March 31, 2024 compared to the three months ended March 31, 2023. For additional information see the following discussion of our results of operations.

EBITDA and Adjusted EBITDA

In analyzing and planning for our business, we supplement our use of GAAP financial measures with non-GAAP financial measures, including EBITDA and Adjusted EBITDA as performance measures. These non-GAAP financial measures reflect an additional way of viewing aspects of our business that, when viewed (i) with our GAAP results and (ii) the accompanying reconciliations to corresponding GAAP financial measures may provide a more complete understanding of factors and trends affecting our business. Because EBITDA and Adjusted EBITDA are financial measures that management uses to allocate resources, determine our ability to fund capital expenditures, assess performance against our peers, and evaluate overall financial performance, we believe they provide useful information for investors.

These non-GAAP financial measures should not be relied upon to the exclusion of GAAP financial measures and are, by definition, an incomplete understanding of Vistra and must be considered in conjunction with GAAP measures. In addition, non-GAAP financial measures are not standardized; therefore, it may not be possible to compare these financial measures with other companies' non-GAAP financial measures having the same or similar names. We strongly encourage investors to review our condensed consolidated financial statements and publicly filed reports in their entirety and not rely on any single financial measure.

When EBITDA or Adjusted EBITDA is discussed in reference to performance on a consolidated basis, the most directly comparable GAAP financial measure to EBITDA and Adjusted EBITDA is Net income (loss).

Vistra Consolidated Financial Results — Three Months Ended March 31, 2024 Compared to the Three Months Ended March 31, 2023

The following table presents Net income (loss), EBITDA and Adjusted EBITDA for the three months ended March 31, 2024:

	Three Months Ended March 31, 2024							
nillions)	Retail	Texas	East	West	Sunset	Asset Closure	Eliminations / Corporate and Other	Vistra Consolidated
erating revenues	$ 2,494	439	637	285	239	—$	(1,040)$	3,054
l, purchased power costs and delivery fees	(1,647)	(368)	(526)	(80)	(134)	(1)	1,040	(1,716)
erating costs	(31)	(248)	(124)	(16)	(66)	(12)	(1)	(498)
reciation and amortization	(23)	(132)	(192)	(21)	(20)	—	(15)	(403)
ing, general and administrative expenses	(225)	(34)	(18)	(5)	(11)	(9)	(49)	(351)
perating income (loss)	568	(343)	(223)	163	8	(22)	(65)	86
er income	—	3	39	1	—	3	45	91
er deductions	(1)	(1)	—	—	(1)	(1)	—	(4)
rest expense and related charges	(6)	10	(1)	—	—	(1)	(172)	(170)
acts of Tax Receivable Agreement	—	—	—	—	—	—	(5)	(5)
ncome (loss) before income taxes	561	(331)	(185)	164	7	(21)	(197)	(2)
me tax benefit	—	—	—	—	—	—	20	20
income (loss)	$ 561	(331)	(185)	164	$ 7	(21)$	(177)$	18
come tax benefit	—	—	—	—	—	—	(20)	(20)
terest expense and related charges (a)	6	(10)	1	—	—	1	172	170
epreciation and amortization (b)	23	158	215	21	20	—	16	453
TDA before Adjustments	590	(183)	31	185	27	(20)	(9)	621
nrealized net (gain) loss resulting from commodity hedging transactions	(623)	584	193	(129)	155	(4)	—	176
rchase accounting impacts	(2)	—	(2)	—	—	—	(14)	(18)
pacts of Tax Receivable Agreement (c)	—	—	—	—	—	—	(5)	(5)
n-cash compensation expenses	—	—	—	—	—	—	21	21
ansition and merger expenses	1	—	4	—	—	—	28	33
ecommissioning-related activities (d)	—	5	(26)	—	2	—	—	(19)
RP system implementation	—	—	—	—	—	—	6	6
ther, net	6	5	1	3	—	1	(41)	(25)
usted EBITDA	$ (28)	41	201	$ 9	184	(23)$	(14)$	790

(a) Includes $47 million of unrealized mark-to-market net gains on interest rate swaps.
(b) Includes nuclear fuel amortization of $26 million and $23 million, respectively, in Texas and East segments.
(c) Includes $10 million gain recognized on the repurchase of TRA Rights in the three months ended March 31, 2024 (see Note 13 to the Financial Statements).
(d) Represents net of all NDT income (loss), ARO accretion expense for operating assets and ARO remeasurement impacts for operating assets.

The following table presents Net income (loss), EBITDA and Adjusted EBITDA for the three months ended March 31, 2023:

	Three Months Ended March 31, 2023							
(in millions)	Retail	Texas	East	West	Sunset	Asset Closure	Eliminations / Corporate and Other	Vistra Consolidated
Operating revenues	$ 2,350	$ 1,353	$ 1,809	$ 231	$ 828	$ —	$ (2,146)	$ 4,425
Fuel, purchased power costs and delivery fees	(2,690)	(395)	(820)	(148)	(262)	(1)	2,146	(2,170)
Operating costs	(28)	(228)	(65)	(15)	(65)	(20)	—	(421)
Depreciation and amortization	(29)	(130)	(161)	(15)	(14)	—	(17)	(366)
Selling, general and administrative expenses	(191)	(31)	(19)	(6)	(13)	(8)	(20)	(288)
Impairment of long-lived assets	—	—	—	—	(49)	—	—	(49)
Operating income (loss)	(588)	569	744	47	425	(29)	(37)	1,131
Other income	—	12	1	1	1	3	2	20
Other deductions	—	(1)	—	—	(1)	—	(1)	(3)
Interest expense and related charges	(7)	4	—	4	(1)	(1)	(206)	(207)
Impacts of Tax Receivable Agreement	—	—	—	—	—	—	(65)	(65)
Income (loss) before income taxes	(595)	584	745	52	424	(27)	(307)	876
Income tax expense	—	—	—	—	—	—	(178)	(178)
Net income (loss)	$ (595)	$ 584	$ 745	$ 52	$ 424	$ (27)	$ (485)	$ 698
Income tax expense	—	—	—	—	—	—	178	178
Interest expense and related charges (a)	7	(4)	—	(4)	1	1	206	207
Depreciation and amortization (b)	29	153	161	15	14	—	17	389
EBITDA before Adjustments	(559)	733	906	63	439	(26)	(84)	1,472
Unrealized net (gain) loss resulting from commodity hedging transactions	559	(346)	(923)	(18)	(340)	(17)	—	(1,085)
Generation plant retirement expenses	—	—	—	—	—	—	1	1
Fresh start/purchase accounting impacts	1	(1)	2	—	1	—	—	3
Impacts of Tax Receivable Agreement	—	—	—	—	—	—	65	65
Non-cash compensation expenses	—	—	—	—	—	—	22	22
Transition and merger expenses	(2)	—	—	—	1	—	2	1
Impairment of long-lived assets	—	—	—	—	49	—	—	49
PJM capacity performance default impacts (c)	—	—	14	—	6	—	—	20
Winter Storm Uri impacts (d)	(34)	1	—	—	—	—	—	(33)
Other, net	6	(4)	2	1	8	2	(17)	(2)
Adjusted EBITDA	$ (29)	$ 383	$ 1	$ 46	$ 164	$ (41)	$ (11)	$ 513

(a) Includes $41 million of unrealized mark-to-market net losses on interest rate swaps.

(b) Includes nuclear fuel amortization of $23 million in Texas segment.

(c) Represents estimate of anticipated market participant defaults or settlements on initial PJM capacity performance penalties due to extreme magnitude of penalties associated with Winter Storm Elliott.

(d) Adjusted EBITDA impacts of Winter Storm Uri reflects the application of bill credits to large commercial and industrial customers that curtailed their usage during Winter Storm Uri and a reduction in the allocation of ERCOT default uplift charges which were expected to be paid over several decades under protocols existing at the time of the storm.

GAAP operating income decreased $1.045 billion to operating income of $86 million in the three months ended March 31, 2024 compared to the three months ended March 31, 2023. The primary driver for the decrease is a $1.261 billion change in unrealized mark-to-market activity as results for the three months ended March 31, 2024 were unfavorably impacted by $176 million in pre-tax unrealized mark-to-market losses on derivative positions due to power and natural gas forward market curves moving up in the three months ended March 31, 2024 compared to $1.085 billion in pre-tax unrealized mark-to-market gains on commodity derivative positions due to power and natural gas forward market curves moving down in the three months ended March 31, 2023. See further information on our derivative results in *Energy-Related Commodity Contracts and Mark-to-Market Activities* below.

In addition to the mark-to-market impacts discussed above, operating results for the three months ended March 31, 2024, compared to the three months ended March 31, 2023 were impacted by additional factors including:

Favorable impacts:

- Expiration of contracts in the East segment which resulted in higher-than-expected migration of customers to default service providers at rates below prevailing wholesale market prices in the three months ended March 31, 2023.
- Addition of Energy Harbor in March 2024 with results reflected in the East and Retail segments.

Unfavorable impacts:

- Decreases in capacity revenues primarily in the Sunset segment.
- Increase in selling, general and administrative expenses in Retail and Corp driven primarily by the addition of Energy Harbor.

The following table presents operational performance of our retail and generation segments:

	Three Months Ended March 31,									
	Retail		Texas		East		West		Sunset	
	2024	2023	2024	2023	2024	2023	2024	2023	2024	2023
Retail sales volumes (GWh):										
Retail electricity sales volumes:										
Sales volumes in ERCOT	16,074	14,982								
Sales volumes in Northeast/Midwest	10,261	5,830								
Total retail electricity sales volumes	26,335	20,812								
Production volumes (GWh):										
Natural gas facilities			8,151	6,225	14,762	14,585	1,228	1,543		
Lignite and coal facilities			4,797	4,971					3,551	3,516
Nuclear facilities			5,008	5,227	2,329					
Solar facilities			156	154						
Capacity factors:										
CCGT facilities			43.8 %	35.0 %	61.5 %	62.2 %	55.0 %	70.1 %		
Lignite and coal facilities			57.1 %	59.7 %					35.5 %	35.6 %
Nuclear facilities			95.6 %	100.9 %	77.4 %					
Weather - percent of normal (a):										
Heating degree days	90 %	83 %	93 %	81 %	87 %	84 %	117 %	149 %	88 %	87 %

(a) Reflects heating degree days for the region based on Weather Services International (WSI) data.

	Three Months Ended March 31,	
	2024	2023
Market pricing		
Average ERCOT North power price ($/MWh)	$ 21.66	$ 21.98
Average NYMEX Henry Hub natural gas price ($/MMBtu)	$ 2.43	$ 2.68
Average natural gas price (a):		
TetcoM3 ($/MMBtu)	$ 2.90	$ 2.93
Algonquin Citygates ($/MMBtu)	$ 4.26	$ 5.13

	Three Months Ended March 31,	
	2024	2023
Average Market On-Peak Power Prices ($MWh) (b):		
PJM West Hub	$ 36.03	$ 36.35
AEP Dayton Hub	$ 33.11	$ 33.65
NYISO Zone C	$ 38.13	$ 30.96
Massachusetts Hub	$ 47.97	$ 51.98
Indiana Hub	$ 36.79	$ 35.52
Northern Illinois Hub	$ 30.34	$ 29.58
CAISO NP15	$ 50.86	$ 100.31

(a) Reflects the average of daily quoted prices for the periods presented and does not reflect costs incurred by us.

(b) Reflects the average of day-ahead quoted prices for the periods presented and does not necessarily reflect prices we realized.

For the three months ended March 31, 2024, other income totaled $91 million driven by NDT net gains of $35 million, interest income of $23 million and a gain of $10 million on TRA repurchases. For the three months ended March 31, 2023, other income totaled $20 million driven by interest income.

Consolidated interest expense and related charges decreased $37 million in the three months ended March 31, 2024 compared to the three months ended March 31, 2023 primarily due to unrealized mark-to-market gains on interest rate swaps of $47 million in 2024 compared to unrealized mark-to-market losses on interest rate swaps of $41 million in 2023 due to an increase in interest rates in the three months ended March 31, 2024 compared to a decrease in the three months ended March 31, 2023, partially offset by an increase in interest paid/accrued of $52 million driven by higher average borrowings and rates in 2024. See Note 18 to the Financial Statements.

The following table presents additional changes to Net income (loss) and Adjusted EBITDA for the three months ended March 31, 2024 compared to the three months ended March 31, 2023.

	Three Months Ended March 31, 2024 Compared to 2023				
(in millions)	Retail (a)	Texas	East (a)	West	Sunset
Favorable change in realized revenue net of fuel driven by effectiveness of hedging strategies (b), rolloff of negative margin default service contracts in East and addition of Energy Harbor	$ —	$ 46	$ 246	$ 11	$ 17
Higher margins driven by addition of Energy Harbor	8				
Favorable impact of less Winter Storm Uri bill credits applied	27	—	—	—	—
Negative impacts of milder weather in 2024	(4)				
Increase in operating costs due primarily to change in generation volumes	—	(15)	(47)	(1)	1
Change in SG&A and other	(30)	(3)	1	3	2
Change in Adjusted EBITDA	**$ 1**	**$ 28**	**$ 200**	**$ 13**	**$ 20**
Favorable/(unfavorable) change in depreciation and amortization	6	(5)	(54)	(6)	(6)
Change in unrealized net gains (losses) on hedging activities (b)	1,182	(930)	(1,116)	111	(495)
Impairment of long-lived assets	—	—	—	—	49
Decommissioning related activities	—	(5)	26	—	(2)
PJM capacity performance default impacts	—	—	14	—	6
Winter Storm Uri impact	(34)	1	—	—	—
Other (including interest expenses)	1	(4)	—	(6)	11
Change in Net income (loss)	**$ 1,156**	**$ (915)**	**$ (930)**	**$ 112**	**$ (417)**

(a) Includes amounts associated with March 2024 operations acquired in the Energy Harbor Merger.

(b) See *Energy-Related Commodity Contracts and Mark-to-Market Activities* below for analysis of hedging strategy.

Asset Closure Segment — Three Months Ended March 31, 2024 Compared to Three Months Ended March 31, 2023

	Three Months Ended March 31,		Favorable (Unfavorable)
(in millions)	2024	2023	Change
Fuel, purchased power costs and delivery fees	$ (1)	$ (1)	$ —
Operating costs	(12)	(20)	8
Selling, general and administrative expenses	(9)	(8)	(1)
Operating loss	(22)	(29)	7
Other income	3	3	—
Other deductions	(1)	—	(1)
Interest expense and related charges	(1)	(1)	—
Loss before income taxes	(21)	(27)	6
Net loss	**$ (21)**	**$ (27)**	**$ 6**
Adjusted EBITDA	**$ (23)**	**$ (41)**	**$ 18**

Operating costs for the three months ended March 31, 2024 and 2023 include ongoing costs associated with the decommissioning and reclamation of retired plants and mines. GAAP and Adjusted EBITDA results for 2024 are favorable compared to 2023 primarily due to higher costs incurred in 2023 for the January 2023 retirement of the Edwards generation facility.

Energy-Related Commodity Contracts and Mark-to-Market Activities

As forward power prices materially increased in 2022, our generation segments (Texas, East, West and Sunset) aggressively sold forward power for future years. We entered the 2023 and 2024 calendar years with more than 99% of our expected generation volumes hedged. While settled power prices in the first quarter of 2023 and 2024 are lower than historical averages, the strategic hedging allowed us to lock in margins above what we would have been able to realize if unhedged. Additionally, the margins we were able to lock in with hedges for the first quarter of 2024 were higher than the first quarter of 2023 which is driving the increase in realized revenue net of fuel in the generation segments along with the addition of Energy Harbor in the East segment. The forward power sales are also the drivers of the changes in unrealized gains/losses on hedging activities. As power prices increase/decrease in comparison to what our generation segments have sold forward, the generation segments recognize unrealized losses/gains. The retail segment procures power from the generation segments to serve future load obligations and thus changes in forward power prices have an inverse effect on unrealized mark to market for the retail segment as compared to the generation segments. This is evident in the first quarter of 2023 as decrease in forward power prices drove material unrealized gains in our generation segment, partially offset by unrealized losses in our retail segment. In the first quarter of 2024, forward power prices increased slightly which resulted in unrealized losses in our generation segments which is partially offset by unrealized gains in our retail segment.

The table below summarizes the changes in commodity contract assets and liabilities for the three months ended March 31, 2024 and 2023. The net change in these assets and liabilities, excluding "other activity" as described below, reflects $176 million in unrealized net losses and $1.085 billion in unrealized net gains for the three months ended March 31, 2024 and 2023, respectively, arising from mark-to-market accounting for positions in the commodity contract portfolio.

	Three Months Ended March 31,	
(in millions)	**2024**	**2023**
Commodity contract net liability at beginning of period	$ (2,740)	$ (3,148)
Settlements/termination of positions (a)	387	711
Changes in fair value of positions in the portfolio (b)	(563)	374
Acquired commodity contracts (c)	(39)	—
Other activity (d)	47	(36)
Commodity contract net liability at end of period	$ (2,908)	$ (2,099)

(a) Represents reversals of previously recognized unrealized gains and losses upon settlement/termination (offsets realized gains/(losses) recognized in the settlement period). Excludes changes in fair value in the month the position settled as well as amounts related to positions entered into, and settled, in the same month.

(b) Represents unrealized net gains/(losses) recognized, reflecting the effect of changes in fair value. Excludes changes in fair value in the month the position settled as well as amounts related to positions entered into, and settled, in the same month.

(c) Includes fair value of commodity contracts acquired in the Energy Harbor Merger (see Note 2 to the Financial Statements).

(d) Primarily represents changes in fair value of positions due to receipt or payment of cash not reflected in unrealized gains or losses. Amounts are generally related to premiums related to options purchased or sold as well as certain margin deposits classified as settlement for certain transactions executed on the CME.

The following maturity table presents the net commodity contract liability arising from recognition of fair values as of March 31, 2024, scheduled by the source of fair value and contractual settlement dates of the underlying positions.

(in millions)	**Maturity dates of unrealized commodity contract net liability as of March 31, 2024**				
Source of Fair Value	**Less than 1 year**	**1-3 years**	**4-5 years**	**Excess of 5 years**	**Total**
Prices actively quoted	$ (521)	$ (272)	$ 1	$ —	$ (792)
Prices provided by other external sources	(578)	(389)	—	—	(967)
Prices based on models	(322)	(609)	(130)	(88)	(1,149)
Total	$ (1,421)	$ (1,270)	$ (129)	$ (88)	$ (2,908)

We have engaged in natural gas hedging activities to mitigate the risk of higher or lower wholesale electricity prices that have corresponded to increases or declines in natural gas prices. When natural gas prices are elevated or depressed, we continue to seek opportunities to manage our wholesale power price exposure through hedging activities, including forward wholesale and retail electricity sales.

Estimated hedging levels for generation volumes in our Texas, East, West and Sunset segments as of March 31, 2024 were as follows:

	Balance of 2024	2025
Nuclear/Renewable/Coal Generation:		
Texas	100 %	100 %
East	74 %	39 %
Sunset	97 %	66 %
Natural Gas Generation:		
Texas	95 %	84 %
East	100 %	84 %
West	100 %	99 %

Financial Condition

Cash Flows

Operating Cash Flows

Cash provided by operating activities totaled $312 million and $1.435 billion in the three months ended March 31, 2024 and 2023, respectively. The unfavorable change of $1.123 billion was primarily driven by a lower decrease in net margin deposits (returns of cash related to commodity contracts which support our hedging strategy) as $128 million was returned in the three months ended March 31, 2024 as compared to $1.227 billion returned in the three months ended March 31, 2023, partially offset by cash received from an increase in realized energy margins recognized in the three months ended March 31, 2024 compared to the three months ended March 31, 2023.

Depreciation and amortization — Depreciation and amortization expense reported as a reconciling adjustment in the condensed consolidated statements of cash flows exceeds the amount reported in the condensed consolidated statements of operations by $152 million and $111 million for the three months ended March 31, 2024 and 2023, respectively. The difference represents amortization of nuclear fuel, which is reported as fuel costs in the condensed consolidated statements of operations consistent with industry practice, and amortization of intangible net assets and liabilities that are reported in various other condensed consolidated statements of operations line items including operating revenues and fuel and purchased power costs and delivery fees (see Note 7 to the Financial Statements).

Investing Cash Flows

Cash used in investing activities totaled $3.528 billion and $513 million for the three months ended March 31, 2024 and 2023, respectively. The increase of $3.015 billion was driven primarily by (a) $3.1 billion used to fund the Energy Harbor Merger and (b) $88 million in higher net purchases of environmental allowances, partially offset by a $125 million increase in proceeds from sales of property, plant and equipment, including nuclear fuel.

	Three Months Ended March 31,		
(in millions)	**2024**	**2023**	**Increase (Decrease)**
Capital expenditures, including LTSA prepayments	$ (152)	$ (202)	$ 50
Nuclear fuel purchases	(220)	(64)	(156)
Growth and development expenditures	(93)	(218)	125
Total capital expenditures	(465)	(484)	19
Energy Harbor acquisition (net of cash acquired)	(3,070)	—	(3,070)
Net sales (purchases) of environmental allowances	(114)	(26)	(88)
Proceeds from sales of property, plant and equipment, including nuclear fuel	127	2	125
Other investing activity	(6)	(5)	(1)
Cash used in investing activities	$ (3,528)	$ (513)	$ (3,015)

Financing Cash Flows

Cash provided by financing activities totaled $793 million in the three months ended March 31, 2024 compared to cash used in financing activities of $874 million in the three months ended March 31, 2023. The change of $1.667 billion was driven by (a) the net borrowing of $1.375 billion of short-term debt and accounts receivable financing amounts in the three months ended March 31, 2024 to partially fund the Energy Harbor Merger compared to the net repayment of $475 million of short-term debt and accounts receivable financing amounts in the three months ended March 31, 2023 and (b) $700 million of borrowings under the Vistra Zero Term Loan B Facility, partially offset by cash used for long-term debt and TRA tender offers executed in January 2024.

	Three Months Ended March 31,		
(in millions)	**2024**	**2023**	**Increase (Decrease)**
Share repurchases	$ (291)	$ (301)	$ 10
Issuances of long-term debt	700	—	700
Other net long-term borrowings (repayments)	(756)	(7)	(749)
Net short-term borrowings (repayments)	500	(650)	1,150
Net borrowings (repayments) under the accounts receivable financing facilities	875	175	700
Dividends paid to common stockholders	(77)	(77)	—
TRA Repurchase and tender offer — return of capital	(122)	—	(122)
Other financing activity	(36)	(14)	(22)
Cash used in financing activities	$ 793	$ (874)	$ 1,667

Debt Activity

We remain committed to a strong balance sheet and have continued to state our objective to reduce our consolidated net leverage. We also intend to maintain adequate liquidity and pursue opportunities to refinance our long-term debt to extend maturities.

In May 2024 and July 2024, after taking into account the Senior Secured Notes Tender Offer settled in January 2024, $342 million of 4.875% Senior Secured Notes and $1.155 billion of 3.550% Senior Secured Notes, respectively, will reach maturity. We plan to fund these upcoming principal payments using a combination of (a) the proceeds from the issuance of $500 million of 6.000% Senior Secured Notes due 2034 and $1.0 billion of 6.875% Senior Unsecured Notes due 2032 and (b) cash on hand. Increases in interest rates have resulted in, and will likely continue to result in, increased borrowing costs.

See Note 8 to the Financial Statements for details of the Receivables Facility and Repurchase Facility and Note 10 to the Financial Statements for details of the Vistra Operations Credit Facilities, the Commodity-Linked Facility and other long-term debt.

Available Liquidity

The following table summarizes changes in available liquidity for the three months ended March 31, 2024:

(in millions)	**March 31, 2024**	**December 31, 2023**	**Change**
Cash and cash equivalents (a)	$ 1,070	$ 3,485	$ (2,415)
Vistra Operations Credit Facilities — Revolving Credit Facility (b)	1,293	1,213	80
Vistra Operations — Commodity-Linked Facility (c)	637	1,101	(464)
Total available liquidity (d)(e)	$ 3,000	$ 5,799	$ (2,799)

(a) See the condensed consolidated statements of cash flows in the Financial Statements and *Cash Flows* above for details of the decrease in cash and cash equivalents for the three months ended March 31, 2024. The decrease includes $3.1 billion that was used to fund the Energy Harbor Merger.

(b) The increase in availability for the three months ended March 31, 2024 was driven by an $80 million decrease in letters of credit outstanding under the facility.

(c) As of both March 31, 2024 and December 31, 2023, the borrowing bases are less than the facility limit of $1.575 billion. As of March 31, 2024, available capacity reflects the borrowing base of $1.137 billion and $500 million in cash borrowings. As of December 31, 2023, available capacity reflects the borrowing base of $1.101 billion and no cash borrowings.

(d) Excludes amounts available to be borrowed under the Receivables Facility and the Repurchase Facility, respectively. See Note 8 to the Financial Statements for detail on our accounts receivable financing.

(e) Excludes any additional letters of credit that may be issued under the Secured LOC Facilities, the Alternative LOC Facility or the Energy Harbor LOC Facility. See Note 10 to the Financial Statements for detail on our letter of credit facilities.

We believe that we will have access to sufficient liquidity to fund our other anticipated cash requirements through at least the next 12 months. Our operational cash flows tend to be seasonal and weighted toward the second half of the year.

Including obligations assumed in the Energy Harbor Merger, our obligations under commodity purchase and services agreements, including capacity payments, nuclear fuel and natural gas take-or-pay contracts, coal contracts, business services and nuclear-related outsourcing and other purchase commitments, are expected to total approximately $3.0 billion in fiscal year 2024, $2.9 billion in 2025-2026, $1.1 billion in 2027-2028 and $500 million thereafter.

Capital Expenditures

Estimated 2024 capital expenditures and nuclear fuel purchases as of May 8, 2024 total approximately $1.943 billion and include:

- $822 million for investments in generation and mining facilities;
- $745 million for solar and energy storage development;
- $302 million for nuclear fuel purchases; and
- $74 million for other growth expenditures.

Share Repurchase Program

In October 2021, we announced that the Board authorized a share repurchase program (Share Repurchase Program) under which up to $2.0 billion of our outstanding shares of common stock may be repurchased. The Share Repurchase Program became effective on October 11, 2021, at which time it superseded the 2020 Share Repurchase Program (described below) and any authorization remaining as of such date. In August 2022, March 2023 and February 2024, the Board authorized incremental amounts of $1.25 billion, $1.0 billion and $1.5 billion, respectively, for repurchases to bring the total authorized under the Share Repurchase Program to $5.75 billion.

The following table provides information about our repurchases of common stock for the period between January 1, 2024 and May 3, 2024:

(in millions, except share amounts and price paid per share)	$5.75 billion Board Authorization			
	Total Number of Shares Repurchased	Average Price Paid Per Share	Amount Paid for Shares Repurchased	Amount Available for Additional Repurchases at the End of the Period
Three Months Ended March 31, 2024 (a)	6,138,773	$ 46.21	$ 284	
April 1, 2024 through May 3, 2024	1,455,357	71.34	104	
January 1, 2024 through May 3, 2024	7,594,130	$ 51.02	$ 388	$ 1,862

(a) Shares repurchased include 72,839 of unsettled shares for $5 million as of March 31, 2024.

Dividends

Common Stock Dividends

In November 2018, Vistra announced the Board adopted a dividend program which we initiated in the first quarter of 2019. Each dividend under the program is subject to declaration by the Board and, thus, may be subject to numerous factors in existence at the time of any such declaration including, but not limited to, prevailing market conditions, Vistra's results of operations, financial condition and liquidity, Delaware law and any contractual limitations. Quarterly dividends paid per share of common stock in 2024 and 2023 are reflected in the table below.

Three Months Ended March 31, 2024			Year Ended December 31, 2023		
Board Declaration Date	Payment Date	Per Share Amount	Board Declaration Date	Payment Date	Per Share Amount
February 2024	March 2024	$ 0.2150	February 2023	March 2023	$ 0.1975
			May 2023	June 2023	$ 0.2040
			July 2023	September 2023	$ 0.2060
			October 2023	December 2023	$ 0.2130

In May 2024, the Board declared a quarterly dividend of $0.2175 per share of common stock that will be paid in June 2024.

Preferred Stock Dividends

Semiannual dividends paid per share of each respective preferred stock series in 2024 and 2023 are reflected in the table below. Dividends payable are recorded on the Board declaration date.

Series A Preferred Stock			Series B Preferred Stock		
Board Declaration Date	Payment Date	Per Share Amount	Board Declaration Date	Payment Date	Per Share Amount
February 2023	April 2023	$ 40.00	May 2023	June 2023	$ 35.00
August 2023	October 2023	$ 40.00	November 2023	December 2023	$ 35.00
February 2024	April 2024	$ 40.00			

In May 2024, the Board declared a semi-annual dividend of $35.00 per share of Series B Preferred Stock that will be paid in June 2024 and an initial dividend of $48.32 per share on Series C Preferred Stock that will be paid in July 2024.

Liquidity Effects of Commodity Hedging and Trading Activities

We have entered into commodity hedging and trading transactions that require us to post collateral if the forward price of the underlying commodity moves such that the hedging or trading instrument we hold has declined in value. We use cash, letters of credit, Eligible Assets (see Note 9 to the Financial Statements) and other forms of credit support to satisfy such collateral posting obligations. See Note 10 to the Financial Statements for discussion of the Vistra Operations Credit Facilities, the Commodity-Linked Facility, the Secured LOC Facilities, the Alternative LOC Facility and the Energy Harbor LOC Facility.

Exchange cleared transactions typically require initial margin (*i.e.*, the upfront cash and/or letter of credit posted to take into account the size and maturity of the positions and credit quality) in addition to variation margin (*i.e.*, the daily cash margin posted to take into account changes in the value of the underlying commodity). The amount of initial margin required is generally defined by exchange rules. Clearing agents, however, typically have the right to request additional initial margin based on various factors, including market depth, volatility and credit quality, which may be in the form of cash, letters of credit, a guaranty or other forms as negotiated with the clearing agent. Cash collateral received from counterparties is either used for working capital and other business purposes, including reducing borrowings under credit facilities, or is required to be deposited in a separate account and restricted from being used for working capital and other corporate purposes. With respect to over-the-counter transactions, counterparties generally have the right to substitute letters of credit for such cash collateral. In such event, the cash collateral previously posted would be returned to such counterparties, which would reduce liquidity in the event the cash was not restricted.

As of March 31, 2024, we received or posted cash, letters of credit, and Eligible Assets for commodity hedging and trading activities as follows:

- $1.629 billion in cash and Eligible Assets have been posted with counterparties as compared to $1.244 billion posted as of December 31, 2023;
- $115 million in cash has been received from counterparties as compared to $45 million received as of December 31, 2023;
- $2.634 billion in letters of credit have been posted with counterparties as compared to $2.408 billion posted as of December 31, 2023; and
- $140 million in letters of credit have been received from counterparties as compared to $143 million received as of December 31, 2023.

See *Collateral Support Obligations* below for information related to collateral posted in accordance with the PUCT and ISO/RTO rules.

Income Tax Payments

In the next 12 months, we expect to make approximately $4 million in federal income tax payments and $52 million in state income tax payments, offset by $8 million in state tax refunds.

For the three months ended March 31, 2024, there were no federal income tax payments, $3 million in state income tax payments, $1 million in state income tax refunds and no TRA payments.

Financial Covenants

The Vistra Operations Credit Agreement and the Vistra Operations Commodity-Linked Credit Agreement each includes a covenant, solely with respect to the Revolving Credit Facility and the Commodity-Linked Facility and solely during a compliance period (which, in general, is applicable when the aggregate revolving borrowings and issued revolving letters of credit exceed 30% of the revolving commitments, provided that solely with respect to the Revolving Credit Facility only such amounts in excess of $300 million are taken into account for purposes of determining whether a compliance period is in effect), that requires the consolidated first-lien net leverage ratio not to exceed 4.25 to 1.00 (or, during a collateral suspension period, the consolidated total net leverage ratio not to exceed 5.50 to 1.00). In addition, each of the Secured LOC Facilities includes a covenant that requires the consolidated first-lien net leverage ratio not to exceed 4.25 to 1.00 (or, for certain facilities that include a collateral suspension mechanism, during a collateral suspension period, the consolidated total net leverage ratio not to exceed 5.50 to 1.00). As of March 31, 2024, we were in compliance with the Vistra Operations Credit Agreement, Vistra Operations Commodity-Linked Credit Agreement and Secured LOC Facilities financial covenants.

See Note 10 to the Financial Statements for discussion of other covenants related to the Vistra Operations Credit Facilities.

Collateral Support Obligations

The RCT has rules in place to assure that parties can meet their mining reclamation obligations. In September 2016, the RCT agreed to a collateral bond of up to $975 million to support Luminant's reclamation obligations. The collateral bond is effectively a first lien on all of Vistra Operations' assets (which ranks pari passu with the Vistra Operations Credit Facilities) that contractually enables the RCT to be paid (up to $975 million) before the other first-lien lenders in the event of a liquidation of our assets. Collateral support relates to land mined or being mined and not yet reclaimed as well as land for which permits have been obtained but mining activities have not yet begun and land already reclaimed but not released from regulatory obligations by the RCT, and includes cost contingency amounts.

The PUCT has rules in place to assure adequate creditworthiness of each REP, including the ability to return customer deposits, if necessary. Under these rules, as of March 31, 2024, Vistra has posted letters of credit in the amount of $95 million with the PUCT, which is subject to adjustments.

The ISOs/RTOs we operate in have rules in place to assure adequate creditworthiness of parties that participate in the markets operated by those ISOs/RTOs. Under these rules, Vistra has posted collateral support totaling $583 million in the form of letters of credit, $81 million in the form of a surety bond and $12 million of cash as of March 31, 2024 (which is subject to daily adjustments based on settlement activity with the ISOs/RTOs).

Material Cross Default/Acceleration Provisions

Certain of our contractual arrangements contain provisions that could result in an event of default if there were a failure under financing arrangements to meet payment terms or to observe covenants that could result in an acceleration of payments due. Such provisions are referred to as "cross default" or "cross acceleration" provisions.

A default by Vistra Operations or any of its restricted subsidiaries in respect of certain specified indebtedness in an aggregate amount in excess of the greater of $300 million and 17.5% of Consolidated EBITDA may result in a cross default under the Vistra Operations Credit Facilities and the Commodity-Linked Facility. Such a default would allow the lenders under each such facility to accelerate the maturity of outstanding balances under such facilities, which totaled approximately $2.494 billion and $500 million, respectively, as of March 31, 2024.

Each of Vistra Operations' (or its subsidiaries') commodity hedging agreements and interest rate swap agreements that are secured with a lien on its assets on a pari passu basis with the Vistra Operations Credit Facilities lenders contains a cross-default provision. An event of a default by Vistra Operations or any of its subsidiaries relating to indebtedness equal to or above a threshold defined in the applicable agreement that results in the acceleration of such debt, would give such counterparty under these hedging agreements the right to terminate its hedge or interest rate swap agreement with Vistra Operations (or its applicable subsidiary) and require all outstanding obligations under such agreement to be settled.

Under the Vistra Operations Senior Unsecured Indentures, the Vistra Operations Senior Secured Indenture and the Indenture governing the 7.233% Senior Secured Notes, a default under any document evidencing indebtedness for borrowed money by Vistra Operations or any Guarantor Subsidiary for failure to pay principal when due at final maturity or that results in the acceleration of such indebtedness in an aggregate amount of $300 million or more may result in a cross default under the Vistra Operations Senior Unsecured Notes, the Senior Secured Notes, the 7.233% Senior Secured Notes, the Vistra Operations Credit Facilities, the Receivables Facility, the Commodity-Linked Facility and other current or future documents evidencing any indebtedness for borrowed money by the applicable borrower or issuer, as the case may be, and the applicable Guarantor Subsidiaries party thereto.

Additionally, we enter into energy-related physical and financial contracts, the master forms of which contain provisions whereby an event of default or acceleration of settlement would occur if we were to default under an obligation in respect of borrowings in excess of thresholds, which may vary by contract.

The Receivables Facility contains a cross-default provision. The cross-default provision applies, among other instances, if TXU Energy, Dynegy Energy Services, Ambit Texas, Value Based Brands, Energy Harbor LLC, TriEagle Energy, each indirect subsidiaries of Vistra and originators under the Receivables Facility (Originators), and Vistra or any of their respective subsidiaries fails to make a payment of principal or interest on any indebtedness that is outstanding in a principal amount of at least $300 million, in the case of Vistra Operations, and in a principal amount of at least $50 million, in the case of TXU Energy or any of the other Originators, after the expiration of any applicable grace period, or if other events occur or circumstances exist under such indebtedness which give rise to a right of the debtholder to accelerate such indebtedness, or if such indebtedness becomes due before its stated maturity. If this cross-default provision is triggered, a termination event under the Receivables Facility would occur and the Receivables Facility may be terminated.

The Repurchase Facility contains a cross-default provision. The cross-default provision applies, among other instances, if an event of default (or similar event) occurs under the Receivables Facility or the Vistra Operations Credit Facilities. If this cross-default provision is triggered, a termination event under the Repurchase Facility would occur and the Repurchase Facility may be terminated.

Under the Secured LOC Facilities, a default by Vistra Operations or any of its restricted subsidiaries in respect of certain specified indebtedness in an aggregate amount in excess of $300 million may result in a cross default under the Secured LOC Facilities. In addition, a default under any document evidencing indebtedness for borrowed money by Vistra Operations or any Guarantor Subsidiary for failure to pay principal when due at final maturity or that results in the acceleration of such indebtedness in an aggregate amount of $300 million or more, may result in a termination of the Secured LOC Facilities.

Under the Alternative LOC Facility, a default by Vistra Operations or any of its restricted subsidiaries in respect of certain specified indebtedness in an aggregate amount in excess of the greater of $300 million and 17.5% of Consolidated EBITDA may result in a cross default under the Alternative LOC Facility. In addition, a default under any document evidencing indebtedness for borrowed money by Vistra Operations or any Guarantor Subsidiary for failure to pay principal when due at final maturity or that results in the acceleration of such indebtedness in an aggregate amount exceeding the threshold above, may result in a termination of the Alternative LOC Facility.

Under the Vistra Operations Senior Unsecured Indenture and the Vistra Operations Senior Secured Indenture governing the 7.750% Senior Unsecured Notes and 6.950% Senior Secured Notes, respectively, a default under any document evidencing indebtedness for borrowed money by Vistra Operations or any Guarantor Subsidiary for failure to pay principal when due at final maturity or that results in the acceleration of such indebtedness in an aggregate amount that exceeds the greater of 1.5% of total assets and $600 million may result in a cross default under the respective notes and other current or future documents evidencing any indebtedness for borrowed money by the applicable borrower or issuer, as the case may be, and the applicable Guarantor Subsidiaries party thereto.

A default by Vistra Zero or any of its restricted subsidiaries in respect of certain specified indebtedness in an aggregate amount in excess of the greater of $100 million and 75% of Consolidated EBITDA may result in a cross default under the Vistra Zero Credit Agreement. Such a default would allow the lenders under each such facility to accelerate the maturity of outstanding balances under such facilities, which totaled approximately $700 million as of March 31, 2024.

Guarantees

See Note 15 to the Financial Statements for discussion of guarantees.

Commitments and Contingencies

See Note 15 to the Financial Statements for discussion of commitments and contingencies.

Changes in Accounting Standards

See Note 1 to the Financial Statements for discussion of changes in accounting standards.

Item 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the risk that in the normal course of business we may experience a loss in value because of changes in market conditions that affect economic factors such as commodity prices, interest rates and counterparty credit. Our exposure to market risk is affected by several factors, including the size, duration and composition of our energy and financial portfolio, as well as the volatility and liquidity of markets. Instruments used to manage this exposure include interest rate swaps to hedge debt costs, as well as exchange-traded, over-the-counter contracts and other contractual arrangements to hedge commodity prices.

Risk Oversight

We manage the commodity price, counterparty credit and commodity-related operational risk related to the competitive energy business within limitations established by senior management and in accordance with overall risk management policies. Interest rate risk is managed centrally by our treasury function. Market risks are monitored by risk management groups that operate independently of the wholesale commercial operations, utilizing defined practices and analytical methodologies. These techniques measure the risk of change in value of the portfolio of contracts and the hypothetical effect on this value from changes in market conditions and include, but are not limited to, position reporting and review, Value at Risk (VaR) methodologies and stress test scenarios. Key risk control activities include, but are not limited to, transaction review and approval (including credit review), operational and market risk measurement, transaction authority oversight, validation of transaction capture, market price validation and reporting, and portfolio valuation and reporting, including mark-to-market valuation, VaR and other risk measurement metrics.

Vistra has a risk management organization that enforces applicable risk limits, including the respective policies and procedures to ensure compliance with such limits, and evaluates the risks inherent in our businesses.

Commodity Price Risk

Our business is subject to the inherent risks of market fluctuations in the price of electricity, natural gas and other energy-related products it markets or purchases. We actively manage the portfolio of generation assets, fuel supply and retail sales load to mitigate the near-term impacts of these risks on results of operations. Similar to other participants in the market, we cannot fully manage the long-term value impact of structural declines or increases in natural gas and power prices.

In managing energy price risk, we enter into a variety of market transactions including, but not limited to, short- and long-term contracts for physical delivery, exchange-traded and over-the-counter financial contracts and bilateral contracts with customers. Activities include hedging, the structuring of long-term contractual arrangements and proprietary trading. We continuously monitor the valuation of identified risks and adjust positions based on current market conditions. We strive to use consistent assumptions regarding forward market price curves in evaluating and recording the effects of commodity price risk.

VaR Methodology

A VaR methodology is used to measure the amount of market risk that exists within the portfolio under a variety of market conditions. The resultant VaR produces an estimate of a portfolio's potential for loss given a specified confidence level and considers, among other things, market movements utilizing standard statistical techniques given historical and projected market prices and volatilities.

Parametric processes are used to calculate VaR and are considered by management to be the most effective way to estimate changes in a portfolio's value based on assumed market conditions for liquid markets. The use of these methods requires a number of key assumptions, such as use of (i) an assumed confidence level, (ii) an assumed holding period (*i.e.*, the time necessary for management action, such as to liquidate positions); and (iii) historical estimates of volatility and correlation data. The table below details certain VaR measures related to various portfolios of contracts.

VaR for Underlying Generation Assets and Energy-Related Contracts

This measurement estimates the potential loss in value, due to changes in market conditions, of all underlying generation assets and contracts, based on a 95% confidence level and an assumed holding period of 60 days. The forward period covered by this calculation includes the current and subsequent calendar year at the time of calculation.

(in millions)	Three Months Ended March 31, 2024	Year Ended December 31, 2023
Month-end average VaR	$ 251	$ 190
Month-end high VaR	$ 329	$ 423
Month-end low VaR	$ 197	$ 115

The month-end VaR risk measures in 2024 are consistent with prior year.

Price Sensitivities

The following sensitivity table provides approximate estimates of the potential impact of movements in power prices and spark spreads (the difference between the power revenue and fuel expense of natural gas-fired generation as calculated using an assumed Heat Rate of 7.2 MMBtu/MWh) on realized pre-tax earnings (in millions) taking into account the hedge positions noted above for the periods presented. The residual natural gas position is calculated based on two steps: first, calculating the difference between actual Heat Rates of our natural gas generation units and the assumed 7.2 Heat Rate used to calculate the sensitivity to spark spreads; and second, calculating the residual natural gas exposure that is not already included in the natural gas generation spark spread sensitivity shown in the table below. The estimates related to price sensitivity are based on our expected generation, related hedges and forward prices as of March 31, 2024.

(in millions)	Balance of 2024	2025
Texas:		
Natural Gas Generation: $1.00/MWh increase in spark spread	$ 3	$ 8
Natural Gas Generation: $1.00/MWh decrease in spark spread	$ (2)	$ (8)
Residual Natural Gas Position: $0.25/MMBtu increase in natural gas price	$ —	$ 9
Residual Natural Gas Position: $0.25/MMBtu decrease in natural gas price	$ (5)	$ (15)
East:		
Nuclear Generation: $2.50/MWh increase in power price	$ 17	$ 50
Nuclear Generation: $2.50/MWh decrease in power price	$ (17)	$ (50)
Natural Gas Generation: $1.00/MWh increase in spark spread	$ 1	$ 10
Natural Gas Generation: $1.00/MWh decrease in spark spread	$ —	$ (8)
Residual Natural Gas Position: $0.25/MMBtu increase in natural gas price	$ (6)	$ (24)
Residual Natural Gas Position: $0.25/MMBtu decrease in natural gas price	$ —	$ 20
West:		
Residual Natural Gas Position: $0.25/MMBtu increase in natural gas price	$ —	$ 1
Residual Natural Gas Position: $0.25/MMBtu decrease in natural gas price	$ (1)	$ (2)
Sunset:		
Coal Generation: $2.50/MWh increase in power price	$ 2	$ 23
Coal Generation: $2.50/MWh decrease in power price	$ 1	$ (23)
Residual Natural Gas Position: $0.25/MMBtu increase in natural gas price	$ —	$ 1
Residual Natural Gas Position: $0.25/MMBtu decrease in natural gas price	$ —	$ (1)

Interest Rate Risk

We manage our interest rate risk to limit the impact of interest rate changes on our results of operations and cash flows and to lower our overall borrowing costs. To achieve these objectives, a majority of our borrowings have fixed interest rates.

As of March 31, 2024, the potential reduction of annual pretax earnings over the next twelve months due to a one percentage-point (100 basis points) increase in floating interest rates on long-term debt totaled approximately $9 million taking into account the interest rate swaps discussed in Note 11 to Financial Statements. The inflationary environment continues to drive elevated interest rates, resulting in increased recently completed and expected refinancing or borrowing costs. See Item 2. *Management's Discussion and Analysis of Financial Condition, and Results of Operations – Significant Activities and Events, and Items Influencing Future Performance – Macroeconomic Conditions.*

Credit Risk

Credit risk relates to the risk of loss associated with nonperformance by counterparties. We minimize credit risk by evaluating potential counterparties, monitoring ongoing counterparty risk and assessing overall portfolio risk. This includes review of counterparty financial condition, current and potential credit exposures, credit rating and other quantitative and qualitative credit criteria. We also employ certain risk mitigation practices, including utilization of standardized master agreements that provide for netting and setoff rights, as well as credit enhancements such as margin deposits and customer deposits, letters of credit, parental guarantees and surety bonds. See Note 11 to the Financial Statements for further discussion of this exposure.

Credit Exposure

Our gross credit exposure (excluding collateral impacts) associated with retail and wholesale trade accounts receivable and net derivative assets arising from commodity contracts and hedging and trading activities totaled $2.164 billion as of March 31, 2024.

As of March 31, 2024, Retail segment credit exposure totaled approximately $1.392 billion, including $1.370 billion of trade accounts receivable and $22 million related to derivatives. Cash deposits and letters of credit held as collateral for these receivables totaled $51 million, resulting in a net exposure of $1.341 billion. Allowances for uncollectible accounts receivable are established for the expected loss from nonpayment by these customers based on historical experience, market or operational conditions and changes in the financial condition of large business customers.

As of March 31, 2024, aggregate Texas, East, Sunset and Asset Closure segments credit exposure totaled $772 million including $681 million related to derivative assets and $91 million of trade accounts receivable, after taking into account master netting agreement provisions but excluding collateral impacts.

Including collateral posted to us by counterparties, our net Texas, East, Sunset and Asset Closure segments exposure was $581 million, as seen in the following table that presents the distribution of credit exposure by counterparty credit quality as of March 31, 2024. Credit collateral includes cash and letters of credit but excludes other credit enhancements such as guarantees or liens on assets.

(in millions)	Exposure Before Credit Collateral	Credit Collateral	Net Exposure
Investment grade	$ 633	$ 111	$ 522
Below investment grade or no rating	139	80	59
Totals	$ 772	$ 191	$ 581

Significant (*i.e.*, 10% or greater) concentration of credit exposure exists with two counterparties, which represent an aggregate $310 million, or 53%, of our total net exposure as of March 31, 2024. We view exposure to these counterparties to be within an acceptable level of risk tolerance due to the counterparties' credit ratings, the counterparties' market role and deemed creditworthiness and the importance of our business relationship with the counterparties. An event of default by one or more counterparties could subsequently result in termination-related settlement payments that reduce available liquidity if amounts such as margin deposits are owed to the counterparties or delays in receipts of expected settlements owed to us.

Contracts classified as "normal" purchase or sale and non-derivative contractual commitments are not marked-to-market in the financial statements and are excluded from the detail above. Such contractual commitments may contain pricing that is favorable considering current market conditions and therefore represent economic risk if the counterparties do not perform.

Item 4. CONTROLS AND PROCEDURES

An evaluation was performed under the supervision and with the participation of our management, including the principal executive officer and principal financial officer, of the effectiveness of the design and operation of the disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15a-15(e) of the Exchange Act) in effect at March 31, 2024. Based on the evaluation performed, our principal executive officer and principal financial officer concluded that the disclosure controls and procedures were effective. During the fiscal quarter covered by this quarterly report on Form 10-Q, other than additional controls associated with the integration of Energy Harbor due to the Energy Harbor Merger, there have been no changes in our internal control over financial reporting (as such term is defined in Rules 13a-15(e) and 15a-15(e) of the Exchange Act) during the most recently completed fiscal quarter that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. LEGAL PROCEEDINGS

Reference is made to the discussion in Note 15 to the Financial Statements regarding legal proceedings.

Item 1A. RISK FACTORS

As of the date of this Quarterly Report on Form 10-Q, except as set forth below, there have been no material changes to the risk factors discussed in Part I, Item 1A *Risk Factors* in our 2023 Form 10-K. We could also be affected by additional factors that are not presently known to us or that we currently consider to be immaterial to our operations.

We may suffer material losses, costs and liabilities due to operation risks, regulatory risks, and the risk of nuclear accidents arising from the ownership and operation of the nuclear generation facilities.

We own and operate nuclear generation facilities in Texas, Ohio, and Pennsylvania. The ownership and operation of nuclear generation facilities involves certain risks. These risks include:

- unscheduled outages or unexpected costs due to equipment, mechanical, structural, cybersecurity, insider threat, third-party compromise or other problems;
- inadequacy or lapses in maintenance protocols;
- the impairment of reactor operation and safety systems due to human error or force majeure;
- the costs of, and liabilities relating to, storage, handling, treatment, transport, release, use and disposal of radioactive materials;
- the costs of procuring nuclear fuel, including impacts from restrictions on imports from Russia or China (see Part I, Item 2. *Management's Discussion and Analysis of Financial Condition, and Results of Operations – Significant Activities and Events, and Items Influencing Future Performance – Macroeconomic Conditions*);
- the costs of storing and maintaining spent nuclear fuel at our on-site dry cask storage facility;
- terrorist or cybersecurity attacks by nation-states or other threat actors and the cost to protect and recover against any such attack;
- the impact of a natural disaster;
- financial risk associated with retrospective insurance premium that could become due under secondary coverage required by the Price Anderson Act;
- limitations on the amounts and types of insurance coverage commercially available; and
- uncertainties with respect to the technological and financial aspects of modifying or decommissioning nuclear facilities at the end of their useful lives.

Our financial performance could be materially and negatively affected by matters arising from our ownership and operation of nuclear facilities, including any prolonged unavailability of any of our nuclear generation facilities. The following are among the more significant related risks:

- *Operational Risk* — Operations at any generation facility could degrade to the point where the facility would have to be shut down. If such degradations were to occur at a nuclear generation facility, the process of identifying and correcting the causes of the operational downgrade to return the facility to operation could require significant time and expense, resulting in both lost revenue and increased fuel and purchased power expense to meet supply commitments. Furthermore, a shut-down or failure at any other nuclear generation facility could cause regulators to require a shut-down or reduced availability at our nuclear generation facilities.

- *Regulatory Risk* — The NRC may modify, suspend or revoke licenses and impose civil penalties for failure to comply with the Atomic Energy Act, the regulations under it or the terms of the licenses of nuclear generation facilities. Unless extended, as to which no assurance can be given, the NRC operating licenses for the two units at the Comanche Peak Facility will expire in 2030 and 2033, respectively, and for the unit at the Perry Facility will expire in 2026, and are pending license renewal applications subject to review by the NRC. Changes in regulations by the NRC could require a substantial increase in capital expenditures or result in increased operating or decommissioning costs.

- *Spent Nuclear Fuel Storage*. Our nuclear operations produce various types of nuclear waste materials, including spent nuclear fuel. The availability of a national repository for the storage of spent nuclear fuel and the timing of that facility opening will significantly affect the costs associated with storage of spent nuclear fuel and the ultimate amounts received from the DOE to reimburse us for these costs. Any regulatory action relating to the timing and availability of a repository for spent nuclear fuel could adversely affect our ability to decommission fully our nuclear units. We cannot predict whether a fee may be established or to what extent in the future for spent nuclear fuel disposal.

- *Decommissioning Obligation and Funding*. NRC regulations require that licensees of nuclear generating facilities demonstrate reasonable assurance that funds will be available in certain minimum amounts at the end of the life of the facility to decommission the facility.

  Actual costs to decommission our nuclear facilities may substantially exceed our estimates as a result of changes in the approach and timing of decommissioning activities, changes in decommissioning costs, changes in federal or state regulatory requirements, other changes in our estimates or ability to effectively execute on our planned decommissioning activities.

  Forecasting trust fund investment earnings and costs to decommission nuclear generating stations requires significant judgment, and actual results could differ significantly from current estimates. In addition, financial market performance directly affects the asset values in the NDT trust funds. If the investments held by our PJM NDT funds are not sufficient to fund the decommissioning of our nuclear units, we could be required to take steps, such as providing financial guarantees through letters of credit or parent company guarantees or making additional contributions to the trusts, which could be significant, to ensure that the trusts are adequately funded and that current and future NRC minimum funding requirements are met.

- *Nuclear Accident Risk* — Although the safety record of our nuclear generation facilities generally has been very good, accidents and other unforeseen problems have occurred at nuclear stations both in the U.S. and elsewhere. The consequences of an accident can be severe and include loss of life, injury, lasting negative health impacts and property damage. Any accident, or perceived accident, could result in significant liabilities that may exceed our resources, including insurance coverages, and could damage our reputation. Such liabilities to third parties are currently covered by a primary layer of financial protection required by the Price Anderson Act in the form of insurance carried by the owners of each nuclear facility and by a secondary layer of insurance coverage into which each nuclear licensee in the country is required to contribute in the event of an accident at any facility which exceeds the primary level of coverage for that facility. Our potential exposure for the secondary layer of coverage is currently capped at $165.9 million per reactor but is subject to adjustment for inflation, and the total retrospective premium per reactor per incident is capped at $24.7 million in any one year. Any such resulting liability from a nuclear accident could exceed our resources, including insurance coverage, and could ultimately result in the suspension or termination of power generation from the impacted facility. Such accidents could also result in property damage to our nuclear plant and equipment, which could exceed coverage available under insurance provided by Nuclear Electric Insurance Limited. If a serious nuclear incident were to occur, our business, reputation, financial condition and results of operations could be materially adversely affected.

Item 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

The following table provides information about our repurchase of common stock during the three months ended March 31, 2024.

	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of a Publicly Announced Program	Maximum Dollar Amount of Shares that may yet be Purchased under the Program (in millions)
January 1 - January 31, 2024	2,788,825	$ 39.50	2,788,825	$ 640
February 1 - February 29, 2024	2,070,289	$ 45.68	2,070,289	$ 2,045
March 1 - March 31, 2024	1,279,659	$ 61.68	1,279,659	$ 1,966
For the quarter ended March 31, 2024	6,138,773		6,138,773	

In October 2021, we announced that the Board had authorized a share repurchase program (Share Repurchase Program) under which up to $2.0 billion of our outstanding common stock may be repurchased. The Share Repurchase Program became effective on October 11, 2021. In August 2022, March 2023 and February 2024, the Board authorized incremental amounts of $1.25 billion, $1.0 billion and $1.5 billion, respectively, for repurchases to bring the total authorized under the Share Repurchase Program to $5.75 billion. We expect to complete repurchases under the Share Repurchase Program by the end of 2025.

See Note 16 to the Financial Statements for more information concerning the Share Repurchase Program.

Item 3. DEFAULTS UPON SENIOR SECURITIES

None.

Item 4. MINE SAFETY DISCLOSURES

Vistra currently owns and operates, or is in the process of reclaiming, 12 surface lignite coal mines in Texas to provide fuel for its electricity generation facilities. Vistra also owns or leases, and is in the process of reclaiming, two waste-to-energy surface facilities in Pennsylvania. These mining operations are regulated by the MSHA under the Federal Mine Safety and Health Act of 1977, as amended (the Mine Act), as well as other federal and state regulatory agencies such as the RCT and Office of Surface Mining. The MSHA inspects U.S. mines, including Vistra's mines, on a regular basis, and if it believes a violation of the Mine Act or any health or safety standard or other regulation has occurred, it may issue a citation or order, generally accompanied by a proposed fine or assessment. Such citations and orders can be contested and appealed, which often results in a reduction of the severity and amount of fines and assessments and sometimes results in dismissal. Disclosure of MSHA citations, orders and proposed assessments are provided in Exhibit 95.1 to this quarterly report on Form 10-Q.

Item 5. OTHER INFORMATION

During the three months ended March 31, 2024, none of our officers or directors adopted or terminated any contract, instruction, or written plan for the purchase or sale of Company securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any "non-Rule 10b5-1 trading arrangement".

Item 6. EXHIBITS

(a) Exhibits filed or furnished as part of Part II are:

Exhibits	Previously Filed With File Number*	As Exhibit		
(2)	**Plan of Acquisition, Reorganization, Arrangement, Liquidation, or Succession**			
2.1	0001-38086 Form 8-K (filed March 7, 2023)	2.1	—	Transaction Agreement, dated March 6, 2023, by and among Vistra Operations Company LLC, Black Pen Inc. and Energy Harbor Corp.
(3(i))	**Articles of Incorporation**			
3.1	0001-38086 Form 8-K (filed May 4, 2020)	3.1	—	Restated Certificate of Incorporation of Vistra Energy Corp. (now known as Vistra Corp.)
3.2	0001-38086 Form 8-K (filed June 29, 2020)	3.1	—	Certificate of Amendment of the Restated Certificate of Incorporation of Vistra Energy Corp. (now known as Vistra Corp.), effective July 2, 2020
3.3	0001-38086 Form 8-K (filed October 15, 2021)	3.1	—	Series A Preferred Stock Certificate of Designation, filed with the Secretary of State of Delaware on October 14, 2021
3.4	0001-38086 Form 8-K (filed December 13, 2021)	3.1	—	Series B Preferred Stock Certificate of Designation, filed with the Secretary of State of Delaware on December 9, 2021
3.5	0001-38086 Form 8-K (filed January 4, 2024)	3.1	—	Series C Preferred Stock Certificate of Designation filed with the Secretary of State of Delaware on December 29, 2023

Exhibits	Previously Filed With File Number*	As Exhibit		
(3(ii))	**By-laws**			
3.3	001-38086 Form 10-K (Year ended December 31, 2021) (filed February 25, 2022)	3.5	—	Amended and Restated Bylaws of Vistra Corp., effective February 23, 2022
(4)	**Instruments Defining the Rights of Security Holders, Including Indentures**			
4.1	0001-38086 Form 8-K (filed April 9, 2024)	4.1	—	Fourteenth Amendment to Receivables Purchase Agreement, dated as of April 8, 2024, among TXU Receivables, as seller, TXU Retail, as servicer, Vistra Operations Company LLC, as performance guarantor, certain purchaser agents and purchasers named therein and Credit Agricole Corporate and Investment Bank, as administrator
4.2	0001-38086 Form 8-K (filed April 9, 2024)	4.2	—	Sixth Amendment to Purchase and Sale Agreement, dated as of April 8, 2024, among TXU Receivables, as buyer, TXU Retail, as servicer, certain originators named therein and Credit Agricole Corporate and Investment Bank, as administrator
4.3	**		—	Second Supplemental Indenture for 7.750% Senior Secured Notes due 2031, dated March 29, 2024, among Vistra Operations Company LLC, as Issuer, the Guaranteeing Subsidiaries, the Subsidiary Guarantors and the Trustee
4.4	**		—	Fourth Supplemental Indenture for 7.233% Senior Secured Notes due 2028, dated March 29, 2024, among Vistra Operations Company LLC, as Issuer, the Guaranteeing Subsidiaries, the Subsidiary Guarantors and the Trustee
4.5	**		—	Sixth Supplemental Indenture for 4.375% Senior Notes due 2029, dated March 29, 2024, among Vistra Operations Company LLC, as Issuer, the Guaranteeing Subsidiaries, the Subsidiary Guarantors and the Trustee
4.6	**		—	Twelfth Supplemental Indenture for 5.500% Senior Notes due 2026, dated March 29, 2024, among Vistra Operations Company LLC, as Issuer, the Guaranteeing Subsidiaries, the Subsidiary Guarantors and the Trustee
4.7	**		—	Twelfth Supplemental Indenture for 5.625% Senior Notes due 2027, dated March 29, 2024, among Vistra Operations Company LLC, as Issuer, the Guaranteeing Subsidiaries, the Subsidiary Guarantors and the Trustee
4.8	**		—	Twelfth Supplemental Indenture for 5.00% Senior Notes due 2027, dated March 29, 2024, among Vistra Operations Company LLC, as Issuer, the Guaranteeing Subsidiaries, the Subsidiary Guarantors and the Trustee
4.9	**		—	Sixteenth Supplemental Indenture for 3.55% Senior Secured Notes due 2024, 4.30% Senior Secured Notes due 2029, 3.70% Senior Secured Notes due 2027, 4.875% Senior Secured Notes due 2024, 5.125% Senior Secured Notes due 2025 and 6.950% Senior Secured Notes due 2033, dated March 29, 2024, among Vistra Operations Company LLC, as Issuer, the Guaranteeing Subsidiaries, the Subsidiary Guarantors and the Trustee
4.10	0001-38086 Form 8-K (filed April 18, 2024)	4.1	—	Seventeenth Supplemental Indenture, dated as of April 12, 2024, between Vistra Operations Company LLC, as Issuer, the Subsidiary Guarantors, and Wilmington Trust, National Association, as Trustee
4.11	0001-38086 Form 8-K (filed April 18, 2024)	4.2	—	Indenture, dated as of April 12, 2024, between Vistra Operations Company LLC, as Issuer, the Subsidiary Guarantors, and Wilmington Trust, National Association, as Trustee

Exhibits	Previously Filed With File Number*	As Exhibit		
4.12	0001-38086 Form 8-K (filed April 18, 2024)	4.3	—	Form of Rule 144A Global Security for 6.000% Senior Secured Note due 2034 (included in Exhibit 4.10)
4.13	0001-38086 Form 8-K (filed April 18, 2024)	4.4	—	Form of Rule 144A Global Security for 6.875% Senior Note due 2032 (included in Exhibit 4.11)
4.14	0001-38086 Form 8-K (filed April 18, 2024)	4.5	—	Form of Regulation S Global Security for 6.000% Senior Secured Note due 2034 (included in Exhibit 4.10)
4.15	0001-38086 Form 8-K (filed April 18, 2024)	4.6	—	Form of Regulation S Global Security for 6.875% Senior Note due 2032 (included in Exhibit 4.11)
4.16 +	**		—	First Supplemental Indenture, dated as of June 15, 2009, under the Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009
4.17 +	**		—	Second Supplemental Indenture, dated as of June 30, 2009, under the Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009
4.18 +	**		—	Fifth Supplemental Indenture, dated as of August 15, 2016, under the Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009
4.19 +	**		—	Eighth Supplemental Indenture, dated as of August 15, 2016, under the Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 19, 2008
4.20 +	**		—	Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009
4.21 +	**		—	Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 19, 2008
(10)	**Material Contracts**			
10.1	0001-38086 Form 8-K (filed March 7, 2024)	10.1	—	Amended and Restated Limited Liability Company Agreement of Vistra Vision LLC, dated March 1, 2024
10.2	0001-38086 Form 8-K (filed April 1, 2023)	10.1	—	Credit Agreement, dated March 26, 2024, by and among Vistra Zero Operating Company, LLC, the Lenders (as defined in the Credit Agreement) party thereto and Citibank, N.A. (as Administrative Agent and as Collateral Agent)
10.3	0001-38086 Form 8-K (filed April 9, 2024)	10.1	—	Joinder Agreement, dated as of April 8, 2024, among TXU Retail, as seller party agent, Vistra Operations, as guarantor, certain originators named therein, and MUFG, as buyer
(31)	**Rule 13a-14(a) / 15d-14(a) Certifications**			
31.1	**		—	Certification of James A. Burke, principal executive officer of Vistra Corp., pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2	**		—	Certification of Kristopher E. Moldovan, principal financial officer of Vistra Corp., pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
(32)	**Section 1350 Certifications**			
32.1	***		—	Certification of James A. Burke, principal executive officer of Vistra Corp., pursuant to U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Exhibits	Previously Filed With File Number*	As Exhibit		
32.2	***		—	Certification of Kristopher E. Moldovan, principal financial officer of Vistra Corp., pursuant to U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
(95)	**Mine Safety Disclosures**			
95.1	**		—	Mine Safety Disclosures
	XBRL Data Files			
101.INS	**		—	The following financial information from Vistra Corp.'s Quarterly Report on Form 10-Q for the period ended March 31, 2024 formatted in Inline XBRL (Extensible Business Reporting Language) includes: (i) the Condensed Consolidated Statements of Operations, (ii) the Condensed Consolidated Statements of Comprehensive Income (Loss), (iii) the Condensed Consolidated Statements of Cash Flows, (iv) the Condensed Consolidated Balance Sheets, (v) the Condensed Consolidated Statement of Changes in Equity and (vi) the Notes to the Condensed Consolidated Financial Statements
101.SCH	**		—	XBRL Taxonomy Extension Schema Document
101.CAL	**		—	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	**		—	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	**		—	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	**		—	XBRL Taxonomy Extension Presentation Linkbase Document
104	**		—	The Cover Page Interactive Data File does not appear in Exhibit 104 because its XBRL tags are embedded within the Inline XBRL document

_____

* Incorporated herein by reference

** Filed herewith

*** Furnished herewith

\+ Certain exhibits and schedules to this exhibit have been omitted pursuant to Item 601(a)(5) of Regulation S-K. Vistra agrees to furnish supplementally a copy of any omitted annexes or schedule to the SEC upon its request.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

Vistra Corp.

By:	/s/ MARGARET MONTEMAYOR
Name:	Margaret Montemayor
Title:	Senior Vice President, Chief Accountant and Controller
	(Principal Accounting Officer)

Date: May 9, 2024

Exhibit 4.3

SECOND SUPPLEMENTAL INDENTURE
SUBSIDIARY GUARANTEES

SECOND SUPPLEMENTAL INDENTURE (this "**Supplemental Indenture**"), dated as of March 29, 2024, among the subsidiary guarantors listed on Schedule I hereto (the "**Guaranteeing Subsidiaries**"), Vistra Operations Company LLC, a Delaware limited liability company (the "**Company**"), the other subsidiary guarantors party hereto and Wilmington Trust, National Association, as trustee under the indenture referred to below (the "**Trustee**").

W I T N E S S E T H

WHEREAS, the Company has heretofore executed and delivered to the Trustee that certain Indenture (as supplemented and amended, the "**Indenture**"), dated as of September 26, 2023, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the issuance of an aggregate principal amount of $1,450,000,000 of 7.750% Senior Notes due 2031 (the "**Notes**");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiaries shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiaries shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture (the "**Subsidiary Guarantees**"); and

WHEREAS, pursuant to Sections 4.07 and 9.01 of the Indenture, the Trustee, the Company and the other Subsidiary Guarantors are authorized and required to execute and deliver this Supplemental Indenture.

NOW THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiaries, the Trustee, the Company and the other Subsidiary Guarantors mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Capitalized Terms*. Unless otherwise defined in this Supplemental Indenture, capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. *Agreement to be Bound; Guarantee*. The Guaranteeing Subsidiaries hereby become a party to the Indenture as a Subsidiary Guarantor and as such will have all of the rights and be subject to all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. The Guaranteeing Subsidiaries hereby agree to be bound by all of the provisions of the Indenture applicable to a Subsidiary Guarantor and to perform all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. In furtherance of the foregoing, each Guaranteeing Subsidiary shall be deemed a Subsidiary Guarantor for purposes of Article 10 of the Indenture, including, without limitation, Section 10.02 thereof.

3. *NEW YORK LAW TO GOVERN*. THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

4. *Counterparts*. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

5. *Effect of Headings*. The Section headings herein are for convenience only and shall not affect the construction hereof.

6. *The Trustee*. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries and the Company.

7. *Ratification of Indenture; Supplemental Indenture Part of Indentur*e Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: March 29, 2024

VISTRA VISION HOLDINGS I LLC
VISTRA VISION MANAGEMENT LLC
PULASKI SOLAR, LLC
MASSAC TRANSMISSION, LLC,
as the Guaranteeing Subsidiaries

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

VISTRA OPERATIONS COMPANY LLC,
as the Company

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

Bellingham Power Generation LLC
Big Brown Power Company LLC
Blackstone Power Generation LLC
Calumet Energy Team, LLC
Casco Bay Energy Company, LLC
Coffeen and Western Railroad Company
Coleto Creek Power, LLC
Coleto Creek Energy Storage LLC
Dallas Power & Light Company, Inc.
Dicks Creek Power Company LLC
Dynegy Coal Holdco, LLC
Dynegy Coal Trading & Transportation, L.L.C.
Dynegy Conesville, LLC
Dynegy Killen, LLC
Dynegy Marketing and Trade, LLC
Dynegy Midwest Generation, LLC
Dynegy Operating Company
Dynegy Power Marketing, LLC
Dynegy Resources Generating Holdco, LLC
Dynegy South Bay, LLC
Dynegy Stuart, LLC
Ennis Power Company, LLC
EquiPower Resources Corp.

Fayette Power Company LLC
Generation SVC Company
Hanging Rock Power Company LLC
Hays Energy, LLC
Hopewell Power Generation, LLC
Illinois Power Generating Company
Illinois Power Resources Generating, LLC
Illinois Power Resources, LLC
Illinova Corporation
IPH, LLC
Kendall Power Company LLC
Kincaid Generation, L.L.C.
La Frontera Holdings, LLC
Lake Road Generating Company, LLC
Liberty Electric Power, LLC
Lone Star Energy Company, Inc.
Lone Star Pipeline Company, Inc.
Luminant Administrative Services Company
Luminant Coal Generation LLC
Luminant Commercial Asset Management LLC
Luminant Energy Company LLC
Luminant Energy Trading California Company
Luminant ET Services Company LLC
Luminant Gas Imports LLC
Luminant Generation Company LLC
Luminant Mining Company LLC
Luminant Power Generation, LLC
Luminant Power LLC
Maroon Farmer, LLC
Masspower, LLC
Miami Fort Power Company LLC
Midlothian Energy, LLC
Milford Power Company, LLC
Morro Bay Energy Storage 1, LLC
Morro Bay Energy Storage 2, LLC
Morro Bay Power Company LLC
Moss Landing Energy Storage 4, LLC
Moss Landing Power Company LLC
NCA Resources Development Company LLC
NEPCO Services Company
Northeastern Power Company
Oak Grove Management Company LLC
Oakland Energy Storage 2, LLC
Oakland Energy Storage 3, LLC
Oakland Power Company LLC
Ontelaunee Power Operating Company, LLC
Pleasants Energy, LLC
Sandow Power Company LLC
Sayreville Power Generation LP

Sayreville Power GP Inc.
Sayreville Power Holdings LLC
Sithe Energies, Inc.
Sithe/Independence LLC
Southwestern Electric Service Company, Inc.
Texas Electric Service Company, Inc.
Texas Energy Industries Company, Inc.
Texas Power & Light Company, Inc.
Texas Utilities Company, Inc.
Texas Utilities Electric Company, Inc
Trinidad Power Storage LLC
TXU Electric Company, Inc.
Vistra Asset Company LLC
Vistra Corporate Services Company
Vistra EP Properties Company
Vistra Finance Corp.
Vistra Insurance Solutions LLC
VZ Development LLC
Washington Power Generation LLC
Wise County Power Company, LLC
Wise-Fuels Pipeline, Inc.
Zimmer Power Company LLC, as Subsidiary Guarantors

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

[Signature Page to Second Supplemental Indenture]

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as the Trustee

By: /s/ Latoya S Elvin
Name: Latoya S Elvin
Title: Vice President

[Signature Page to Second Supplemental Indenture]

SCHEDULE I

GUARANTEEING SUBSIDIARIES

Name	Jurisdiction
VISTRA VISION HOLDINGS I LLC	Delaware
VISTRA VISION MANAGEMENT LLC	Delaware
PULASKI SOLAR, LLC	Delaware
MASSAC TRANSMISSION, LLC	Delaware

Exhibit 4.4

FOURTH SUPPLEMENTAL INDENTURE
ADDITIONAL SUBSIDIARY GUARANTEES

FOURTH SUPPLEMENTAL INDENTURE (this "**Supplemental Indenture**"), dated as of March 29, 2024, among the subsidiary guarantors listed on Schedule I hereto (the "**Guaranteeing Subsidiaries**"), Vistra Operations Company LLC, a Delaware limited liability company (the "**Company**"), the other subsidiary guarantors party hereto and The Bank of New York Mellon Trust Company, N.A., as trustee under the Indenture (the "**Trustee**").

W I T N E S S E T H

WHEREAS, the Company has heretofore executed and delivered to the Trustee (i) that certain indenture (the "**Base Indenture**"), dated as of June 15, 2023, between the Company and the Trustee and (ii) that certain first supplemental indenture, dated as of June 15, 2023 (the "**First Supplemental Indenture**" and, together with the Base Indenture, the "**Indenture**"), among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the original issuance of an aggregate principal amount of $450,000,000 of 7.233% Senior Secured Notes due 2028 (the "**Notes**");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiaries shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiaries shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture (the "**Subsidiary Guarantees**"); and

WHEREAS, pursuant to Section 9.01(8) of the Base Indenture and Section 4.07 and Section 9.01(8) of the First Supplemental Indenture, the Trustee, the Company and the other Subsidiary Guarantors are authorized and required to execute and deliver this Supplemental Indenture.

NOW THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiaries, the Trustee, the Company and the other Subsidiary Guarantors mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Capitalized Terms*. Unless otherwise defined in this Supplemental Indenture, capitalized terms used herein without definition shall have the meanings assigned to them in the Base Indenture or First Supplemental Indenture, as applicable.

2. *Agreement to be Bound; Guarantee*. The Guaranteeing Subsidiaries hereby become a party to the Indenture as a Subsidiary Guarantor and as such will have all of the rights and be subject to all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. The Guaranteeing Subsidiaries hereby agree to be bound by all of the provisions of the First Supplemental Indenture applicable to a Subsidiary Guarantor and to perform all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. In furtherance of the foregoing, each Guaranteeing Subsidiary shall be deemed a Subsidiary Guarantor for purposes of Article 10 of the First Supplemental Indenture, including, without limitation, Section 10.02 thereof.

3. *NEW YORK LAW TO GOVERN*. THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

4. *Counterparts*. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

5. *Effect of Headings*. The Section headings herein are for convenience only and shall not affect the construction hereof.

6. *The Trustee*. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries and the Company.

7. *Ratification of Indenture; Supplemental Indenture Part of Indenture*. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed, all as of the date first above written.

Dated: March 29, 2024

VISTRA VISION HOLDINGS I LLC
VISTRA VISION MANAGEMENT LLC
PULASKI SOLAR, LLC
MASSAC TRANSMISSION, LLC,
as the Guaranteeing Subsidiaries

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

VISTRA OPERATIONS COMPANY LLC,
as the Company

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

Bellingham Power Generation LLC
Big Brown Power Company LLC
Blackstone Power Generation LLC
Calumet Energy Team, LLC
Casco Bay Energy Company, LLC
Coffeen and Western Railroad Company
Coleto Creek Power, LLC
Coleto Creek Energy Storage LLC
Dallas Power & Light Company, Inc.
Dicks Creek Power Company LLC
Dynegy Coal Holdco, LLC
Dynegy Coal Trading & Transportation, L.L.C.
Dynegy Conesville, LLC
Dynegy Killen, LLC
Dynegy Marketing and Trade, LLC
Dynegy Midwest Generation, LLC
Dynegy Operating Company
Dynegy Power Marketing, LLC
Dynegy Resources Generating Holdco, LLC
Dynegy South Bay, LLC
Dynegy Stuart, LLC
Ennis Power Company, LLC

EquiPower Resources Corp.
Fayette Power Company LLC
Generation SVC Company
Hanging Rock Power Company LLC
Hays Energy, LLC
Hopewell Power Generation, LLC
Illinois Power Generating Company
Illinois Power Resources Generating, LLC
Illinois Power Resources, LLC
Illinova Corporation
IPH, LLC
Kendall Power Company LLC
Kincaid Generation, L.L.C.
La Frontera Holdings, LLC
Lake Road Generating Company, LLC
Liberty Electric Power, LLC
Lone Star Energy Company, Inc.
Lone Star Pipeline Company, Inc.
Luminant Administrative Services Company
Luminant Coal Generation LLC
Luminant Commercial Asset Management LLC
Luminant Energy Company LLC
Luminant Energy Trading California Company
Luminant ET Services Company LLC
Luminant Gas Imports LLC
Luminant Generation Company LLC
Luminant Mining Company LLC
Luminant Power Generation, LLC
Luminant Power LLC
Maroon Farmer, LLC
Masspower, LLC
Miami Fort Power Company LLC
Midlothian Energy, LLC
Milford Power Company, LLC
Morro Bay Energy Storage 1, LLC
Morro Bay Energy Storage 2, LLC
Morro Bay Power Company LLC
Moss Landing Energy Storage 4, LLC
Moss Landing Power Company LLC
NCA Resources Development Company LLC
NEPCO Services Company
Northeastern Power Company
Oak Grove Management Company LLC
Oakland Energy Storage 2, LLC
Oakland Energy Storage 3, LLC
Oakland Power Company LLC
Ontelaunee Power Operating Company, LLC
Pleasants Energy, LLC
Sandow Power Company LLC

Sayreville Power Generation LP
Sayreville Power GP Inc.
Sayreville Power Holdings LLC
Sithe Energies, Inc.
Sithe/Independence LLC
Southwestern Electric Service Company, Inc.
Texas Electric Service Company, Inc.
Texas Energy Industries Company, Inc.
Texas Power & Light Company, Inc.
Texas Utilities Company, Inc.
Texas Utilities Electric Company, Inc
Trinidad Power Storage LLC
TXU Electric Company, Inc.
Vistra Asset Company LLC
Vistra Corporate Services Company
Vistra EP Properties Company
Vistra Finance Corp.
Vistra Insurance Solutions LLC
VZ Development LLC
Washington Power Generation LLC
Wise County Power Company, LLC
Wise-Fuels Pipeline, Inc.
Zimmer Power Company LLC, as Subsidiary Guarantors

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,
not in its individual capacity but solely as the Trustee

By: /s/ Terence Rawlins
Name: Terence Rawlins
Title: Vice President

[Signature Page to Fourth Supplemental Indenture]

SCHEDULE I

GUARANTEEING SUBSIDIARIES

Name	Jurisdiction
VISTRA VISION HOLDINGS I LLC	Delaware
VISTRA VISION MANAGEMENT LLC	Delaware
PULASKI SOLAR, LLC	Delaware
MASSAC TRANSMISSION, LLC	Delaware

Exhibit 4.5

SIXTH SUPPLEMENTAL INDENTURE
SUBSIDIARY GUARANTEES

SIXTH SUPPLEMENTAL INDENTURE (this "**Supplemental Indenture**"), dated as of March 29, 2024, among the subsidiary guarantors listed on Schedule I hereto (the "**Guaranteeing Subsidiaries**"), Vistra Operations Company LLC, a Delaware limited liability company (the "**Company**"), the other subsidiary guarantors party hereto and Wilmington Trust, National Association, as trustee under the indenture referred to below (the "**Trustee**").

W I T N E S S E T H

WHEREAS, the Company has heretofore executed and delivered to the Trustee that certain Indenture (as supplemented and amended, the "**Indenture**"), dated as of May 10, 2021, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the original issuance of an aggregate principal amount of $1,250,000,000 of 4.375% Senior Notes due 2029 (the "**Notes**");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiaries shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiaries shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture (the "**Subsidiary Guarantees**"); and

WHEREAS, pursuant to Sections 4.07 and 9.01 of the Indenture, the Trustee, the Company and the other Subsidiary Guarantors are authorized and required to execute and deliver this Supplemental Indenture.

NOW THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiaries, the Trustee, the Company and the other Subsidiary Guarantors mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Capitalized Terms*. Unless otherwise defined in this Supplemental Indenture, capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. *Agreement to be Bound; Guarantee.* The Guaranteeing Subsidiaries hereby become a party to the Indenture as a Subsidiary Guarantor and as such will have all of the rights and be subject to all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. The Guaranteeing Subsidiaries hereby agree to be bound by all of the provisions of the Indenture applicable to a Subsidiary Guarantor and to perform all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. In furtherance of the foregoing, each Guaranteeing Subsidiary shall be deemed a Subsidiary Guarantor for purposes of Article 10 of the Indenture, including, without limitation, Section 10.02 thereof.

3. *NEW YORK LAW TO GOVERN.* THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

4. *Counterparts*. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

5. *Effect of Headings.* The Section headings herein are for convenience only and shall not affect the construction hereof.

6. *The Trustee*. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries and the Company.

7. *Ratification of Indenture; Supplemental Indenture Part of Indentur*e Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: March 29, 2024

VISTRA VISION HOLDINGS I LLC
VISTRA VISION MANAGEMENT LLC
PULASKI SOLAR, LLC
MASSAC TRANSMISSION, LLC,
as the Guaranteeing Subsidiaries

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

VISTRA OPERATIONS COMPANY LLC,
as the Company

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

Bellingham Power Generation LLC
Big Brown Power Company LLC
Blackstone Power Generation LLC
Calumet Energy Team, LLC
Casco Bay Energy Company, LLC
Coffeen and Western Railroad Company
Coleto Creek Power, LLC
Coleto Creek Energy Storage LLC
Dallas Power & Light Company, Inc.
Dicks Creek Power Company LLC
Dynegy Coal Holdco, LLC
Dynegy Coal Trading & Transportation, L.L.C.
Dynegy Conesville, LLC
Dynegy Killen, LLC
Dynegy Marketing and Trade, LLC
Dynegy Midwest Generation, LLC
Dynegy Operating Company
Dynegy Power Marketing, LLC
Dynegy Resources Generating Holdco, LLC
Dynegy South Bay, LLC
Dynegy Stuart, LLC
Ennis Power Company, LLC

EquiPower Resources Corp.
Fayette Power Company LLC
Generation SVC Company
Hanging Rock Power Company LLC
Hays Energy, LLC
Hopewell Power Generation, LLC
Illinois Power Generating Company
Illinois Power Resources Generating, LLC
Illinois Power Resources, LLC
Illinova Corporation
IPH, LLC
Kendall Power Company LLC
Kincaid Generation, L.L.C.
La Frontera Holdings, LLC
Lake Road Generating Company, LLC
Liberty Electric Power, LLC
Lone Star Energy Company, Inc.
Lone Star Pipeline Company, Inc.
Luminant Administrative Services Company
Luminant Coal Generation LLC
Luminant Commercial Asset Management LLC
Luminant Energy Company LLC
Luminant Energy Trading California Company
Luminant ET Services Company LLC
Luminant Gas Imports LLC
Luminant Generation Company LLC
Luminant Mining Company LLC
Luminant Power Generation, LLC
Luminant Power LLC
Maroon Farmer, LLC
Masspower, LLC
Miami Fort Power Company LLC
Midlothian Energy, LLC
Milford Power Company, LLC
Morro Bay Energy Storage 1, LLC
Morro Bay Energy Storage 2, LLC
Morro Bay Power Company LLC
Moss Landing Energy Storage 4, LLC
Moss Landing Power Company LLC
NCA Resources Development Company LLC
NEPCO Services Company
Northeastern Power Company
Oak Grove Management Company LLC
Oakland Energy Storage 2, LLC
Oakland Energy Storage 3, LLC
Oakland Power Company LLC
Ontelaunee Power Operating Company, LLC
Pleasants Energy, LLC
Sandow Power Company LLC

Sayreville Power Generation LP
Sayreville Power GP Inc.
Sayreville Power Holdings LLC
Sithe Energies, Inc.
Sithe/Independence LLC
Southwestern Electric Service Company, Inc.
Texas Electric Service Company, Inc.
Texas Energy Industries Company, Inc.
Texas Power & Light Company, Inc.
Texas Utilities Company, Inc.
Texas Utilities Electric Company, Inc
Trinidad Power Storage LLC
TXU Electric Company, Inc.
Vistra Asset Company LLC
Vistra Corporate Services Company
Vistra EP Properties Company
Vistra Finance Corp.
Vistra Insurance Solutions LLC
VZ Development LLC
Washington Power Generation LLC
Wise County Power Company, LLC
Wise-Fuels Pipeline, Inc.
Zimmer Power Company LLC, as Subsidiary Guarantors

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as the Trustee

By: /s/ Latoya S Elvin
Name: Latoya S Elvin
Title: Vice President

[Signature Page to Sixth Supplemental Indenture]

SCHEDULE I

GUARANTEEING SUBSIDIARIES

Name	Jurisdiction
VISTRA VISION HOLDINGS I LLC	Delaware
VISTRA VISION MANAGEMENT LLC	Delaware
PULASKI SOLAR, LLC	Delaware
MASSAC TRANSMISSION, LLC	Delaware

Exhibit 4.6

TWELFTH SUPPLEMENTAL INDENTURE
SUBSIDIARY GUARANTEES

TWELFTH SUPPLEMENTAL INDENTURE (this "**Supplemental Indenture**"), dated as of March 29, 2024, among the subsidiary guarantors listed on Schedule I hereto (the "**Guaranteeing Subsidiaries**"), Vistra Operations Company LLC, a Delaware limited liability company (the "**Company**"), the other subsidiary guarantors party hereto and Wilmington Trust, National Association, as trustee under the indenture referred to below (the "**Trustee**").

W I T N E S S E T H

WHEREAS, the Company has heretofore executed and delivered to the Trustee that certain Indenture (as supplemented and amended, the "**Indenture**"), dated as of August 22, 2018, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the original issuance of an aggregate principal amount of $1,000,000,000 of 5.500% Senior Notes due 2026 (the "**Notes**");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiaries shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiaries shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture (the "**Subsidiary Guarantees**"); and

WHEREAS, pursuant to Sections 4.07 and 9.01 of the Indenture, the Trustee, the Company and the other Subsidiary Guarantors are authorized and required to execute and deliver this Supplemental Indenture.

NOW THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiaries, the Trustee, the Company and the other Subsidiary Guarantors mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Capitalized Terms*. Unless otherwise defined in this Supplemental Indenture, capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. *Agreement to be Bound; Guarantee*. The Guaranteeing Subsidiaries hereby become a party to the Indenture as a Subsidiary Guarantor and as such will have all of the rights and be subject to all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. The Guaranteeing Subsidiaries hereby agree to be bound by all of the provisions of the Indenture applicable to a Subsidiary Guarantor and to perform all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. In furtherance of the foregoing, each Guaranteeing Subsidiary shall be deemed a Subsidiary Guarantor for purposes of Article 10 of the Indenture, including, without limitation, Section 10.02 thereof.

3. *NEW YORK LAW TO GOVERN*. THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

4. *Counterparts*. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

5. *Effect of Headings*. The Section headings herein are for convenience only and shall not affect the construction hereof.

6. *The Trustee*. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries and the Company.

7. *Ratification of Indenture; Supplemental Indenture Part of Indentur*e Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: March 29, 2024

VISTRA VISION HOLDINGS I LLC
VISTRA VISION MANAGEMENT LLC
PULASKI SOLAR, LLC
MASSAC TRANSMISSION, LLC,
as the Guaranteeing Subsidiaries

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

VISTRA OPERATIONS COMPANY LLC,
as the Company

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

Bellingham Power Generation LLC
Big Brown Power Company LLC
Blackstone Power Generation LLC
Calumet Energy Team, LLC
Casco Bay Energy Company, LLC
Coffeen and Western Railroad Company
Coleto Creek Power, LLC
Coleto Creek Energy Storage LLC
Dallas Power & Light Company, Inc.
Dicks Creek Power Company LLC
Dynegy Coal Holdco, LLC
Dynegy Coal Trading & Transportation, L.L.C.
Dynegy Conesville, LLC
Dynegy Killen, LLC
Dynegy Marketing and Trade, LLC
Dynegy Midwest Generation, LLC
Dynegy Operating Company
Dynegy Power Marketing, LLC
Dynegy Resources Generating Holdco, LLC
Dynegy South Bay, LLC
Dynegy Stuart, LLC
Ennis Power Company, LLC

EquiPower Resources Corp.
Fayette Power Company LLC
Generation SVC Company
Hanging Rock Power Company LLC
Hays Energy, LLC
Hopewell Power Generation, LLC
Illinois Power Generating Company
Illinois Power Resources Generating, LLC
Illinois Power Resources, LLC
Illinova Corporation
IPH, LLC
Kendall Power Company LLC
Kincaid Generation, L.L.C.
La Frontera Holdings, LLC
Lake Road Generating Company, LLC
Liberty Electric Power, LLC
Lone Star Energy Company, Inc.
Lone Star Pipeline Company, Inc.
Luminant Administrative Services Company
Luminant Coal Generation LLC
Luminant Commercial Asset Management LLC
Luminant Energy Company LLC
Luminant Energy Trading California Company
Luminant ET Services Company LLC
Luminant Gas Imports LLC
Luminant Generation Company LLC
Luminant Mining Company LLC
Luminant Power Generation, LLC
Luminant Power LLC
Maroon Farmer, LLC
Masspower, LLC
Miami Fort Power Company LLC
Midlothian Energy, LLC
Milford Power Company, LLC
Morro Bay Energy Storage 1, LLC
Morro Bay Energy Storage 2, LLC
Morro Bay Power Company LLC
Moss Landing Energy Storage 4, LLC
Moss Landing Power Company LLC
NCA Resources Development Company LLC
NEPCO Services Company
Northeastern Power Company
Oak Grove Management Company LLC
Oakland Energy Storage 2, LLC
Oakland Energy Storage 3, LLC
Oakland Power Company LLC
Ontelaunee Power Operating Company, LLC
Pleasants Energy, LLC
Sandow Power Company LLC

Sayreville Power Generation LP
Sayreville Power GP Inc.
Sayreville Power Holdings LLC
Sithe Energies, Inc.
Sithe/Independence LLC
Southwestern Electric Service Company, Inc.
Texas Electric Service Company, Inc.
Texas Energy Industries Company, Inc.
Texas Power & Light Company, Inc.
Texas Utilities Company, Inc.
Texas Utilities Electric Company, Inc
Trinidad Power Storage LLC
TXU Electric Company, Inc.
Vistra Asset Company LLC
Vistra Corporate Services Company
Vistra EP Properties Company
Vistra Finance Corp.
Vistra Insurance Solutions LLC
VZ Development LLC
Washington Power Generation LLC
Wise County Power Company, LLC
Wise-Fuels Pipeline, Inc.
Zimmer Power Company LLC, as Subsidiary Guarantors

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

[Signature Page to Twelfth Supplemental Indenture]

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as the Trustee

By: /s/ Latoya S Elvin
Name: Latoya S Elvin
Title: Vice President

[Signature Page to Twelfth Supplemental Indenture]

SCHEDULE I

GUARANTEEING SUBSIDIARIES

Name	Jurisdiction
VISTRA VISION HOLDINGS I LLC	Delaware
VISTRA VISION MANAGEMENT LLC	Delaware
PULASKI SOLAR, LLC	Delaware
MASSAC TRANSMISSION, LLC	Delaware

Exhibit 4.7

TWELFTH SUPPLEMENTAL INDENTURE
SUBSIDIARY GUARANTEES

TWELFTH SUPPLEMENTAL INDENTURE (this "**Supplemental Indenture**"), dated as of March 29, 2024, among the subsidiary guarantors listed on Schedule I hereto (the "**Guaranteeing Subsidiaries**"), Vistra Operations Company LLC, a Delaware limited liability company (the "**Company**"), the other subsidiary guarantors party hereto and Wilmington Trust, National Association, as trustee under the indenture referred to below (the "**Trustee**").

W I T N E S S E T H

WHEREAS, the Company has heretofore executed and delivered to the Trustee that certain Indenture (as supplemented and amended, the "**Indenture**"), dated as of February 6, 2019, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the original issuance of an aggregate principal amount of $1,300,000,000 of 5.625% Senior Notes due 2027 (the "**Notes**");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiaries shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiaries shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture (the "**Subsidiary Guarantees**"); and

WHEREAS, pursuant to Sections 4.07 and 9.01 of the Indenture, the Trustee, the Company and the other Subsidiary Guarantors are authorized and required to execute and deliver this Supplemental Indenture.

NOW THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiaries, the Trustee, the Company and the other Subsidiary Guarantors mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Capitalized Terms*. Unless otherwise defined in this Supplemental Indenture, capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. *Agreement to be Bound; Guarantee*. The Guaranteeing Subsidiaries hereby become a party to the Indenture as a Subsidiary Guarantor and as such will have all of the rights and be subject to all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. The Guaranteeing Subsidiaries hereby agree to be bound by all of the provisions of the Indenture applicable to a Subsidiary Guarantor and to perform all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. In furtherance of the foregoing, each Guaranteeing Subsidiary shall be deemed a Subsidiary Guarantor for purposes of Article 10 of the Indenture, including, without limitation, Section 10.02 thereof.

3. *NEW YORK LAW TO GOVERN*. THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

4. *Counterparts*. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

5. *Effect of Headings*. The Section headings herein are for convenience only and shall not affect the construction hereof.

6. *The Trustee*. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries and the Company.

7. *Ratification of Indenture; Supplemental Indenture Part of Indentur*e Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: March 29, 2024

VISTRA VISION HOLDINGS I LLC
VISTRA VISION MANAGEMENT LLC
PULASKI SOLAR, LLC
MASSAC TRANSMISSION, LLC,
as the Guaranteeing Subsidiaries

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

VISTRA OPERATIONS COMPANY LLC,
as the Company

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

Bellingham Power Generation LLC
Big Brown Power Company LLC
Blackstone Power Generation LLC
Calumet Energy Team, LLC
Casco Bay Energy Company, LLC
Coffeen and Western Railroad Company
Coleto Creek Power, LLC
Coleto Creek Energy Storage LLC
Dallas Power & Light Company, Inc.
Dicks Creek Power Company LLC
Dynegy Coal Holdco, LLC
Dynegy Coal Trading & Transportation, L.L.C.
Dynegy Conesville, LLC
Dynegy Killen, LLC
Dynegy Marketing and Trade, LLC
Dynegy Midwest Generation, LLC
Dynegy Operating Company
Dynegy Power Marketing, LLC
Dynegy Resources Generating Holdco, LLC
Dynegy South Bay, LLC
Dynegy Stuart, LLC
Ennis Power Company, LLC

EquiPower Resources Corp.
Fayette Power Company LLC
Generation SVC Company
Hanging Rock Power Company LLC
Hays Energy, LLC
Hopewell Power Generation, LLC
Illinois Power Generating Company
Illinois Power Resources Generating, LLC
Illinois Power Resources, LLC
Illinova Corporation
IPH, LLC
Kendall Power Company LLC
Kincaid Generation, L.L.C.
La Frontera Holdings, LLC
Lake Road Generating Company, LLC
Liberty Electric Power, LLC
Lone Star Energy Company, Inc.
Lone Star Pipeline Company, Inc.
Luminant Administrative Services Company
Luminant Coal Generation LLC
Luminant Commercial Asset Management LLC
Luminant Energy Company LLC
Luminant Energy Trading California Company
Luminant ET Services Company LLC
Luminant Gas Imports LLC
Luminant Generation Company LLC
Luminant Mining Company LLC
Luminant Power Generation, LLC
Luminant Power LLC
Maroon Farmer, LLC
Masspower, LLC
Miami Fort Power Company LLC
Midlothian Energy, LLC
Milford Power Company, LLC
Morro Bay Energy Storage 1, LLC
Morro Bay Energy Storage 2, LLC
Morro Bay Power Company LLC
Moss Landing Energy Storage 4, LLC
Moss Landing Power Company LLC
NCA Resources Development Company LLC
NEPCO Services Company
Northeastern Power Company
Oak Grove Management Company LLC
Oakland Energy Storage 2, LLC
Oakland Energy Storage 3, LLC
Oakland Power Company LLC
Ontelaunee Power Operating Company, LLC
Pleasants Energy, LLC
Sandow Power Company LLC

Sayreville Power Generation LP
Sayreville Power GP Inc.
Sayreville Power Holdings LLC
Sithe Energies, Inc.
Sithe/Independence LLC
Southwestern Electric Service Company, Inc.
Texas Electric Service Company, Inc.
Texas Energy Industries Company, Inc.
Texas Power & Light Company, Inc.
Texas Utilities Company, Inc.
Texas Utilities Electric Company, Inc
Trinidad Power Storage LLC
TXU Electric Company, Inc.
Vistra Asset Company LLC
Vistra Corporate Services Company
Vistra EP Properties Company
Vistra Finance Corp.
Vistra Insurance Solutions LLC
VZ Development LLC
Washington Power Generation LLC
Wise County Power Company, LLC
Wise-Fuels Pipeline, Inc.
Zimmer Power Company LLC, as Subsidiary Guarantors

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

[Signature Page to Twelfth Supplemental Indenture]

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as the Trustee

By: /s/ Latoya S Elvin
Name: Latoya S Elvin
Title: Vice President

[Signature Page to Twelfth Supplemental Indenture]

SCHEDULE I

GUARANTEEING SUBSIDIARIES

Name	Jurisdiction
VISTRA VISION HOLDINGS I LLC	Delaware
VISTRA VISION MANAGEMENT LLC	Delaware
PULASKI SOLAR, LLC	Delaware
MASSAC TRANSMISSION, LLC	Delaware

Exhibit 4.8

TWELFTH SUPPLEMENTAL INDENTURE
SUBSIDIARY GUARANTEES

TWELFTH SUPPLEMENTAL INDENTURE (this "**Supplemental Indenture**"), dated as of March 29, 2024, among the subsidiary guarantors listed on Schedule I hereto (the "**Guaranteeing Subsidiaries**"), Vistra Operations Company LLC, a Delaware limited liability company (the "**Company**"), the other subsidiary guarantors party hereto and Wilmington Trust, National Association, as trustee under the indenture referred to below (the "**Trustee**").

W I T N E S S E T H

WHEREAS, the Company has heretofore executed and delivered to the Trustee that certain Indenture (as supplemented and amended, the "**Indenture**"), dated as of June 21, 2019, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the original issuance of an aggregate principal amount of $1,300,000,000 of 5.00% Senior Notes due 2027 (the "**Notes**");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiaries shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiaries shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture (the "**Subsidiary Guarantees**"); and

WHEREAS, pursuant to Sections 4.07 and 9.01 of the Indenture, the Trustee, the Company and the other Subsidiary Guarantors are authorized and required to execute and deliver this Supplemental Indenture.

NOW THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiaries, the Trustee, the Company and the other Subsidiary Guarantors mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Capitalized Terms*. Unless otherwise defined in this Supplemental Indenture, capitalized terms used herein without definition shall have the meanings assigned to them in the Indenture.

2. *Agreement to be Bound; Guarantee*. The Guaranteeing Subsidiaries hereby become a party to the Indenture as a Subsidiary Guarantor and as such will have all of the rights and be subject to all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. The Guaranteeing Subsidiaries hereby agree to be bound by all of the provisions of the Indenture applicable to a Subsidiary Guarantor and to perform all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. In furtherance of the foregoing, each Guaranteeing Subsidiary shall be deemed a Subsidiary Guarantor for purposes of Article 10 of the Indenture, including, without limitation, Section 10.02 thereof.

3. *NEW YORK LAW TO GOVERN.* THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

4. *Counterparts*. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

5. *Effect of Headings*. The Section headings herein are for convenience only and shall not affect the construction hereof.

6. *The Trustee*. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries and the Company.

7. *Ratification of Indenture; Supplemental Indenture Part of Indenture*. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: March 29, 2024

VISTRA VISION HOLDINGS I LLC
VISTRA VISION MANAGEMENT LLC
PULASKI SOLAR, LLC
MASSAC TRANSMISSION, LLC,
as the Guaranteeing Subsidiaries

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

VISTRA OPERATIONS COMPANY LLC,
as the Company

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

Bellingham Power Generation LLC
Big Brown Power Company LLC
Blackstone Power Generation LLC
Calumet Energy Team, LLC
Casco Bay Energy Company, LLC
Coffeen and Western Railroad Company
Coleto Creek Power, LLC
Coleto Creek Energy Storage LLC
Dallas Power & Light Company, Inc.
Dicks Creek Power Company LLC
Dynegy Coal Holdco, LLC
Dynegy Coal Trading & Transportation, L.L.C.
Dynegy Conesville, LLC
Dynegy Killen, LLC
Dynegy Marketing and Trade, LLC
Dynegy Midwest Generation, LLC
Dynegy Operating Company
Dynegy Power Marketing, LLC
Dynegy Resources Generating Holdco, LLC
Dynegy South Bay, LLC
Dynegy Stuart, LLC
Ennis Power Company, LLC

EquiPower Resources Corp.
Fayette Power Company LLC
Generation SVC Company
Hanging Rock Power Company LLC
Hays Energy, LLC
Hopewell Power Generation, LLC
Illinois Power Generating Company
Illinois Power Resources Generating, LLC
Illinois Power Resources, LLC
Illinova Corporation
IPH, LLC
Kendall Power Company LLC
Kincaid Generation, L.L.C.
La Frontera Holdings, LLC
Lake Road Generating Company, LLC
Liberty Electric Power, LLC
Lone Star Energy Company, Inc.
Lone Star Pipeline Company, Inc.
Luminant Administrative Services Company
Luminant Coal Generation LLC
Luminant Commercial Asset Management LLC
Luminant Energy Company LLC
Luminant Energy Trading California Company
Luminant ET Services Company LLC
Luminant Gas Imports LLC
Luminant Generation Company LLC
Luminant Mining Company LLC
Luminant Power Generation, LLC
Luminant Power LLC
Maroon Farmer, LLC
Masspower, LLC
Miami Fort Power Company LLC
Midlothian Energy, LLC
Milford Power Company, LLC
Morro Bay Energy Storage 1, LLC
Morro Bay Energy Storage 2, LLC
Morro Bay Power Company LLC
Moss Landing Energy Storage 4, LLC
Moss Landing Power Company LLC
NCA Resources Development Company LLC
NEPCO Services Company
Northeastern Power Company
Oak Grove Management Company LLC
Oakland Energy Storage 2, LLC
Oakland Energy Storage 3, LLC
Oakland Power Company LLC
Ontelaunee Power Operating Company, LLC
Pleasants Energy, LLC
Sandow Power Company LLC

Sayreville Power Generation LP
Sayreville Power GP Inc.
Sayreville Power Holdings LLC
Sithe Energies, Inc.
Sithe/Independence LLC
Southwestern Electric Service Company, Inc.
Texas Electric Service Company, Inc.
Texas Energy Industries Company, Inc.
Texas Power & Light Company, Inc.
Texas Utilities Company, Inc.
Texas Utilities Electric Company, Inc
Trinidad Power Storage LLC
TXU Electric Company, Inc.
Vistra Asset Company LLC
Vistra Corporate Services Company
Vistra EP Properties Company
Vistra Finance Corp.
Vistra Insurance Solutions LLC
VZ Development LLC
Washington Power Generation LLC
Wise County Power Company, LLC
Wise-Fuels Pipeline, Inc.
Zimmer Power Company LLC, as Subsidiary Guarantors

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

[Signature Page to Twelfth Supplemental Indenture]

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as the Trustee

By: /s/ Latoya S Elvin
Name: Latoya S Elvin
Title: Vice President

[Signature Page to Twelfth Supplemental Indenture]

SCHEDULE I

GUARANTEEING SUBSIDIARIES

Name	Jurisdiction
VISTRA VISION HOLDINGS I LLC	Delaware
VISTRA VISION MANAGEMENT LLC	Delaware
PULASKI SOLAR, LLC	Delaware
MASSAC TRANSMISSION, LLC	Delaware

Exhibit 4.9

SIXTEENTH SUPPLEMENTAL INDENTURE
SUBSIDIARY GUARANTEES

SIXTEENTH SUPPLEMENTAL INDENTURE (this "**Supplemental Indenture**"), dated as of March 29, 2024, among the subsidiary guarantors listed on Schedule I hereto (the "**Guaranteeing Subsidiaries**"), Vistra Operations Company LLC, a Delaware limited liability company (the "**Company**"), the other subsidiary guarantors party hereto and Wilmington Trust, National Association, as trustee under the indenture referred to below (the "**Trustee**").

W I T N E S S E T H

WHEREAS, the Company has heretofore executed and delivered to the Trustee (i) that certain Indenture (the "**Base Indenture**"), dated as of June 11, 2019, among the Company and the Trustee, (ii) that certain Supplemental Indenture (the "**First Supplement**"), dated as of June 11, 2019, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the original issuance of an aggregate principal amount of $1,200,000,000 of 3.55% Senior Secured Notes due 2024 (the "**2024 3.55% Notes**") and aggregate principal amount of $800,000,000 of 4.30% Senior Secured Notes due 2029 (the "**2029 Notes**"), (iii) that certain Second Supplemental Indenture, dated as of August 30, 2019, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Second Supplement**"), (iv) that certain Third Supplemental Indenture, dated as of October 25, 2019, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Third Supplement**"), (v) that certain Fourth Supplemental Indenture, dated as of November 15, 2019, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the issuance of $800,000,000 of 3.70% Senior Secured Notes due 2027 (the "2027 Notes") (the "**Fourth Supplement**"), (vi) that certain Fifth Supplemental Indenture, dated as of January 31, 2020, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Fifth Supplement**"), (vii) that certain Sixth Supplemental Indenture, dated as of March 26, 2020, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Sixth Supplement**"), (viii) that certain Seventh Supplemental Indenture, dated as of October 7, 2020, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Seventh Supplement**"), (ix) that certain Eighth Supplemental Indenture, dated as of January 8, 2021, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Eighth Supplement**"), (x) that certain Ninth Supplemental Indenture, dated as of July 29, 2021, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Ninth Supplement**"), (xi) that certain Tenth Supplemental Indenture, dated as of December 28, 2021, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Tenth Supplement**"), (xii) that certain Eleventh Supplemental Indenture, dated as of May 13, 2022, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the original issuance of an aggregate principal amount of $400,000,000 of 4.875% Senior Secured Notes due 2024 (the "**2024 4.875% Notes**") and aggregate principal amount of $1,100,000,000 of 5.125% Senior Secured Notes due 2025 (the "**2025 Notes**") (the "**Eleventh Supplement**"), that certain Twelfth Supplemental Indenture, dated as of December 15, 2022, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Twelfth Supplement**"), that certain Thirteenth Supplemental Indenture, dated as of July 31, 2023, among the Company, the Subsidiary Guarantors party thereto and the Trustee (the "**Thirteenth Supplement**"), that certain Fourteenth Supplemental Indenture, dated as of September 26, 2023, among the Company, the Subsidiary Guarantors party thereto and the Trustee, providing for the issuance of an aggregate principal amount of $1,050,000,000 of 6.950% Senior Secured Notes due 2033 (the "**2033 6.950% Notes**" and, collectively with the 2024 3.55% Notes, the 2029 Notes, the 2027 Notes, the 2024 4.875% Notes and the 2025 Notes, the **Notes**") (the "**Fourteenth Supplement**") and that certain Fifteenth Supplemental Indenture, dated as of October 20, 2023, among the Company, the Subsidiary Guarantors party thereto and the Trustee (together with the Base Indenture, the First Supplement, the Second Supplement, the Third Supplement, the Fourth Supplement, the Fifth Supplement, the Sixth Supplement, the Seventh Supplement, the Eighth Supplement, the Ninth

Supplement, the Tenth Supplement, the Eleventh Supplement, the Twelfth Supplement, the Thirteenth Supplement and the Fourteenth Supplement, the "**Indenture**");

WHEREAS, the Indenture provides that under certain circumstances the Guaranteeing Subsidiary shall execute and deliver to the Trustee a supplemental indenture pursuant to which the Guaranteeing Subsidiaries shall unconditionally guarantee all of the Company's Obligations under the Notes and the Indenture (the "**Subsidiary Guarantees**"); and

WHEREAS, pursuant to Section 9.01 of the Base Indenture and Sections 4.07 and 9.01 of the First Supplement, the Fourth Supplement, the Eleventh Supplement and the Fourteenth Supplement, the Trustee, the Company and the other Subsidiary Guarantors are authorized and required to execute and deliver this Supplemental Indenture.

NOW THEREFORE, in consideration of the foregoing and for good and valuable consideration, the receipt of which is hereby acknowledged, the Guaranteeing Subsidiaries, the Trustee, the Company and the other Subsidiary Guarantors mutually covenant and agree for the equal and ratable benefit of the Holders of the Notes as follows:

1. *Capitalized Terms*. Unless otherwise defined in this Supplemental Indenture, capitalized terms used herein without definition shall have the meanings assigned to them in the Base Indenture, the First Supplement, the Fourth Supplement, the Eleventh Supplement or the Fourteenth Supplement, as applicable.

2. *Agreement to be Bound; Guarantee*. The Guaranteeing Subsidiaries hereby become a party to the Indenture as a Subsidiary Guarantor and as such will have all of the rights and be subject to all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. The Guaranteeing Subsidiaries hereby agree to be bound by all of the provisions of the Indenture applicable to a Subsidiary Guarantor and to perform all of the Obligations and agreements of a Subsidiary Guarantor under the Indenture. In furtherance of the foregoing, each Guaranteeing Subsidiary shall be deemed a Subsidiary Guarantor for purposes of Article 10 of the First Supplement, the Fourth Supplement, the Eleventh Supplement and the Fourteenth Supplement, including, without limitation, Section 10.02 thereof.

3. *NEW YORK LAW TO GOVERN*. THIS SUPPLEMENTAL INDENTURE SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

4. *Counterparts*. The parties may sign any number of copies of this Supplemental Indenture. Each signed copy shall be an original, but all of them together represent the same agreement.

5. *Effect of Headings*. The Section headings herein are for convenience only and shall not affect the construction hereof.

6. *The Trustee*. The Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals contained herein, all of which recitals are made solely by the Guaranteeing Subsidiaries and the Company.

7. *Ratification of Indenture; Supplemental Indenture Part of Indenture*. Except as expressly amended hereby, the Indenture is in all respects ratified and confirmed and all the terms, conditions and provisions thereof shall remain in full force and effect. This Supplemental Indenture shall form a part of the Indenture for all purposes, and every Holder of Notes heretofore or hereafter authenticated and delivered shall be bound hereby.

[Signature Page Follows]

IN WITNESS WHEREOF, the parties hereto have caused this Supplemental Indenture to be duly executed and attested, all as of the date first above written.

Dated: March 29, 2024

VISTRA VISION HOLDINGS I LLC
VISTRA VISION MANAGEMENT LLC
PULASKI SOLAR, LLC
MASSAC TRANSMISSION, LLC,
as the Guaranteeing Subsidiaries

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

VISTRA OPERATIONS COMPANY LLC,
as the Company

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

Bellingham Power Generation LLC
Big Brown Power Company LLC
Blackstone Power Generation LLC
Calumet Energy Team, LLC
Casco Bay Energy Company, LLC
Coffeen and Western Railroad Company
Coleto Creek Power, LLC
Coleto Creek Energy Storage LLC
Dallas Power & Light Company, Inc.
Dicks Creek Power Company LLC
Dynegy Coal Holdco, LLC
Dynegy Coal Trading & Transportation, L.L.C.
Dynegy Conesville, LLC
Dynegy Killen, LLC
Dynegy Marketing and Trade, LLC
Dynegy Midwest Generation, LLC
Dynegy Operating Company
Dynegy Power Marketing, LLC
Dynegy Resources Generating Holdco, LLC
Dynegy South Bay, LLC
Dynegy Stuart, LLC
Ennis Power Company, LLC

EquiPower Resources Corp.
Fayette Power Company LLC
Generation SVC Company
Hanging Rock Power Company LLC
Hays Energy, LLC
Hopewell Power Generation, LLC
Illinois Power Generating Company
Illinois Power Resources Generating, LLC
Illinois Power Resources, LLC
Illinova Corporation
IPH, LLC
Kendall Power Company LLC
Kincaid Generation, L.L.C.
La Frontera Holdings, LLC
Lake Road Generating Company, LLC
Liberty Electric Power, LLC
Lone Star Energy Company, Inc.
Lone Star Pipeline Company, Inc.
Luminant Administrative Services Company
Luminant Coal Generation LLC
Luminant Commercial Asset Management LLC
Luminant Energy Company LLC
Luminant Energy Trading California Company
Luminant ET Services Company LLC
Luminant Gas Imports LLC
Luminant Generation Company LLC
Luminant Mining Company LLC
Luminant Power Generation, LLC
Luminant Power LLC
Maroon Farmer, LLC
Masspower, LLC
Miami Fort Power Company LLC
Midlothian Energy, LLC
Milford Power Company, LLC
Morro Bay Energy Storage 1, LLC
Morro Bay Energy Storage 2, LLC
Morro Bay Power Company LLC
Moss Landing Energy Storage 4, LLC
Moss Landing Power Company LLC
NCA Resources Development Company LLC
NEPCO Services Company
Northeastern Power Company
Oak Grove Management Company LLC
Oakland Energy Storage 2, LLC
Oakland Energy Storage 3, LLC
Oakland Power Company LLC
Ontelaunee Power Operating Company, LLC
Pleasants Energy, LLC
Sandow Power Company LLC

Sayreville Power Generation LP
Sayreville Power GP Inc.
Sayreville Power Holdings LLC
Sithe Energies, Inc.
Sithe/Independence LLC
Southwestern Electric Service Company, Inc.
Texas Electric Service Company, Inc.
Texas Energy Industries Company, Inc.
Texas Power & Light Company, Inc.
Texas Utilities Company, Inc.
Texas Utilities Electric Company, Inc
Trinidad Power Storage LLC
TXU Electric Company, Inc.
Vistra Asset Company LLC
Vistra Corporate Services Company
Vistra EP Properties Company
Vistra Finance Corp.
Vistra Insurance Solutions LLC
VZ Development LLC
Washington Power Generation LLC
Wise County Power Company, LLC
Wise-Fuels Pipeline, Inc.
Zimmer Power Company LLC, as Subsidiary Guarantors

By: /s/ William M. Quinn
Name: William M. Quinn
Title: Senior Vice President and Treasurer

[Signature Page to Sixteenth Supplemental Indenture]

WILMINGTON TRUST, NATIONAL ASSOCIATION,
as the Trustee

By: /s/ Latoya S Elvin
Name: Latoya S Elvin
Title: Vice President

[Signature Page to Sixteenth Supplemental Indenture]

SCHEDULE I

GUARANTEEING SUBSIDIARIES

Name	Jurisdiction
VISTRA VISION HOLDINGS I LLC	Delaware
VISTRA VISION MANAGEMENT LLC	Delaware
PULASKI SOLAR, LLC	Delaware
MASSAC TRANSMISSION, LLC	Delaware

EXHIBIT 4.16

FIRST SUPPLEMENTAL INDENTURE

FIRSTENERGY NUCLEAR GENERATION CORP.

TO

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,
as Trustee

Dated as of June 15, 2009

Providing among other things for

First Mortgage Bonds, Guarantee Series A of 2009 due 2033
First Mortgage Bonds, Guarantee Series B of 2009 due 2011
First Mortgage Bonds, Collateral Series A of 2009 due 2010
First Mortgage Bonds, Collateral Series B of 2009 due 2010
First Mortgage Bonds, Collateral Series C of 2009 due 2010
First Mortgage Bonds, Collateral Series D of 2009 due 2010
First Mortgage Bonds, Collateral Series E of 2009 due 2010
First Mortgage Bonds, Collateral Series F of 2009 due 2011
First Mortgage Bonds, Collateral Series G of 2009 due 2011

Supplemental to Open-End Mortgage, General Mortgage
Indenture and Deed of Trust, Dated as of June 1, 2009

THIS FIRST SUPPLEMENTAL INDENTURE (this "***Supplemental Indenture***"), dated as of June 15, 2009, between FIRSTENERGY NUCLEAR GENERATION CORP., a corporation organized and existing under the laws of the State of Ohio (hereinafter called the "***Company***"), and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association organized and existing under the laws of the United States of America, as Trustee (hereinafter called the "***Trustee***") under the Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009 (hereinafter called the "***Original Indenture***," and as hereby supplemented, the "***Indenture***") with the Company.

W I T N E S S E T H:

WHEREAS, the Company has heretofore duly executed and delivered to the Trustee the Original Indenture to secure Bonds of the Company, issuable in series, from time to time, in the manner and subject to the conditions set forth, and without limit as to principal amount except as provided in the Original Indenture which Original Indenture has been filed for record in the filing offices set forth on Schedule 1 attached hereto and incorporated herein by reference; and

WHEREAS, pursuant to Section 14.01(a) of the Indenture, the Company and the Trustee, without the consent of the bondholders, in a form satisfactory to the Trustee, may enter into a supplemental indenture to among other things, correct or amplify the description of any property at any time subject to the Lien of this Indenture and make any other changes to the provisions of this Indenture when there are no Bonds of a series or Tranche Outstanding that will be adversely affected; and

WHEREAS, the Company desires to delete the real property description set forth on Exhibit A of the Original Indenture and replace it with Exhibit J attached to this Supplemental Indenture; and

WHEREAS, the Company desires to amend and restate Section 4.03(b)(iv) to clarify that in connection with the issuance of bonds on the basis of Property Additions, the delivery of a written appraisal of an Engineer or Appraiser is only required with respect to Property Additions that were actually acquired after the date of execution and delivery of the Original Indenture and there are no Holders of Bonds of any series or Tranche; and

WHEREAS, the Company, by appropriate corporate action in conformity with the terms of the Indenture, has duly determined to create nine new series of Bonds under the Indenture, consisting of (i) $107,500,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series A of 2009 due 2033" (hereinafter referred to as the "***bonds of Guarantee Series A***"), (ii) up to $500,000,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series B of 2009 due 2011" (hereinafter referred to as the "***bonds of Guarantee Series B***"), (iii) $8,079,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series A of 2009 due 2010" (hereinafter referred to as the "***bonds of Collateral Series A***"), (iv) $7,272,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series B of 2009 due 2010" (hereinafter referred to as the "***bonds of Collateral Series B***"), (v) $100,078,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series C of 2009 due 2010" (hereinafter referred

to as the "***bonds of Collateral Series C***"), (vi) $83,617,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series D of 2009 due 2010" (hereinafter referred to as the "***bonds of Collateral Series D***"), (vii) $73,367,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series E of 2009 due 2010" (hereinafter referred to as the "***bonds of Collateral Series E***"), (viii) $46,959,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series F of 2009 due 2011" (hereinafter referred to as the "***bonds of Collateral Series F***") and (ix) $60,592,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series G of 2009 due 2011" (hereinafter referred to as the "***bonds of Collateral Series G***," and together with the bonds of Guarantee Series A, the bonds of Guarantee Series B, the bonds of Collateral Series A, the bonds of Collateral Series B, the bonds of Collateral Series C, the bonds of Collateral Series D, the bonds of Collateral Series E and the bonds of Collateral Series F, the "***bonds of June 2009 Series***"), which shall bear interest at the respective rates per annum set forth in, shall be subject to certain redemption rights and obligations set forth in, and will otherwise be in the respective forms and have the terms and provisions provided for in this Supplemental Indenture; and

WHEREAS, the bonds of Guarantee Series A and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit A hereto; the bonds of Guarantee Series B and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit B hereto; the bonds of Collateral Series A and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit C hereto; the bonds of Collateral Series B and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit D hereto; the bonds of Collateral Series C and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit E hereto; the bonds of Collateral Series D and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit F hereto; the bonds of Collateral Series E and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit G hereto; the bonds of Collateral Series F and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit H hereto; and the bonds of Collateral Series G and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit I hereto; and

WHEREAS, the Company deems it advisable to enter into this Supplemental Indenture for the purposes of establishing the form, terms and provisions of the bonds of Guarantee Series A, the bonds of Guarantee Series B, the bonds of Collateral Series A, the bonds of Collateral Series B, the bonds of Collateral Series C, the bonds of Collateral Series D, the bonds of Collateral Series E, the bonds of Collateral Series F, and the bonds of Collateral Series G, as provided and contemplated by Sections 2.01(a) and 3.01(b) of the Indenture, and the Company has requested and hereby requests the Trustee to join in the execution of this Supplemental Indenture; and

WHEREAS, it is provided in the Indenture, among other things, that the Company shall execute and file with the Trustee and the Trustee, at the request of the Company, when required by the Indenture, shall join in indentures supplemental thereto, and which thereafter shall form a

part thereof, for the purpose, among others, of providing for the creation of any series of Bonds and specifying the form and provisions of the Bonds of such series; and

WHEREAS, all acts and things have been done and performed which are necessary to make this Supplemental Indenture, when duly executed and delivered, a valid, binding and legal instrument in accordance with its terms and for the purposes herein expressed; and the execution and delivery of this Supplemental Indenture have been in all respects duly authorized.

NOW THEREFORE, in consideration of the premises and in further consideration of the sum of One Dollar in lawful money of the United States of America paid to the Company by the Trustee at or before the execution and delivery of this Supplemental Indenture, the receipt whereof is hereby acknowledged, and of other good and valuable consideration, it is agreed by and between the Company and the Trustee as follows:

ARTICLE I

DEFINITIONS

SECTION 1.01 *Terms Incorporated by Reference.*

Except for the terms defined in this Supplemental Indenture, all capitalized terms used in this Supplemental Indenture have the respective meanings set forth in the Original Indenture.

SECTION 1.02 *Additional Definitions*.

"***Administrative Agent***" shall mean Barclays Bank PLC, New York Branch, as Administrative Agent under each of the Reimbursement Agreements or any successor thereto as such Administrative Agent thereunder.

"***Banks***" shall mean, with respect to each of the Reimbursement Agreements, the Fronting Bank and the other participating banks parties to such Reimbursement Agreement.

"***BCIDA 2005-A Revenue Bonds***" means the $72,650,000 aggregate principal amount of Beaver County Pollution Control Revenue Refunding Bonds, Series 2005-A (FirstEnergy Nuclear Generation Corp. Project) issued by the Beaver County Industrial Development Authority.

"***BCIDA 2005-A Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of December 16, 2005 (as amended), among the Company, Barclays Bank, PLC, New York Branch, as Administrative Agent and Fronting Bank, and the Banks, pursuant to which a letter of credit was issued by the Fronting Bank in favor of the trustee for the BCIDA 2005-A Revenue Bonds.

"***BCIDA 2006-A Revenue Bonds***" means the $60,000,000 aggregate principal amount of Beaver County Pollution Control Revenue Refunding Bonds, Series 2006-A (FirstEnergy Nuclear Generation Corp. Project) issued by the Beaver County Industrial Development Authority.

"***BCIDA 2006-A Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of April 3, 2006 (as amended), among the Company, Barclays Bank, PLC, New York Branch, as Administrative Agent and Fronting Bank, KeyBank National Association, as Syndication Agent, and the Banks, pursuant to which a letter of credit was issued by the Fronting Bank in favor of the trustee for the BCIDA 2006-A Revenue Bonds.

"***bonds of June 2009 Collateral Series***" means collectively, the bonds of Collateral Series A, the bonds of Collateral Series B, the bonds of Collateral Series C, the bonds of Collateral Series D, the bonds of Collateral Series E, the bonds of Collateral Series F, and the bonds of Collateral Series G

"***Fronting Bank***" shall mean Barclays Bank PLC, New York Branch, as Fronting Bank under each of the Reimbursement Agreements or any successor thereto as such Fronting Bank thereunder.

"***Guaranteed Parties***" shall mean The Cleveland Electric Illuminating Company, The Toledo Edison Company and Ohio Edison Company, as guaranteed parties under the Guaranty Agreement.

"***Guaranty Agreement***" shall mean that certain Surplus Margin Guaranty dated as of June 16, 2009 by the Company in favor of the Guaranteed Parties.

"***Initial Interest Accrual Date***" shall have the meaning assigned to such term in the form of bond of Guarantee Series A.

"***Interest Payment Date***" shall have the meaning assigned to such term in the respective form of bond of Series.

"***OAQDA 2005-A Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of December 16, 2005 (as amended), among the Company, Barclays Bank, PLC, New York Branch, as Administrative Agent and Fronting Bank, and the Banks, pursuant to which a letter of credit was issued by the Fronting Bank in favor of the trustee for the OAQDA 2005-A Revenue Bonds.

"***OAQDA 2005-A Revenue Bonds***" means the $8,000,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2005-A (FirstEnergy Nuclear Generation Corp. Project) issued by the Ohio Air Quality Development Authority.

"***OAQDA 2005-B Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of December 16, 2005 (as amended), among the Company, Barclays Bank, PLC, New York Branch, as Administrative Agent and Fronting Bank, and the Banks, pursuant to which a letter of credit was issued by the Fronting Bank in favor of the trustee for the OAQDA 2005-B Revenue Bonds.

"***OAQDA 2005-B Revenue Bonds***" means the $7,200,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2005-B (FirstEnergy Nuclear Generation Corp. Project) issued by the Ohio Air Quality Development Authority.

"***OWDA 2005-A Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of December 16, 2005 (as amended), among the Company, Barclays Bank, PLC, New York Branch, as Administrative Agent and Fronting Bank, and the Banks, pursuant to which a letter of credit was issued by the Fronting Bank in favor of the trustee for the OWDA 2005-A Revenue Bonds.

"***OWDA 2005-A Revenue Bonds***" means the $99,100,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2005-A (FirstEnergy Nuclear Generation Corp. Project) issued by the Ohio Water Development Authority.

"***OWDA 2005-B Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of December 16, 2005 (as amended), among the Company, Barclays Bank, PLC, New York Branch, as Administrative Agent and Fronting Bank, and the Banks, pursuant to which a letter of credit was issued by the Fronting Bank in favor of the trustee for the OWDA 2005-B Revenue Bonds.

"***OWDA 2005-B Revenue Bonds***" means the $82,800,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2005-B (FirstEnergy Nuclear Generation Corp. Project) issued by the Ohio Water Development Authority.

"***OWDA 2006-A Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of April 3, 2006 (as amended), among the Company, Barclays Bank, PLC, New York Branch, as Administrative Agent and Fronting Bank, and the Banks, pursuant to which a letter of credit was issued by the Fronting Bank in favor of the trustee for the OWDA 2006-A Revenue Bonds.

"***OWDA 2006-A Revenue Bonds***" means the $46,500,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2006-A (FirstEnergy Nuclear Generation Corp. Project) issued by the Ohio Water Development Authority.

"***OWDA 2009-A Revenue Bonds***" means the $107,500,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2009-A (FirstEnergy Nuclear Generation Corp. Project) to be issued by the Ohio Water Development Authority.

"***OWDA 2009-A Revenue Bond Indenture***" means the Trust Indenture, dated as of June 1, 2009, between the Ohio Water Development Authority and the OWDA 2009-A Revenue Bond Trustee, securing the OWDA 2009-A Revenue Bonds issued for the benefit of the Company.

"***OWDA 2009-A Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A., as trustee under that certain OWDA 2009-A Revenue Bond Indenture.

"***Reimbursement Agreements***" means the BCIDA 2005-A Reimbursement Agreement, the BCIDA 2006-A Reimbursement Agreement, the OAQDA 2005-A Reimbursement Agreement, the OAQDA 2005-B Reimbursement Agreement, the OWDA 2005-A Reimbursement Agreement, the OWDA 2005-B Reimbursement Agreement and the OWDA 2006-A Reimbursement Agreement.

The terms "***Available Amount***," "***Commitments***," "***Letter of Credit***," "***Obligations***," and "***Tender Advances***" shall have the respective meanings assigned to those terms in the respective Reimbursement Agreements.

SECTION 1.03. *Rules of Construction.* All references to any agreement refer to such agreement as modified, varied, supplemented, amended or restated from time to time by the parties thereto (including any permitted successors or assigns) in accordance with its terms.

ARTICLE II

BONDS

SECTION 2.01. *Designation and Issuance of Bonds.* (a) The bonds of Guarantee Series A shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series A of 2009 due 2033" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of One Hundred Seven Million Five Hundred Thousand Dollars ($107,500,000). The bonds of Guarantee Series A are to be issued and secured by the Lien of the Indenture.

(b) The bonds of Guarantee Series B shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series B of 2009 due 2011" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Five Hundred Million Dollars ($500,000,000). The bonds of Guarantee Series B are to be issued and secured by the Lien of the Indenture.

(c) The bonds of Collateral Series A shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series A of 2009 due 2010" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Eight Million Seventy-Nine Thousand Dollars ($8,079,000). The bonds of Collateral Series A are to be issued and secured by the Lien of the Indenture.

(d) The bonds of Collateral Series B shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series B of 2009 due 2010" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Seven Million Two Hundred Seventy-Two Thousand Dollars ($7,272,000). The bonds of Collateral Series B are to be issued and secured by the Lien of the Indenture.

(e) The bonds of Collateral Series C shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series C of 2009 due 2010" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of One Hundred

Million Seventy-Eight Thousand Dollars ($100,078,000). The bonds of Collateral Series C are to be issued and secured by the Lien of the Indenture.

(f) The bonds of Collateral Series D shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series D of 2009 due 2010" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Eighty-Three Million Six Hundred Seventeen Thousand Dollars ($83,617,000). The bonds of Collateral Series D are to be issued and secured by the Lien of the Indenture.

(g) The bonds of Collateral Series E shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series E of 2009 due 2010" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Seventy Three Million Three Hundred Sixty-Seven Thousand Dollars ($73,367,000). The bonds of Collateral Series E are to be issued and secured by the Lien of the Indenture.

(h) The bonds of Collateral Series F shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series F of 2009 due 2011" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Forty-Six Million Nine Hundred Fifty-Nine Thousand Dollars ($46,959,000). The bonds of Collateral Series F are to be issued and secured by the Lien of the Indenture.

(i) The bonds of Collateral Series G shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series G of 2009 due 2011" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Sixty Million Five Hundred Ninety-Two Thousand Dollars ($60,592,000). The bonds of Collateral Series G are to be issued and secured by the Lien of the Indenture.

SECTION 2.02. *Form, Date, Maturity Date, Interest Rate and Interest Payment Dates of Bonds* (a) The definitive bonds of June 2009 Series shall be in engraved, lithographed, printed or typewritten form and shall be registered bonds without coupons, and such bonds and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the respective forms included in Exhibits A, B, C, D, E, F, G, H and I hereto. The bonds of June 2009 Series shall be dated as provided in Section 3.03 of the Indenture.

(b) The bonds of Guarantee Series A shall bear interest from the Initial Interest Accrual Date as provided in the form of the bond of Guarantee Series A, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series A shall be as set forth in the form of the bond of Guarantee Series A.

(c) The interest on the bonds of Guarantee Series A so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(d) Interest shall be payable on the bonds of Guarantee Series B as set forth in the form of the bonds of Guarantee Series B. The maturity date of the bonds of Guarantee Series B shall be as set forth in the form of the bonds of Guarantee Series B.

(e) The bonds of Collateral Series A shall bear interest on each day that they are outstanding at such rate or rates per annum as shall cause the amount of interest payable on the bonds of Collateral Series A on an Interest Payment Date to equal the amount of outstanding Obligations under the OAQDA 2005-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OAQDA 2005-A Reimbursement Agreement) payable on such Interest Payment Date; *provided, however*, such interest rate or rates on the bonds of Collateral Series A shall not exceed ten percent (10%) per annum (calculated on the basis of a year of 360 days for the actual days elapsed). The bonds of Collateral Series A shall bear interest until the principal thereof shall be paid in full.

(f) The interest on the bonds of Collateral Series A so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(g) The bonds of Collateral Series B shall bear interest on each day that they are outstanding at such rate or rates per annum as shall cause the amount of interest payable on the bonds of Collateral Series B on an Interest Payment Date to equal the amount of outstanding Obligations under the OAQDA 2005-B Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OAQDA 2005-B Reimbursement Agreement) payable on such Interest Payment Date; *provided, however*, such interest rate or rates on the bonds of Collateral Series B shall not exceed ten percent (10%) per annum (calculated on the basis of a year of 360 days for the actual days elapsed). The bonds of Collateral Series B shall bear interest until the principal thereof shall be paid in full.

(h) The interest on the bonds of Collateral Series B so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(i) The bonds of Collateral Series C shall bear interest on each day that they are outstanding at such rate or rates per annum as shall cause the amount of interest payable on the bonds of Collateral Series C on an Interest Payment Date to equal the amount of outstanding Obligations under the OWDA 2005-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OWDA 2005-A Reimbursement Agreement) payable on such Interest Payment Date; *provided, however*, such interest rate or rates on the bonds of Collateral Series C shall not exceed ten percent (10%) per annum (calculated on the basis of a year of 360 days for the actual days elapsed). The bonds of Collateral Series C shall bear interest until the principal thereof shall be paid in full.

(j) The interest on the bonds of Collateral Series C so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(k) The bonds of Collateral Series D shall bear interest on each day that they are outstanding at such rate or rates per annum as shall cause the amount of interest payable on the bonds of Collateral Series D on an Interest Payment Date to equal the amount of outstanding Obligations under the OWDA 2005-B Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OWDA 2005-B Reimbursement Agreement) payable on such Interest Payment Date; *provided, however*, such interest rate or rates on the bonds of Collateral Series D shall not exceed ten percent (10%) per annum (calculated on the basis of a year of 360 days for the actual days elapsed). The bonds of Collateral Series D shall bear interest until the principal thereof shall be paid in full.

(l) The interest on the bonds of Collateral Series D so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(m) The bonds of Collateral Series E shall bear interest on each day that they are outstanding at such rate or rates per annum as shall cause the amount of interest payable on the bonds of Collateral Series E on an Interest Payment Date to equal the amount of outstanding Obligations under the BCIDA 2005-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the BCIDA 2005-A Reimbursement Agreement) payable on such Interest Payment Date; *provided, however*, such interest rate or rates on the bonds of Collateral Series E shall not exceed ten percent (10%) per annum (calculated on the basis of a year of 360 days for the actual days elapsed). The bonds of Collateral Series E shall bear interest until the principal thereof shall be paid in full.

(n) The interest on the bonds of Collateral Series E so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(o) The bonds of Collateral Series F shall bear interest on each day that they are outstanding at such rate or rates per annum as shall cause the amount of interest payable on the bonds of Collateral Series F on an Interest Payment Date to equal the amount of outstanding Obligations under the OWDA 2006-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OWDA 2006-A Reimbursement Agreement) payable on such Interest Payment Date; *provided, however*, such interest rate or rates on the bonds of Collateral Series F shall not exceed ten percent (10%) per annum (calculated on the basis of a year of 360 days

for the actual days elapsed). The bonds of Collateral Series F shall bear interest until the principal thereof shall be paid in full.

(p) The interest on the bonds of Collateral Series F so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(q) The bonds of Collateral Series G shall bear interest on each day that they are outstanding at such rate or rates per annum as shall cause the amount of interest payable on the bonds of Collateral Series G on an Interest Payment Date to equal the amount of outstanding Obligations under the BCIDA 2006-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the BCIDA 2006-A Reimbursement Agreement) payable on such Interest Payment Date; *provided, however*, such interest rate or rates on the bonds of Collateral Series G shall not exceed ten percent (10%) per annum (calculated on the basis of a year of 360 days for the actual days elapsed). The bonds of Collateral Series G shall bear interest until the principal thereof shall be paid in full.

(r) The interest on the bonds of Collateral Series G so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

SECTION 2.03. *Bonds Issued as Collateral Security.* The bonds of Guarantee Series A shall be issued, delivered, and pledged to, and registered in the name of, the OWDA 2009-A Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal of and interest on the OWDA 2009-A Revenue Bonds. The bonds of Guarantee Series B shall be issued, delivered, and pledged to, and registered in the name of, FirstEnergy Service Company, as Custodian, under the Custodian Agreement (as defined below) pursuant to which it acts on behalf of the Guaranteed Parties under the Guaranty Agreement, in order to secure and provide for, and as collateral security for, the Company's obligations under the Guaranty Agreement. The bonds of Collateral Series A shall be issued, delivered, and pledged to, and registered in the name of, the Administrative Agent under the OAQDA 2005-A Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Obligations arising thereunder. The bonds of Collateral Series B shall be issued, delivered, and pledged to, and registered in the name of, the Administrative Agent under the OAQDA 2005-B Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Obligations arising thereunder. The bonds of Collateral Series C shall be issued, delivered, and pledged to, and registered in the name of, the Administrative Agent under the OWDA 2005-A Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Obligations arising thereunder. The bonds of Collateral Series D shall be issued, delivered, and pledged to, and registered in the name of, the Administrative Agent under the OWDA 2005-B Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Obligations arising

thereunder. The bonds of Collateral Series E shall be issued, delivered, and pledged to, and registered in the name of, the Administrative Agent under the BCIDA 2005-A Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Obligations arising thereunder. The bonds of Collateral Series F shall be issued, delivered, and pledged to, and registered in the name of, the Administrative Agent under the OWDA 2006-A Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Obligations arising thereunder. The bonds of Collateral Series G shall be issued, delivered, and pledged to, and registered in the name of, the Administrative Agent under the BCIDA 2006-A Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Obligations arising thereunder.

SECTION 2.04. *Credit for Payments of the Revenue Bonds and Payments under the Reimbursement Agreements* (a) If and when the principal of any OWDA 2009-A Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series A then outstanding; provided, however, that such payment of the bonds of Guarantee Series A is deemed to be made only when and to the extent that notice of such payment of such OWDA 2009-A Revenue Bonds is given by the Company to the Trustee.

(b) The Company shall receive a credit against its obligation to make any payment of interest on the bonds of Collateral Series A, whether on an Interest Payment Date, at maturity, upon redemption, upon acceleration or otherwise, in an amount equal to the amount, if any, paid by or for the account of the Company in respect of any corresponding payment of the Obligations outstanding under the OAQDA 2005-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OAQDA 2005-A Reimbursement Agreement). The obligation of the Company to make any payment with respect to the principal of the bonds of Collateral Series A shall be credited in full if, at the time that any such payment of principal shall be due, there shall have been paid by or for the account of the Company an equivalent amount of Obligations constituting demand loans pursuant to Section 2.04 of the OAQDA 2005-A Reimbursement Agreement. No payment of principal of such Tender Advances or demand loans under the 2005-A OAQDA Reimbursement Agreement or under the bonds of Collateral Series A shall reduce the stated principal amount of the bonds of Collateral Series A unless, and only to the extent that, the OAQDA 2005-A Reimbursement Agreement shall be terminated concurrently therewith in accordance with the provisions of Section 2.02(c) of the OAQDA 2005-A Reimbursement Agreement.

(c) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series A, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Administrative Agent stating that payment of Obligations due under the OAQDA 2005-A Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

(d) The Company shall receive a credit against its obligation to make any payment of interest on the bonds of Collateral Series B, whether on an Interest Payment Date, at maturity, upon redemption, upon acceleration or otherwise, in an amount equal to the amount, if any, paid by or for the account of the Company in respect of any corresponding payment of the Obligations outstanding under the OAQDA 2005-B Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OAQDA 2005-B Reimbursement Agreement). The obligation of the Company to make any payment with respect to the principal of the bonds of Collateral Series B shall be credited in full if, at the time that any such payment of principal shall be due, there shall have been paid by or for the account of the Company an equivalent amount of Obligations constituting demand loans pursuant to Section 2.04 of the OAQDA 2005-B Reimbursement Agreement. No payment of principal of such Tender Advances or demand loans under the OAQDA 2005-B Reimbursement Agreement or under the bonds of Collateral Series B shall reduce the stated principal amount of the bonds of Collateral Series B unless, and only to the extent that, the OAQDA 2005-B Reimbursement Agreement shall be terminated concurrently therewith in accordance with the provisions of Section 2.02(c) of the OAQDA 2005-B Reimbursement Agreement.

(e) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series B, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Administrative Agent stating that payment of Obligations due under the OAQDA 2005-B Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

(f) The Company shall receive a credit against its obligation to make any payment of interest on the bonds of Collateral Series C, whether on an Interest Payment Date, at maturity, upon redemption, upon acceleration or otherwise, in an amount equal to the amount, if any, paid by or for the account of the Company in respect of any corresponding payment of the Obligations outstanding under the OWDA 2005-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OWDA 2005-A Reimbursement Agreement). The obligation of the Company to make any payment with respect to the principal of the bonds of Collateral Series C shall be credited in full if, at the time that any such payment of principal shall be due, there shall have been paid by or for the account of the Company an equivalent amount of Obligations constituting demand loans pursuant to Section 2.04 of the OWDA 2005-A Reimbursement Agreement. No payment of principal of such Tender Advances or demand loans under the OWDA 2005-A Reimbursement Agreement or under the bonds of Collateral Series C shall reduce the stated principal amount of the bonds of Collateral Series C unless, and only to the extent that, the OWDA 2005-A Reimbursement Agreement shall be terminated concurrently therewith in accordance with the provisions of Section 2.02(c) of the OWDA 2005-A Reimbursement Agreement.

(g) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series C, as the same shall become due

and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Administrative Agent stating that payment of Obligations due under the OWDA 2005-A Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

(h) The Company shall receive a credit against its obligation to make any payment of interest on the bonds of Collateral Series D, whether on an Interest Payment Date, at maturity, upon redemption, upon acceleration or otherwise, in an amount equal to the amount, if any, paid by or for the account of the Company in respect of any corresponding payment of the Obligations outstanding under the OWDA 2005-B Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OWDA 2005-B Reimbursement Agreement). The obligation of the Company to make any payment with respect to the principal of the bonds of Collateral Series D shall be credited in full if, at the time that any such payment of principal shall be due, there shall have been paid by or for the account of the Company an equivalent amount of Obligations constituting demand loans pursuant to Section 2.04 of the OWDA 2005-B Reimbursement Agreement. No payment of principal of such Tender Advances or demand loans under the OWDA 2005-B Reimbursement Agreement or under the bonds of Collateral Series D shall reduce the stated principal amount of the bonds of Collateral Series D unless, and only to the extent that, the OWDA 2005-B Reimbursement Agreement shall be terminated concurrently therewith in accordance with the provisions of Section 2.02(c) of the OWDA 2005-B Reimbursement Agreement.

(i) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series D, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Administrative Agent stating that payment of Obligations due under the OWDA 2005-B Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

(j) The Company shall receive a credit against its obligation to make any payment of interest on the bonds of Collateral Series E, whether on an Interest Payment Date, at maturity, upon redemption, upon acceleration or otherwise, in an amount equal to the amount, if any, paid by or for the account of the Company in respect of any corresponding payment of the Obligations outstanding under the BCIDA 2005-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the BCIDA 2005-A Reimbursement Agreement). The obligation of the Company to make any payment with respect to the principal of the bonds of Collateral Series E shall be credited in full if, at the time that any such payment of principal shall be due, there shall have been paid by or for the account of the Company an equivalent amount of Obligations constituting demand loans pursuant to Section 2.04 of the BCIDA 2005-A Reimbursement Agreement. No payment of principal of such Tender Advances or demand loans under the BCIDA 2005-A Reimbursement Agreement or under the bonds of Collateral Series E shall reduce the stated principal amount of the bonds of Collateral Series E unless, and only to

the extent that, the BCIDA 2005-A Reimbursement Agreement shall be terminated concurrently therewith in accordance with the provisions of Section 2.02(c) of the BCIDA 2005-A Reimbursement Agreement.

(k) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series E, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Administrative Agent stating that payment of Obligations due under the BCIDA 2005-A Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

(l) The Company shall receive a credit against its obligation to make any payment of interest on the bonds of Collateral Series F, whether on an Interest Payment Date, at maturity, upon redemption, upon acceleration or otherwise, in an amount equal to the amount, if any, paid by or for the account of the Company in respect of any corresponding payment of the Obligations outstanding under the OWDA 2006-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the OWDA 2006-A Reimbursement Agreement). The obligation of the Company to make any payment with respect to the principal of the bonds of Collateral Series F shall be credited in full if, at the time that any such payment of principal shall be due, there shall have been paid by or for the account of the Company an equivalent amount of Obligations constituting demand loans pursuant to Section 2.04 of the OWDA 2006-A Reimbursement Agreement. No payment of principal of such Tender Advances or demand loans under the OWDA 2006-A Reimbursement Agreement or under the bonds of Collateral Series F shall reduce the stated principal amount of the bonds of Collateral Series F unless, and only to the extent that, the OWDA 2006-A Reimbursement Agreement shall be terminated concurrently therewith in accordance with the provisions of Section 2.02(c) of the OWDA 2006-A Reimbursement Agreement.

(m) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series F, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Administrative Agent stating that payment of Obligations due under the OWDA 2006-A Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

(n) The Company shall receive a credit against its obligation to make any payment of interest on the bonds of Collateral Series G, whether on an Interest Payment Date, at maturity, upon redemption, upon acceleration or otherwise, in an amount equal to the amount, if any, paid by or for the account of the Company in respect of any corresponding payment of the Obligations outstanding under the BCIDA 2006-A Reimbursement Agreement (other than Tender Advances or reimbursement obligations of the Company to the Banks constituting demand loans pursuant to Section 2.04 of the BCIDA 2006-A Reimbursement Agreement). The obligation of the Company to make any payment with respect to the principal of the bonds of

Collateral Series G shall be credited in full if, at the time that any such payment of principal shall be due, there shall have been paid by or for the account of the Company an equivalent amount of Obligations constituting demand loans pursuant to Section 2.04 of the BCIDA 2006-A Reimbursement Agreement. No payment of principal of such Tender Advances or demand loans under the BCIDA 2006-A Reimbursement Agreement or under the bonds of Collateral Series G shall reduce the stated principal amount of the bonds of Collateral Series G unless, and only to the extent that, the BCIDA 2006-A Reimbursement Agreement shall be terminated concurrently therewith in accordance with the provisions of Section 2.02(c) of the BCIDA 2006-A Reimbursement Agreement.

(o) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series G, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Administrative Agent stating that payment of Obligations due under the BCIDA 2006-A Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

SECTION 2.05. *Execution of Bonds.* The bonds of June 2009 Series shall be executed on behalf of the Company in accordance with Section 3.03 of the Indenture.

SECTION 2.06. *Medium and Places of Payment of Principal of, and Interest on, Bonds; Transferability and Exchangeability.* The principal of, and the interest on, the bonds of June 2009 Series shall be payable in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, and such principal and interest shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio. The Corporate Trust Office of the Trustee shall serve as the initial location of such office. Subject to the limitations provided herein, the bonds of June 2009 Series shall be transferable and exchangeable, in the manner provided in Sections 3.05 and 3.06 of the Indenture, at said office or agency. The bonds of Guarantee Series A shall not be transferable except (i) to a successor to the OWDA 2009-A Revenue Bond Trustee under the OWDA 2009-A Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder thereof consequent upon an event of default as defined in the Indenture, or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. The bonds of Guarantee Series B shall not be transferable except (i) to a successor to FirstEnergy Service Company, an Ohio corporation ("***FirstEnergy Service***") as Custodian, under the Custodian Agreement dated as of June 16, 2009, among FirstEnergy Service and the Guaranteed Parties, relating to the Guaranty Agreement, (ii) in connection with the exercise of the rights and remedies of the holder thereof consequent upon an "event of default" or an "early termination date" as defined in the Agreements referred to in the Guaranty Agreement or an event of default as defined in the Indenture, or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. The bonds of June 2009 Collateral Series shall not be transferable except (i) to a successor to the respective Administrative Agent under the respective Reimbursement Agreement, (ii) in connection with the exercise of the rights and remedies of the holder thereof consequent upon an

event of default as defined in the Indenture, or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. No charge shall be made by the Company to the registered owner of any bond of Series for the registration of transfer of such Bond or for the exchange thereof for Bonds of the same series of other authorized denominations, except, in the case of any transfer, a charge sufficient to reimburse the Company for any stamp or other tax or governmental charge required to be paid by the Company or the Trustee.

SECTION 2.07. *Denominations and Numbering of Bonds*. The bonds of June 2009 Series shall be issued in the denomination of $1,000 and any integral multiple thereof. The bonds of June 2009 Series shall each be numbered R-1 and consecutively upwards.

SECTION 2.08. *Temporary Bonds.* Until definitive bonds of June 2009 Series are ready for delivery, there may be authenticated and issued in lieu of any thereof and subject to all of the provisions, limitations, and conditions set forth in Section 3.04 of the Indenture, temporary registered bonds of June 2009 Series without coupons.

SECTION 2.09. *Mandatory Redemption.* The bonds of June 2009 Series shall be subject to mandatory redemption as provided in the respective forms thereof.

SECTION 2.10. *Confirmation of Lien.* The Company, for the equal and proportionate benefit and security of the holders of all Bonds at any time issued under the Indenture, hereby confirms the lien and security interest of the Indenture upon, and hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms to the Trustee, and grants to the Trustee a security interest in, the Mortgaged Property (as defined in the Indenture), including the real property legally described on Exhibit J attached hereto and made a part hereof, but excluding from such lien, security interest and grant all property which, by virtue of any of the provisions of the Indenture, is excluded from the lien, security interests and granting clauses thereof.

ARTICLE III

AMENDMENTS

SECTION 3.01 *Amendments.* The Indenture is hereby amended in the following respects.

(a) Section 4.03(b)(iv) is amended and restated in its entirety as follows:

"(iv) in case any Property Additions acquired, made or constructed after the date of the execution and delivery of this Indenture are shown by the Engineer's Certificate provided for in clause (ii) above to have been acquired, made or constructed in whole or in part through the delivery of securities or other property, a written appraisal of an Engineer or Appraiser stating, in the judgment of such Engineer or Appraiser, the fair market value in cash of such securities or other property at the time of delivery thereof in payment for or for the acquisition of such Property Additions;" and

(b) The real property description set forth on Exhibit A of the Original Indenture is hereby deleted and replaced with the real property description set forth on Exhibit J attached to this Supplemental Indenture and incorporated herein by reference.

ARTICLE IV

MISCELLANEOUS

SECTION 4.01 Except as herein otherwise expressly provided, no duties, responsibilities or liabilities are assumed, or shall be construed to be assumed, by the Trustee by reason of this Supplemental Indenture; the Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals herein or in the bonds of June 2009 Series (except the Trustee's authentication certificate), all of which are made by the Company solely; and this Supplemental Indenture is executed and accepted by the Trustee, subject to all the terms and conditions set forth in the Indenture, as fully to all intents and purposes as if the terms and conditions of the Indenture were herein set forth at length.

SECTION 4.02 As supplemented by this Supplemental Indenture, the Indenture is in all respects ratified and confirmed, and the Indenture as herein defined, and this Supplemental Indenture, shall be read, taken and construed as one and the same instrument.

SECTION 4.03 Nothing in this Supplemental Indenture contained shall or shall be construed to confer upon any person other than a Holder of Bonds issued under the Indenture, the Company and the Trustee any right or interest to avail himself of any benefit under any provision of the Indenture or of this Supplemental Indenture.

SECTION 4.04 This Supplemental Indenture may be simultaneously executed in several counterparts and all such counterparts executed and delivered, each as an original, shall constitute but one and the same instrument.

[Remainder of this page intentionally left blank.]

IN WITNESS WHEREOF, FIRSTENERGY NUCLEAR GENERATION CORP., party of the first part hereto, and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., party of the second part hereto, have caused these presents to be executed in their respective names as of the day and year first above written.

FIRSTENERGY NUCLEAR GENERATION CORP.

By: /s/ James F. Pearson

James F. Pearson

Vice President and Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By: /s/ Biagio S. Impala

Biagio S. Impala

Vice President

STATE OF OHIO)

)ss.:

COUNTY OF)

On the 15th day of June, 2009, personally appeared before me, a Notary Public in and for the said County and State aforesaid, James F. Pearson, to me known and known to me to be the Vice President and Treasurer of FIRSTENERGY NUCLEAR GENERATION CORP., the corporation which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President and Treasurer of FIRSTENERGY NUCLEAR GENERATION CORP., the same is his free act and deed and the free and corporate act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 1th day of June, 2009.

/s/ Kathleen M. Hofacre

_____, Notary Public

Commission Expires_____

[Seal]

STATE OF OHIO)

)ss.:

COUNTY OF CUYAHOGA)

On the 15 day of June, 2009, personally appeared before me, a Notary Public in and for the said County and State aforesaid, Biagio S. Impala, to me known and known to me to be a Vice President of THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., the national banking association which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President for and on behalf of said national banking association and that the same is his free act and deed and the free and corporate act and deed of said national banking association.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 15 day of June, 2009.

J. Weber

_____, Notary Public

Commission Expires _____

[Seal]

The Bank of New York Mellon Trust Company, N.A. hereby certifies that its precise name and address as Trustee is:

The Bank of New York Mellon Trust Company, N.A.
Global Corporate Trust
1660 West 2nd Street, Suite 830
Cleveland, Ohio 44113

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.

By: /s/ Biagio S. Impala

Biagio S. Impala

Vice President

THIS INSTRUMENT PREPARED BY:

Lucas F. Torres
Akin Gump Strauss Hauer & Feld LLP
One Bryant Park
New York, NY 10036

Exhibit A

[FORM OF FIRST MORTGAGE BOND OF GUARANTEE SERIES A]

This Bond is not transferable except (i) to a successor trustee under the Trust Indenture, dated as of June 1, 2009, between the Ohio Water Development Authority and The Bank of New York Mellon Trust Company, N.A., as trustee, referred to herein, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture referred to herein or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company.

FIRSTENERGY NUCLEAR GENERATION CORP.

First Mortgage Bond, Guarantee Series A of 2009 due 2033

Due June 1, 2033

$[_____]
No. R-__

FIRSTENERGY NUCLEAR GENERATION CORP., a corporation of the State of Ohio (herein, together with its successors and assigns, the ***Company***"), for value received promises to pay to The Bank of New York Mellon Trust Company, N.A., as trustee (the "***Revenue Bond Trustee***") under that certain Trust Indenture, dated as of June 1, 2009, between the Ohio Water Development Authority and the Revenue Bond Trustee, securing $107,500,000 of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2009-A (FirstEnergy Nuclear Generation Corp. Project) issued for the benefit of the Company (the "***Revenue Bonds***") (such Trust Indenture, as amended from time to time, hereinafter the ***Revenue Bond Indenture***"), or registered assigns, on June 1, 2033, the principal sum of [_____] Dollars, and to pay interest on the unpaid principal amount from the Initial Interest Accrual Date (as hereinafter defined) at the Revenue Bond Interest Rate (as hereinafter defined) per annum payable semi-annually on June 1 and December 1 in each year commencing on the June 1 or December 1 immediately succeeding the Initial Interest Accrual Date (each such date herein referred to as an "***Interest Payment Date***") on and until maturity, or, in the case of any Bonds of this series duly called for redemption, on and until the redemption date, or in the case of any default by the Company in the payment of the principal due on any Bonds of this series, until the Company's obligation with respect to the payment of such principal shall be discharged as provided in the Indenture (as hereinafter defined). The interest on each Bond of this series so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on the date of such payment. The principal of, and the interest on, this Bond shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

This Bond is one of an issue of Bonds of the Company known as its First Mortgage Bonds, issued and to be issued in one or more series under and secured by an Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009, duly executed by the Company to The Bank of New York Mellon Trust Company, N.A., a national banking association organized and existing under the laws of the United States of America, as Trustee (the "***Trustee***"), and indentures supplemental thereto, heretofore or hereafter executed, including the First Supplemental Indenture dated as of June 15, 2009 (as amended, supplemented, modified or restated, the "***Supplemental Indenture***"), to which Open-End Mortgage, General Mortgage Indenture and Deed of Trust and all indentures supplemental thereto (collectively referred to as the "***Indenture***") reference is hereby made for a description of the property mortgaged and pledged, the nature and extent of the security, the terms and conditions upon which such Bonds are, and are to be, issued and secured, and the rights of the owners of such Bonds and the Trustee in respect of such security. As provided in the Indenture, such Bonds may be in various principal sums, are issuable in series, may mature at different times, may bear interest at different rates and may otherwise vary as therein provided; and this Bond is one Bond of a series entitled "First Mortgage Bonds, Guarantee Series A of 2009 due 2033," created by the Supplemental Indenture, as provided for in the Indenture, and authorized for issuance in an aggregate principal amount of up to $107,500,000.

If and when the principal of any Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the Bonds of this series then outstanding; provided, however, that such payment of the Bonds of this series is deemed to be made only when and to the extent that notice of such payment of such Revenue Bonds is given by the Company to the Trustee.

The Bonds of this series shall be redeemed by the Company in whole at any time prior to maturity at a redemption price of 100% of the principal amount thereof plus accrued and unpaid interest to the date of redemption following receipt by the Trustee of written demand for redemption (a "***Redemption Demand***") from an authorized representative of the Revenue Bond Trustee under the Revenue Bond Indenture stating that the principal amount of all the Revenue Bonds then outstanding under the Revenue Bond Indenture has been declared due and payable pursuant to the provisions of Section 11.02 of the Revenue Bond Indenture, specifying the date of the accelerated maturity of such Revenue Bonds and the date or dates from which interest on the Revenue Bonds has then accrued and is unpaid (specifying the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rates apply), stating such declaration of maturity has not been annulled and demanding payment of the principal amount of the Bonds of this series plus accrued interest thereon to the date fixed for such redemption. The date fixed for such redemption shall be set forth in the aforesaid Redemption Demand and shall not be earlier than the date specified in such Redemption Demand as the date of accelerated maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and not later than forty-five days after the Trustee's receipt of such Redemption Demand unless such forty-fifth day is earlier than such date of accelerated maturity. The Revenue Bond Trustee as the sole holder of the Bonds of this series, and any successor thereto, hereby irrevocably waives any requirement of notice of such redemption under Section 5.04 of the Indenture. Upon receipt of the aforesaid Redemption Demand, the earliest date from which unpaid interest on the Revenue Bonds has then accrued (as specified by the Revenue Bond Trustee in the Redemption Demand) shall become the initial interest accrual date (the "***Initial Interest Accrual Date***") with respect to the Bonds of this series; provided, however, on any

demand for payment of the principal amount thereof at maturity as a result of the principal of the Revenue Bonds becoming due and payable on the maturity date of the Bonds of this series, the earliest date from which unpaid interest on the Revenue Bonds has then accrued shall become the Initial Interest Accrual Date with respect to the Bonds of this series, such date, together with each other different date from which unpaid interest on the Revenue Bonds has then accrued, to be as stated in a written notice from the Revenue Bond Trustee to the Trustee, which notice shall also specify the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rate or rates apply. Such redemption shall become null and void for all purposes under the Indenture (including the fixing of the Initial Interest Accrual Date with respect to the Bonds of this series) upon receipt by the Trustee of written notice from the Revenue Bond Trustee of the annulment of the acceleration of the maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and of the rescission of the aforesaid Redemption Demand prior to the redemption date specified in the Redemption Demand, and thereupon no redemption of the Bonds of this series and no payment in respect thereof as specified in the Redemption Demand, shall be effected or required. But no such rescission shall extend to any subsequent Redemption Demand from the Revenue Bond Trustee or impair any right consequent on any such subsequent Redemption Demand.

The "***Revenue Bond Interest Rate***" shall be the same rate of interest per annum as is borne by the Revenue Bonds; provided, however, that if there are different rates of interest borne by the Revenue Bonds, or if interest is required to be paid on the Revenue Bonds more frequently than on each June 1 or December 1, the Revenue Bond Interest Rate shall be the rate that results in the total amount of interest payable on an Interest Payment Date, a redemption date or at maturity, as the case may be, or at any other time interest on this Bond is due and payable, to be equal to the total amount of unpaid interest that has accrued on all then outstanding Revenue Bonds.

The principal of this Bond may be declared or may become due before the maturity hereof, on the conditions, in the manner and at the times set forth in the Indenture, upon the happening of an Event of Default as therein defined.

From and after the Release Date (as defined in the Revenue Bond Indenture), the Bonds of this series shall be deemed fully paid, satisfied and discharged and the obligation of the Company thereunder shall be terminated. On the Release Date or promptly following, the Bonds of this series shall be surrendered to and cancelled by the Trustee.

No recourse shall be had for the payment of the principal of or premium, or interest if any, on this Bond, or any part hereof, or for any claim based hereon or otherwise in respect hereof, or of the indebtedness represented hereby, or upon any obligation, covenant or agreement under the Indenture, against any incorporator, stockholder, officer or director, as such, past, present or future of the Company or of any predecessor or successor corporation (either directly or through the Company or a predecessor or successor corporation), whether by virtue of any Constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability of incorporators, stockholders, officers and directors being released by the registered owner hereof by the acceptance of this Bond and being likewise waived and released by the terms of the Indenture.

This Bond is nontransferable except to (i) effect transfer to any successor to the Revenue Bond Trustee under the Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. But this Bond is exchangeable by the registered holder hereof, in person or by attorney duly authorized, at the Corporate Trust Office of the Trustee, any such permitted transfer or exchange to be made in the manner and upon the conditions prescribed in the Indenture, upon the surrender and cancellation of this Bond and the payment of any applicable taxes and fees required by law, and upon any such transfer or exchange a new registered Bond or Bonds of the same series and tenor, will be issued to the authorized transferee, or the registered holder, as the case may be. The Company and the Trustee may deem and treat the person in whose name this Bond is registered as the absolute owner for the purpose of receiving payment of or on account of the principal and interest due hereon and for all other purposes.

This Bond shall not be valid until authenticated by the manual signature of the Trustee, or a successor Trustee or Authenticating Agent appointed pursuant to the Indenture.

IN WITNESS WHEREOF, the Company has caused this Bond to be executed in its name by the manual or facsimile signature of an Authorized Executive Officer and attested by the manual or facsimile signature of another Authorized Executive Officer.

Dated: _____

FIRSTENERGY NUCLEAR GENERATION
CORP.

By: _____

Title:

Attest:

_____

Title:

[FORM OF TRUSTEE'S AUTHENTICATION CERTIFICATE]

TRUSTEE'S AUTHENTICATION CERTIFICATE

This is one of the Bonds of the series designated therein referred to in the within-mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A., *as Trustee*

By:_____

Authorized Signatory

Exhibit A-5

EXHIBIT 4.17

SECOND SUPPLEMENTAL INDENTURE

FIRSTENERGY NUCLEAR GENERATION CORP.

TO

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,
as Trustee

Dated as of June 30, 2009

Providing among other things for

First Mortgage Bonds, Guarantee Series C of 2009 due 2033
First Mortgage Bonds, Guarantee Series D of 2009 due 2033
First Mortgage Bonds, Guarantee Series E of 2009 due 2033
First Mortgage Bonds, Collateral Series H of 2009 due 2011
First Mortgage Bonds, Collateral Series I of 2009 due 2011
First Mortgage Bonds, Collateral Series J of 2009 due 2010

Supplemental to Open-End Mortgage, General Mortgage
Indenture and Deed of Trust, Dated as of June 1, 2009

THIS SECOND SUPPLEMENTAL INDENTURE (this "***Supplemental Indenture***"), dated as of June 30, 2009, between FIRSTENERGY NUCLEAR GENERATION CORP., a corporation organized and existing under the laws of the State of Ohio (hereinafter called the "***Company***"), and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association organized and existing under the laws of the United States of America, as Trustee (hereinafter called the "***Trustee***") under the Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009 (hereinafter called the "***Original Indenture***," and as hereby supplemented, the "***Indenture***") with the Company.

W I T N E S S E T H:

WHEREAS, the Company has heretofore duly executed and delivered to the Trustee the Original Indenture to secure Bonds of the Company, issuable in series, from time to time, in the manner and subject to the conditions set forth, and without limit as to principal amount except as provided in the Original Indenture which Original Indenture has been filed for record in the filing offices set forth on Schedule 1 attached hereto and incorporated herein by reference; and

WHEREAS, the Company has heretofore executed and delivered to the Trustee, a First Supplemental Indenture dated as of June 15, 2009 (the ***First Supplemental Indenture***"), and the Original Indenture, as supplemented by the aforementioned First Supplemental Indenture and this Supplemental Indenture and any other indentures supplemental to the Original Indenture are herein collectively called the "***Indenture***"; and

WHEREAS, the Company, by appropriate corporate action in conformity with the terms of the Indenture, has duly determined to create six new series of Bonds under the Indenture, consisting of (i) $20,450,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series C of 2009 due 2033" (hereinafter referred to as the "***bonds of Guarantee Series C***"), (ii) $9,100,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series D of 2009 due 2033" (hereinafter referred to as the "***bonds of Guarantee Series D***"), (iii) $62,500,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series E of 2009 due 2033" (hereinafter referred to as the "***bonds of Guarantee Series E***"), (iv) $26,257,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series H of 2009 due 2011" (hereinafter referred to as the "***bonds of Collateral Series H***"), (v) $55,139,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series I of 2009 due 2011" (hereinafter referred to as the "***bonds of Collateral Series I***") and (vi) $99,876,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Collateral Series J of 2009 due 2010" (hereinafter referred to as the "***bonds of Collateral Series J***", and together with the bonds of Guarantee Series C, the bonds of Guarantee Series D, the bonds of Guarantee Series E, the bonds of Collateral Series H, the bonds of Collateral Series I, the "***bonds of June 2009 Second Series***"), which shall bear interest at the respective rates per annum set forth in, shall be subject to certain redemption rights and obligations set forth in, and will otherwise be in the respective forms and have the terms and provisions provided for in this Supplemental Indenture; and

WHEREAS, the bonds of Guarantee Series C and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit A

hereto; the bonds of Guarantee Series D and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit B hereto; the bonds of Guarantee Series E and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit C hereto; the bonds of Collateral Series H and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit D hereto; the bonds of Collateral Series I and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit E hereto; and the bonds of Collateral Series J and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit F hereto; and

WHEREAS, the Company deems it advisable to enter into this Supplemental Indenture for the purposes of establishing the form, terms and provisions of the bonds of Guarantee Series C, the bonds of Guarantee Series D, the bonds of Guarantee Series E, the bonds of Collateral Series H, the bonds of Collateral Series I, and the bonds of Collateral Series J, as provided and contemplated by Sections 2.01(a) and 3.01(b) of the Indenture, and the Company has requested and hereby requests the Trustee to join in the execution of this Supplemental Indenture; and

WHEREAS, it is provided in the Indenture, among other things, that the Company shall execute and file with the Trustee and the Trustee, at the request of the Company, when required by the Indenture, shall join in the execution of indentures supplemental thereto, and which thereafter shall form a part thereof, for the purpose, among others, of providing for the creation of any series of Bonds and specifying the form and provisions of the Bonds of such series; and

WHEREAS, all acts and things have been done and performed which are necessary to make this Supplemental Indenture, when duly executed and delivered, a valid, binding and legal instrument in accordance with its terms and for the purposes herein expressed; and the execution and delivery of this Supplemental Indenture have been in all respects duly authorized.

NOW THEREFORE, in consideration of the premises and in further consideration of the sum of One Dollar in lawful money of the United States of America paid to the Company by the Trustee at or before the execution and delivery of this Supplemental Indenture, the receipt whereof is hereby acknowledged, and of other good and valuable consideration, it is agreed by and between the Company and the Trustee as follows:

ARTICLE I

DEFINITIONS

SECTION 1.01 *Terms Incorporated by Reference.*

Except for the terms defined in this Supplemental Indenture, all capitalized terms used in this Supplemental Indenture have the respective meanings set forth in the Original Indenture.

SECTION 1.02 *Additional Definitions.*

"***Bank"*** shall mean, with respect to each of the Reimbursement Agreements, The Bank of Nova Scotia and includes its successors and permitted assigns.

"***BCIDA***" means the Beaver County Industrial Development Authority.

"***BCIDA 2008-A Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of June 6, 2008 (as amended, restated, supplemented or otherwise modified from time to time), between the Company and the Bank pursuant to which a letter of credit was issued by the Bank in favor of the BCIDA 2008-A Revenue Bond Trustee.

"***BCIDA 2008-A Revenue Bond Indenture***" means the Trust Indenture dated as of June 1, 2008, between the BCIDA and the BCIDA 2008-A Revenue Bond Trustee, securing the BCIDA 2008-A Revenue Bonds issued for the benefit of the Company.

"***BCIDA 2008-A Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A. (formerly known as The Bank of New York Trust Company, N.A.), as trustee under the BCIDA 2008-A Revenue Bond Indenture.

"***BCIDA 2008-A Revenue Bonds***" means the $98,900,000 aggregate principal amount of Beaver County Pollution Control Revenue Refunding Bonds, Series 2008-A (FirstEnergy Nuclear Generation Corp. Project) issued by the BCIDA.

"***Bonds of Collateral Series***" means collectively, the bonds of Collateral Series H, the bonds of Collateral Series I, and the bonds of Collateral Series J.

"***Bonds of Guarantee Series***" means collectively, the bonds of Guarantee Series C, the bonds of Guarantee Series D and the bonds of Guarantee Series E.

"***Initial Interest Accrual Date***" shall have the meaning assigned to such term in the respective form of Bonds of Guarantee Series.

"***Interest Payment Date***" shall have the meaning assigned to such term in the respective form of Bonds of Collateral Series or in the respective form of Bonds of Guarantee Series.

"***OAQDA***" means the Ohio Air Quality Development Authority.

"***OAQDA 2008-A Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of June 6, 2008 (as amended, restated, supplemented or otherwise modified from time to time), between the Company and the Bank pursuant to which a letter of credit was issued by the Bank in favor of the OAQDA 2008-A Revenue Bond Trustee.

"***OAQDA 2008-A Revenue Bond Indenture***" means the Trust Indenture dated as of June 1, 2008, between the OAQDA and the OAQDA 2008-A Revenue Bond Trustee, securing the OAQDA 2008-A Revenue Bonds issued for the benefit of the Company.

"***OAQDA 2008-A Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A. (formerly known as The Bank of New York Trust Company, N.A.), as trustee under the OAQDA 2008-A Revenue Bond Indenture.

"***OAQDA 2008-A Revenue Bonds***" means the $26,000,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2008-A (FirstEnergy Nuclear Generation Corp. Project) issued by the OAQDA.

"***OAQDA 2008-B Pledge Agreement***" means the Pledge Agreement, dated June 30, 2009, between the Company and the OAQDA 2008-B Revenue Bond Trustee pursuant to which the Company pledges and delivers the bonds of Guarantee Series D.

"***OAQDA 2008-B Revenue Bond Indenture***" means the Trust Indenture dated as of September 1, 2008, between the OAQDA and the OAQDA 2008-B Revenue Bond Trustee, securing the OAQDA 2008-B Revenue Bonds issued for the benefit of the Company.

"***OAQDA 2008-B Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A., as trustee under that certain OAQDA 2008-B Revenue Bond Indenture.

"***OAQDA 2008-B Revenue Bonds***" means the $9,100,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2008-B (FirstEnergy Nuclear Generation Corp. Project) issued by the OAQDA.

"***OAQDA 2009-A Pledge Agreement***" means the Pledge Agreement, dated June 30, 2009, between the Company and the OAQDA 2009-A Revenue Bond Trustee pursuant to which the Company pledges and delivers the bonds of Guarantee Series E.

"***OAQDA 2009-A Revenue Bond Indenture***" means the Trust Indenture dated as of April 1, 2009, between the OAQDA and the OAQDA 2009-A Revenue Bond Trustee, securing the OAQDA 2009-A Revenue Bonds issued for the benefit of the Company.

"***OAQDA 2009-A Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A., as trustee under that certain OAQDA 2009-A Revenue Bond Indenture.

"***OAQDA 2009-A Revenue Bonds***" means the $62,500,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2009-A (FirstEnergy Nuclear Generation Corp. Project) issued by the OAQDA.

"***OWDA"*** means the Ohio Water Development Authority.

"***OWDA 2008-A Reimbursement Agreement***" means that certain Letter of Credit and Reimbursement Agreement dated as of June 6, 2008 (as amended, restated, supplemented or otherwise modified from time to time), between the Company and the Bank, pursuant to which a letter of credit was issued by the Bank in favor of the OWDA 2008-A Revenue Bond Trustee.

"***OWDA 2008-A Revenue Bond Indenture***" means the Trust Indenture dated as of June 1, 2008, between the OWDA and the OWDA 2008-A Revenue Bond Trustee, securing the OWDA 2008-A Revenue Bonds issued for the benefit of the Company.

"***OWDA 2008-A Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A. (formerly known as The Bank of New York Trust Company, N.A.), as trustee under the OWDA 2008-A Revenue Bond Indenture.

"***OWDA 2008-A Revenue Bonds***" means the $54,600,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2008-A (FirstEnergy Nuclear Generation Corp. Project) issued by the OWDA.

"***OWDA 2008-B Pledge Agreement***" means the Pledge Agreement, dated June 30, 2009, between the Company and the OWDA 2008-B Revenue Bond Trustee pursuant to which the Company pledges and delivers the bonds of Guarantee Series C.

"***OWDA 2008-B Revenue Bond Indenture***" means the Trust Indenture, dated as of September 1, 2008, between the OWDA and the OWDA 2008-B Revenue Bond Trustee, securing the OWDA 2008-B Revenue Bonds issued for the benefit of the Company.

"***OWDA 2008-B Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A., as trustee under that certain OWDA 2008-B Revenue Bond Indenture.

"***OWDA 2008-B Revenue Bonds***" means the $20,450,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2008-B (FirstEnergy Nuclear Generation Corp. Project) issued by the OWDA.

"***Reimbursement Agreements***" means, collectively, the BCIDA 2008-A Reimbursement Agreement, the OAQDA 2008-A Reimbursement Agreement and the OWDA 2008-A Reimbursement Agreement.

"***Revenue Bond Indentures***" means, collectively, the OWDA 2008-B Revenue Bond Indenture, the OAQDA 2008-B Revenue Bond Indenture and the OAQDA 2009-A Revenue Bond Indenture.

"***Revenue Bond Trustees***" means, collectively, the OWDA 2008-B Revenue Bond Trustee, the OAQDA 2008-B Revenue Bond Trustee and the OAQDA 2009-A Revenue Bond Trustee.

The terms "***Available Amount***," "***Bank Assignee,***" "***Cancellation Date***," "***Letter of Credit***," "***Letter of Credit Fees***," "***Obligations***" and "***Reimbursement Obligation***," shall have the respective meanings assigned to those terms in the respective Reimbursement Agreements.

SECTION 1.03. *Rules of Construction.* All references to any agreement refer to such agreement as modified, varied, supplemented, amended or restated from time to time by the parties thereto (including any permitted successors or assigns) in accordance with its terms.

ARTICLE II

BONDS

SECTION 2.01. *Designation and Issuance of Bonds.* (a) The bonds of Guarantee Series C shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series C of 2009 due 2033" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Twenty Million Four Hundred Fifty Thousand Dollars ($20,450,000). The bonds of Guarantee Series C are to be issued and secured by the Lien of the Indenture.

(b) The bonds of Guarantee Series D shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series D of 2009 due 2033" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Nine Million One Hundred Thousand Dollars ($9,100,000). The bonds of Guarantee Series D are to be issued and secured by the Lien of the Indenture.

(c) The bonds of Guarantee Series E shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series E of 2009 due 2033" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Sixty-Two Million Five Hundred Thousand Dollars ($62,500,000). The bonds of Guarantee Series E are to be issued and secured by the Lien of the Indenture.

(d) The bonds of Collateral Series H shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series H of 2009 due 2011" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Twenty-Six Million Two Hundred Fifty-Seven Thousand Dollars ($26,257,000). The bonds of Collateral Series H are to be issued and secured by the Lien of the Indenture.

(e) The bonds of Collateral Series I shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series I of 2009 due 2011" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Fifty-Five Million One Hundred Thirty-Nine Thousand Dollars ($55,139,000). The bonds of Collateral Series I are to be issued and secured by the Lien of the Indenture.

(f) The bonds of Collateral Series J shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Collateral Series J of 2009 due 2010" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Ninety-Nine Million Eight Hundred Seventy-Six Thousand Dollars ($99,876,000). The bonds of Collateral Series J are to be issued and secured by the Lien of the Indenture.

SECTION 2.02. *Form, Date, Maturity Date, Interest Rate and Interest Payment Dates of Bonds.* (a) The definitive bonds of June 2009 Second Series shall be in engraved, lithographed, printed or typewritten form and shall be registered bonds without coupons, and such bonds and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the

respective forms included in Exhibits A, B, C, D, E and F hereto. The bonds of June 2009 Second Series shall be dated as provided in Section 3.03 of the Indenture.

(b) The bonds of Guarantee Series C shall bear interest from the Initial Interest Accrual Date as provided in the form of the bond of Guarantee Series C, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series C shall be as set forth in the form of the bond of Guarantee Series C.

(c) The interest on the bonds of Guarantee Series C so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(d) The bonds of Guarantee Series D shall bear interest from the Initial Interest Accrual Date as provided in the form of the bonds of Guarantee Series D, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series D shall be as set forth in the form of the bond of Guarantee Series D.

(e) The interest on the bonds of Guarantee Series D so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(f) The bonds of Guarantee Series E shall bear interest from the Initial Interest Accrual Date as provided in the form of the bonds of Guarantee Series E, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series E shall be as set forth in the form of the bond of Guarantee Series E.

(g) The interest on the bonds of Guarantee Series E so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(h) The bonds of Collateral Series H shall bear interest as provided in the form of the bond of Collateral Series H, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Collateral Series H shall be as set forth in the form of the bond of Collateral Series H.

(i) The interest on the bonds of Collateral Series H so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(j) The bonds of Collateral Series I shall bear interest as provided in the form of the bond of Collateral Series I, and such provisions are incorporated at this place as though set forth

in their entirety. The interest rate and maturity date of the bonds of Collateral Series I shall be as set forth in the form of the bond of Collateral Series I.

(k) The interest on the bonds of Collateral Series I so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(l) The bonds of Collateral Series J shall bear interest as provided in the form of the bond of Collateral Series J, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Collateral Series J shall be as set forth in the form of the bond of Collateral Series J.

(m) The interest on the bonds of Collateral Series J so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, and to the provisions of Section 2.04 of this Supplemental Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

SECTION 2.03. *Bonds Issued as Collateral Security.* The bonds of Guarantee Series C shall be issued, delivered, and pledged to, and registered in the name of, the OWDA 2008-B Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal of and interest on the OWDA 2008-B Revenue Bonds until the Release Date (as defined in the OWDA 2008-B Pledge Agreement). The bonds of Guarantee Series D shall be issued, delivered, and pledged to, and registered in the name of, the OAQDA 2008-B Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal and interest on the OAQDA 2008-B Revenue Bonds until the Release Date (as defined in the OAQDA 2008-B Pledge Agreement). The bonds of Guarantee Series E shall be issued, delivered, and pledged to, and registered in the name of, the OAQDA 2009-A Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal of and interest on the OAQDA 2009-A Revenue Bonds until the Release Date (as defined in the OAQDA 2009-A Pledge Agreement). The bonds of Collateral Series H shall be issued, delivered, and pledged to, and registered in the name of, the Bank under the OAQDA 2008-A Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Reimbursement Obligations arising thereunder. The bonds of Collateral Series I shall be issued, delivered, and pledged to, and registered in the name of, the Bank under the OWDA 2008-A Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Reimbursement Obligations arising thereunder, interest thereon and Letter of Credit Fees. The bonds of Collateral Series J shall be issued, delivered, and pledged to, and registered in the name of, the Bank under the BCIDA 2008-A Reimbursement Agreement in order to secure and provide for, and as collateral security for, the due and punctual payment of the Reimbursement Obligations arising thereunder.

SECTION 2.04. *Credit for Payments of the Revenue Bonds and Payments under the Reimbursement Agreements.* (a) If and when the principal of any OWDA 2008-B Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the bonds of

Guarantee Series C then outstanding; provided, however, that such payment of the bonds of Guarantee Series C is deemed to be made only when and to the extent that notice of such payment of such OWDA 2008-B Revenue Bonds is given by the Company to the Trustee.

(b) If and when the principal of any OAQDA 2008-B Revenue Bond is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series D then outstanding; provided, however, that such payment of the bonds of Guarantee Series D is deemed to be made only when and to the extent that notice of such payment of such OAQDA 2008-B Revenue Bonds is given by the Company to the Trustee.

(c) If and when the principal of any OAQDA 2009-A Revenue Bond is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series E then outstanding; provided, however, that such payment of the bonds of Guarantee Series E is deemed to be made only when and to the extent that notice of such payment of such OAQDA 2009-A Revenue Bonds is given by the Company to the Trustee.

(d) Any payment made in respect of the Company's obligations under the OAQDA 2008-A Reimbursement Agreement with respect to the payment of (i) principal of or (ii) interest on the Reimbursement Obligations or Letter of Credit Fees shall be deemed a payment in respect of (x) principal of or (y) interest on, respectively, the bonds of Collateral Series H, but any such payment of principal shall not reduce the principal amount of the bonds of Collateral Series H unless, and then only to the extent, the stated amount available to be drawn under the Letter of Credit is irrevocably reduced concurrently with such payment. The obligation of the Company to make payments with respect to the principal of and interest on the bonds of Collateral Series H shall be fully satisfied and discharged to the extent that, at any time that any such payment shall be due, the Company shall have paid fully all the Obligations and the Cancellation Date shall have occurred.

(e) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series H, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Bank stating that payment of Reimbursement Obligations or interest thereon or Letter of Credit Fees due under the OAQDA 2008-A Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

(f) Any payment made in respect of the Company's obligations under the OWDA 2008-A Reimbursement Agreement with respect to the payment of (i) principal of or (ii) interest on the Reimbursement Obligations or Letter of Credit Fees shall be deemed a payment in respect of (x) principal of or (y) interest on, respectively, the bonds of Collateral Series I, but any such payment of principal shall not reduce the principal amount of the bonds of Collateral Series I unless, and then only to the extent, the stated amount available to be drawn under the Letter of Credit is irrevocably reduced concurrently with such payment. The obligation of the Company to make payments with respect to the principal of and interest on the bonds of Collateral Series I shall be fully satisfied and discharged to the extent that, at any time that any such payment shall

be due, the Company shall have paid fully all the Obligations and the Cancellation Date shall have occurred.

(g) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series I, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Bank stating that payment of Reimbursement Obligations or interest thereon or Letter of Credit Fees due under the OWDA 2008-A Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

(h) Any payment made in respect of the Company's obligations under the BCIDA 2008-A Reimbursement Agreement with respect to the payment of (i) principal of or (ii) interest on the Reimbursement Obligations or Letter of Credit Fees shall be deemed a payment in respect of (x) principal of or (y) interest on, respectively, the bonds of Collateral Series J, but any such payment of principal shall not reduce the principal amount of the bonds of Collateral Series J unless, and then only to the extent, the stated amount available to be drawn under the Letter of Credit is irrevocably reduced concurrently with such payment. The obligation of the Company to make payments with respect to the principal of and interest on the bonds of Collateral Series J shall be fully satisfied and discharged to the extent that, at any time that any such payment shall be due, the Company shall have paid fully all the Obligations and the Cancellation Date shall have occurred.

(i) The Trustee may conclusively presume that the obligation of the Company to pay the principal of, and interest on, the bonds of Collateral Series J, as the same shall become due and payable, has been credited in accordance with this Section 2.04 unless and until it shall have received a written notice (including a telecopy or other form of written communication) from an authorized representative of the Bank stating that payment of Reimbursement Obligations or interest thereon or Letter of Credit Fees due under the BCIDA 2008-A Reimbursement Agreement has become due and payable and has not been fully paid and specifying the amount of funds required to make such payment.

SECTION 2.05. *Execution of Bonds.* The bonds of June 2009 Second Series shall be executed on behalf of the Company in accordance with Section 3.03 of the Indenture.

SECTION 2.06. *Medium and Places of Payment of Principal of, and Interest on, Bonds; Transferability and Exchangeability.* The principal of, and the interest on, the bonds of June 2009 Second Series shall be payable in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, and such principal and interest shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio. The Corporate Trust Office of the Trustee shall serve as the initial location of such office. Subject to the limitations provided herein, the bonds of June 2009 Second Series shall be transferable and exchangeable, in the manner provided in Sections 3.05 and 3.06 of the Indenture, at said office or agency. The bonds of Guarantee Series shall not be transferable except (i) to a successor to the respective Revenue Bond Trustee under the

respective Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder thereof consequent upon an “Event of Default” as defined in the Indenture, or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. The bonds of Collateral Series shall not be transferable except (i) to a successor to the respective Bank or Bank Assignee under the respective Reimbursement Agreement, (ii) in connection with the exercise of the rights and remedies of the holder thereof consequent upon an “Event of Default” as defined in the Indenture, or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. No charge shall be made by the Company to the registered owner of any bond of June 2009 Second Series for the registration of transfer of such Bond or for the exchange thereof for Bonds of the same series of other authorized denominations, except, in the case of any transfer, a charge sufficient to reimburse the Company for any stamp or other tax or governmental charge required to be paid by the Company or the Trustee.

SECTION 2.07. *Denominations and Numbering of Bonds.* The bonds of June 2009 Second Series shall be issued in the denomination of $1,000 and any integral multiple thereof. Each series of bonds of June 2009 Second Series shall each be numbered R-1 and consecutively upwards.

SECTION 2.08. *Temporary Bonds.* Until definitive bonds of June 2009 Second Series are ready for delivery, there may be authenticated and issued in lieu of any thereof and subject to all of the provisions, limitations, and conditions set forth in Section 3.04 of the Indenture, temporary registered bonds of June 2009 Second Series without coupons.

SECTION 2.09. *Mandatory Redemption.* The bonds of June 2009 Second Series shall be subject to mandatory redemption as provided in the respective forms thereof.

SECTION 2.10. *Confirmation of Lien.* The Company, for the equal and proportionate benefit and security of the holders of all Bonds at any time issued under the Indenture, hereby confirms the lien and security interest of the Indenture upon, and hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms to the Trustee, and grants to the Trustee a security interest in, the Mortgaged Property (as defined in the Indenture), but excluding from such lien, security interest and grant all property which, by virtue of any of the provisions of the Indenture, is excluded from the lien, security interests and granting clauses thereof.

ARTICLE III

MISCELLANEOUS

SECTION 3.01 Except as herein otherwise expressly provided, no duties, responsibilities or liabilities are assumed, or shall be construed to be assumed, by the Trustee by reason of this Supplemental Indenture; the Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals herein or in the bonds of June 2009 Second Series (except the

Trustee's authentication certificate), all of which are made by the Company solely; and this Supplemental Indenture is executed and accepted by the Trustee, subject to all the terms and conditions set forth in the Indenture, as fully to all intents and purposes as if the terms and conditions of the Indenture were herein set forth at length.

SECTION 3.02 As supplemented by this Supplemental Indenture, the Indenture is in all respects ratified and confirmed, and the Indenture as herein defined, and this Supplemental Indenture, shall be read, taken and construed as one and the same instrument.

SECTION 3.03 Nothing in this Supplemental Indenture contained shall or shall be construed to confer upon any person other than a Holder of Bonds issued under the Indenture, the Company and the Trustee any right or interest to avail himself of any benefit under any provision of the Indenture or of this Supplemental Indenture.

SECTION 3.04 This Supplemental Indenture may be simultaneously executed in several counterparts and all such counterparts executed and delivered, each as an original, shall constitute but one and the same instrument.

[Remainder of this page intentionally left blank.]

IN WITNESS WHEREOF, FIRSTENERGY NUCLEAR GENERATION CORP., party of the first part hereto, and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., party of the second part hereto, have caused these presents to be executed in their respective names as of the day and year first above written.

FIRSTENERGY NUCLEAR GENERATION CORP.

By: /s/ James F. Pearson

James F. Pearson

Vice President and Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By: /s/ Biagio S. Impala

Biagio S. Impala

Vice President

STATE OF OHIO)
)ss.:
COUNTY OF)

On the 30th day of June, 2009, personally appeared before me, a Notary Public in and for the said County and State aforesaid, James F. Pearson, to me known and known to me to be the Vice President and Treasurer of FIRSTENERGY NUCLEAR GENERATION CORP., the corporation which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President and Treasurer of FIRSTENERGY NUCLEAR GENERATION CORP., the same is his free act and deed and the free and corporate act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 30th day of June, 2009.

/s/ Michele A. Buchtel
_____, Notary Public
Commission Expires Aug. 28, 2011

Michele A. Buchtel
Resident Summit County
Notary Public, State of Ohio
My Commission Expires: 08/28/11

STATE OF OHIO)
)ss.:
COUNTY OF CUYAHOGA)

On the 30th day of June, 2009, personally appeared before me, a Notary Public in and for the said County and State aforesaid, Biagio S. Impala, to me known and known to me to be a Vice President of THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., the national banking association which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President for and on behalf of said national banking association and that the same is his free act and deed and the free and corporate act and deed of said national banking association.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 30th day of June, 2009.

/s/ Ernie K. Demanelis
_____, Notary Public
Commission Expires _____

ERNIE K. DEMANELIS, Attorney At Law
Notary Public - State of Ohio
My commission has no expiration date.
Section 147.03 R. C.

The Bank of New York Mellon Trust Company, N.A. hereby certifies that its precise name and address as Trustee is:

The Bank of New York Mellon Trust Company, N.A.
Global Corporate Trust
1660 West 2nd Street, Suite 830
Cleveland, Ohio 44113

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A.

By: /s/ Biagio S. Impala

Biagio S. Impala
Vice President

THIS INSTRUMENT PREPARED BY:

Lucas F. Torres
Akin Gump Strauss Hauer & Feld LLP
One Bryant Park
New York, NY 10036

Exhibit C

[FORM OF FIRST MORTGAGE BOND OF GUARANTEE SERIES E]

This Bond is not transferable except (i) to a successor trustee under the Trust Indenture, dated as of April 1, 2009, between the Ohio Air Quality Development Authority and The Bank of New York Mellon Trust Company, N.A., as trustee, referred to herein, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture referred to herein or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company.

FIRSTENERGY NUCLEAR GENERATION CORP.

First Mortgage Bond, Guarantee Series E of 2009 due 2033

Due June 1, 2033

$[_____] No. R-__

FIRSTENERGY NUCLEAR GENERATION CORP., a corporation of the State of Ohio (herein, together with its successors and assigns, the "***Company***"), for value received promises to pay to The Bank of New York Mellon Trust Company, N.A., as trustee (the "***Revenue Bond Trustee***") under that certain Trust Indenture, dated as of April 1, 2009, between the Ohio Air Quality Development Authority and the Revenue Bond Trustee, securing $62,500,000 of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2009-A (FirstEnergy Nuclear Generation Corp. Project) issued for the benefit of the Company (the "***Revenue Bonds***") (such Trust Indenture, as amended from time to time, hereinafter the "***Revenue Bond Indenture***"), or registered assigns, on June 1, 2033, the principal sum of [_____] Dollars, and to pay interest on the unpaid principal amount from the Initial Interest Accrual Date (as hereinafter defined) at the Revenue Bond Interest Rate (as hereinafter defined) per annum payable semi-annually on June 1 and December 1 in each year commencing on the June 1 or December 1 immediately succeeding the Initial Interest Accrual Date (each such date herein referred to as an "***Interest Payment Date***") on and until maturity, or, in the case of any Bonds of this series duly called for redemption, on and until the redemption date, or in the case of any default by the Company in the payment of the principal due on any Bonds of this series, until the Company's obligation with respect to the payment of such principal shall be discharged as provided in the Indenture (as hereinafter defined). The interest on each Bond of this series so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on the date of such payment. The principal of, and the interest on, this Bond shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio in any coin or currency of the United

States of America which at the time of payment is legal tender for the payment of public and private debts.

This Bond is one of an issue of Bonds of the Company known as its First Mortgage Bonds, issued and to be issued in one or more series under and secured by an Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009, duly executed by the Company to The Bank of New York Mellon Trust Company, N.A., a national banking association organized and existing under the laws of the United States of America, as Trustee (the "***Trustee***"), and indentures supplemental thereto, heretofore or hereafter executed, including the Second Supplemental Indenture dated as of June 30, 2009 (as amended, supplemented, modified or restated, the "***Supplemental Indenture***"), to which Open-End Mortgage, General Mortgage Indenture and Deed of Trust and all indentures supplemental thereto (collectively referred to as the "***Indenture***") reference is hereby made for a description of the property mortgaged and pledged, the nature and extent of the security, the terms and conditions upon which such Bonds are, and are to be, issued and secured, and the rights of the owners of such Bonds and the Trustee in respect of such security. As provided in the Indenture, such Bonds may be in various principal sums, are issuable in series, may mature at different times, may bear interest at different rates and may otherwise vary as therein provided; and this Bond is one Bond of a series entitled "First Mortgage Bonds, Guarantee Series E of 2009 due 2033," created by the Supplemental Indenture, as provided for in the Indenture, and authorized for issuance in an aggregate principal amount of up to $62,500,000.

If and when the principal of any Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the Bonds of this series then outstanding; provided, however, that such payment of the Bonds of this series is deemed to be made only when and to the extent that notice of such payment of such Revenue Bonds is given by the Company to the Trustee.

The Bonds of this series have been delivered and pledged to the Revenue Bond Trustee pursuant to a Pledge Agreement, dated June 30, 2009, between the Company and the Revenue Bond Trustee (the "***Pledge Agreement***"), as security for the Revenue Bonds until the Release Date (as defined in the Pledge Agreement). The Bonds of this series shall be redeemed by the Company in whole at any time prior to maturity at a redemption price of 100% of the principal amount thereof plus accrued and unpaid interest to the date of redemption following receipt by the Trustee of written demand for redemption (a "***Redemption Demand***") from an authorized representative of the Revenue Bond Trustee under the Revenue Bond Indenture stating that the principal amount of all the Revenue Bonds then outstanding under the Revenue Bond Indenture has been declared due and payable pursuant to the provisions of Section 11.02 of the Revenue Bond Indenture, specifying the date of the accelerated maturity of such Revenue Bonds and the date or dates from which interest on the Revenue Bonds has then accrued and is unpaid (specifying the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rates apply), stating such declaration of maturity has not been annulled and demanding payment of the principal amount of the Bonds of this series plus accrued interest thereon to the date fixed for such redemption. The date fixed for such redemption shall be set forth in the aforesaid Redemption Demand and shall not be earlier than the date specified in such Redemption Demand as the date of accelerated maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and not later than forty-five days after the Trustee's receipt of such Redemption Demand unless such forty-fifth day is earlier than such date of accelerated

maturity. The Revenue Bond Trustee as the sole holder of the Bonds of this series, and any successor thereto, hereby irrevocably waives any requirement of notice of such redemption under Section 5.04 of the Indenture. Upon receipt of the aforesaid Redemption Demand, the earliest date from which unpaid interest on the Revenue Bonds has then accrued (as specified by the Revenue Bond Trustee in the Redemption Demand) shall become the initial interest accrual date (the "***Initial Interest Accrual Date***") with respect to the Bonds of this series; provided, however, on any demand for payment of the principal amount thereof at maturity as a result of the principal of the Revenue Bonds becoming due and payable on the maturity date of the Bonds of this series, the earliest date from which unpaid interest on the Revenue Bonds has then accrued shall become the Initial Interest Accrual Date with respect to the Bonds of this series, such date, together with each other different date from which unpaid interest on the Revenue Bonds has then accrued, to be as stated in a written notice from the Revenue Bond Trustee to the Trustee, which notice shall also specify the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rate or rates apply. Such redemption shall become null and void for all purposes under the Indenture (including the fixing of the Initial Interest Accrual Date with respect to the Bonds of this series) upon receipt by the Trustee of written notice from the Revenue Bond Trustee of the annulment of the acceleration of the maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and of the rescission of the aforesaid Redemption Demand prior to the redemption date specified in the Redemption Demand, and thereupon no redemption of the Bonds of this series and no payment in respect thereof as specified in the Redemption Demand, shall be effected or required. But no such rescission shall extend to any subsequent Redemption Demand from the Revenue Bond Trustee or impair any right consequent on any such subsequent Redemption Demand.

The "***Revenue Bond Interest Rate***" shall be the same rate of interest per annum as is borne by the Revenue Bonds; provided, however, that if there are different rates of interest borne by the Revenue Bonds, or if interest is required to be paid on the Revenue Bonds more frequently than on each June 1 or December 1, the Revenue Bond Interest Rate shall be the rate that results in the total amount of interest payable on an Interest Payment Date, a redemption date or at maturity, as the case may be, or at any other time interest on this Bond is due and payable, to be equal to the total amount of unpaid interest that has accrued on all then outstanding Revenue Bonds.

The principal of this Bond may be declared or may become due before the maturity hereof, on the conditions, in the manner and at the times set forth in the Indenture, upon the happening of an "Event of Default" as therein defined.

From and after the Release Date, the Bonds of this series shall be deemed fully paid, satisfied and discharged and the obligation of the Company thereunder shall be terminated. On the Release Date or promptly following, the Bonds of this series shall be surrendered to and cancelled by the Trustee.

No recourse shall be had for the payment of the principal of or premium, or interest if any, on this Bond, or any part hereof, or for any claim based hereon or otherwise in respect hereof, or of the indebtedness represented hereby, or upon any obligation, covenant or agreement under the Indenture, against any incorporator, stockholder, officer or director, as such, past, present or future of the Company or of any predecessor or successor corporation (either directly

or through the Company or a predecessor or successor corporation), whether by virtue of any constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability of incorporators, stockholders, officers and directors being released by the registered owner hereof by the acceptance of this Bond and being likewise waived and released by the terms of the Indenture.

This Bond is nontransferable except to (i) effect transfer to any successor to the Revenue Bond Trustee under the Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. But this Bond is exchangeable by the registered holder hereof, in person or by attorney duly authorized, at the Corporate Trust Office of the Trustee, any such permitted transfer or exchange to be made in the manner and upon the conditions prescribed in the Indenture, upon the surrender and cancellation of this Bond and the payment of any applicable taxes and fees required by law, and upon any such transfer or exchange a new registered Bond or Bonds of the same series and tenor, will be issued to the authorized transferee, or the registered holder, as the case may be. The Company and the Trustee may deem and treat the person in whose name this Bond is registered as the absolute owner for the purpose of receiving payment of or on account of the principal and interest due hereon and for all other purposes.

This Bond shall not be valid until authenticated by the manual signature of the Trustee, or a successor Trustee or Authenticating Agent appointed pursuant to the Indenture.

IN WITNESS WHEREOF, the Company has caused this Bond to be executed in its name by the manual or facsimile signature of an Authorized Executive Officer and attested by the manual or facsimile signature of another Authorized Executive Officer.

Dated: _____

FIRSTENERGY NUCLEAR GENERATION CORP.

By:_____
Title:

Attest:

_____
Title:

[FORM OF TRUSTEE'S AUTHENTICATION CERTIFICATE]

TRUSTEE'S AUTHENTICATION CERTIFICATE

This is one of the Bonds of the series designated therein referred to in the within-mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., *as Trustee*

By: _____
Authorized Signatory

EXHIBIT 4.18

FIFTH SUPPLEMENTAL INDENTURE

_____

FIRSTENERGY NUCLEAR GENERATION, LLC

TO

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.
as Trustee

_____

Dated as of August 15, 2016

_____

Providing among other things for

First Mortgage Bonds, Guarantee Series F of 2016 due 2035

First Mortgage Bonds, Guarantee Series G of 2016 due 2033

_____

Supplemental to Open-End Mortgage, General Mortgage
Indenture and Deed of Trust, Dated as of June 1, 2009

THIS FIFTH SUPPLEMENTAL INDENTURE (this "***Supplemental Indenture***"), dated as of August 15, 2016 between FIRSTENERGY NUCLEAR GENERATION, LLC (formerly known as FirstEnergy Nuclear Generation Corp.), a limited liability company organized and existing under the laws of the State of Ohio (hereinafter called the "***Company***"), and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A. (formerly known as The Bank of New York Trust Company, N.A.), a national banking association organized and existing under the laws of the United States of America, as Trustee (hereinafter called the "***Trustee***") under the Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009 (hereinafter called the "***Original Indenture***") with the Company.

W I T N E S S E T H:

WHEREAS, the Company has heretofore duly executed and delivered to the Trustee the Original Indenture to secure Bonds of the Company, issuable in series, from time to time, in the manner and subject to the conditions set forth, and without limit as to principal amount except as provided in the Original Indenture which Original Indenture has been filed for record in the filing offices set forth on Schedule 1 attached hereto and incorporated herein by reference; and

WHEREAS, the Company has heretofore executed and delivered to the Trustee, a First Supplemental Indenture supplementing the Original Indenture dated as of June 15, 2009 (the "***First Supplemental Indenture***"), a Second Supplemental Indenture supplementing the Original Indenture dated as of June 30, 2009 (the "***Second Supplemental Indenture***"), a Third Supplemental Indenture supplementing the Original Indenture dated as of December 1, 2009 (the "***Third Supplemental Indenture***"), a Fourth Supplemental Indenture supplementing the Original Indenture dated as of February 14, 2012 (the "***Fourth Supplemental Indenture,***") and the Original Indenture, as supplemented by the aforementioned First Supplemental Indenture, Second Supplemental Indenture, Third Supplemental Indenture, Fourth Supplemental Indenture and this Supplemental Indenture and any other indentures supplemental to the Original Indenture are herein collectively called the "***Indenture***"); and

WHEREAS, the Company, by appropriate corporate action in conformity with the terms of the Indenture, has duly determined to create two new series of Bonds under the Indenture, consisting of (i) $60,000,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series F of 2016 due 2035" (hereinafter referred to as the "***bonds of Guarantee Series F***") and (ii) $54,600,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series G of 2016 due 2033" (hereinafter referred to as the "***bonds of Guarantee Series G***"), which shall bear interest at the respective rate or rates per annum set forth in, shall be subject to certain redemption rights and obligations set forth in, and will otherwise be in the respective forms and have the respective terms and provisions provided for in this Supplemental Indenture; and

WHEREAS, the bonds of Guarantee Series F and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in **Exhibit A** hereto; and the bonds of Guarantee Series G and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in **Exhibit B** hereto and

WHEREAS, the Company deems it advisable to enter into this Supplemental Indenture for the purposes of establishing the form, terms and provisions of the bonds of Guarantee Series F and the bonds of Guarantee Series G, as provided and contemplated by Sections 2.01(a) and 3.01(b) of the Indenture, and the Company has requested and hereby requests the Trustee to join in the execution of this Supplemental Indenture; and

WHEREAS, it is provided in the Indenture, among other things, that the Company shall execute and file with the Trustee and the Trustee, at the request of the Company, when required by the Indenture, shall join in the execution of indentures supplemental thereto, and which thereafter shall form a part thereof, for the purpose, among others, of providing for the creation of any series of Bonds and specifying the form and provisions of the Bonds of such series; and

WHEREAS, all acts and things have been done and performed which are necessary to make this Supplemental Indenture, when duly executed and delivered, a valid, binding and legal instrument in accordance with its terms and for the purposes herein expressed; and the execution and delivery of this Supplemental Indenture have been in all respects duly authorized.

NOW THEREFORE, in consideration of the premises and in further consideration of the sum of One Dollar in lawful money of the United States of America paid to the Company by the Trustee at or before the execution and delivery of this Supplemental Indenture, the receipt whereof is hereby acknowledged, and of other good and valuable consideration, it is agreed by and between the Company and the Trustee as follows:

ARTICLE I

DEFINITIONS

SECTION 1.01. *Terms Incorporated by Reference.*

Except for the terms defined in this Supplemental Indenture, all capitalized terms used in this Supplemental Indenture have the respective meanings set forth in the Original Indenture.

SECTION 1.02. *Additional Definitions.*

"***BCIDA***" means the Beaver County Industrial Development Authority.

"***BCIDA 2006-A Pledge Agreement***" means the Pledge Agreement, dated August 15, 2016, between the Company and the BCIDA 2006-A Revenue Bond Trustee, pursuant to which the Company pledges and delivers the bonds of Guarantee Series F.

"***BCIDA 2006-A Revenue Bond Indenture***" means the Trust Indenture dated as of April 1, 2006, between the BCIDA and the BCIDA 2006-A Revenue Bond Trustee, as amended, securing the BCIDA 2006-A Revenue Bonds issued for the benefit of the Company.

"***BCIDA 2006-A Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A. (formerly known as The Bank of New York Trust Company, N.A.), as trustee under the BCIDA 2006-A Revenue Bond Indenture.

"***BCIDA 2006-A Revenue Bonds***" means the $60,000,000 aggregate principal amount of Beaver County Industrial Development Authority Pollution Control Revenue Refunding Bonds, Series 2006-A (FirstEnergy Nuclear Generation Project) issued by the BCIDA.

"***Bonds of August 2016 Series***" means collectively, the bonds of Guarantee Series F and the bonds of Guarantee Series G.

"***Initial Interest Accrual Date***" shall have the respective meaning assigned to such term in the form of bond of Guarantee Series F and form of bond of Guarantee Series G.

"***Interest Payment Date***" shall have the meaning assigned to such term in the form of bond of Guarantee Series F and form of bond of Guarantee Series G.

"***OWDA***" means the Ohio Water Development Authority.

"***OWDA 2010-B Pledge Agreement***" means the Pledge Agreement, dated August 15, 2016, between the Company and the OWDA 2010-B Revenue Bond Trustee, pursuant to which the Company pledges and delivers the bonds of Guarantee Series G.

"***OWDA 2010-B Revenue Bond Indenture***" means the Trust Indenture dated as of November 15, 2010, between the OWDA and the OWDA 2010-B Revenue Bond Trustee, as amended, securing the OWDA 2010-B Revenue Bonds issued for the benefit of the Company.

"***OWDA 2010-B Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A. (formerly known as The Bank of New York Trust Company, N.A.), as trustee under the OWDA 2010-B Revenue Bond Indenture.

"***OWDA 2010--B Revenue Bonds***" means the $54,600,000 aggregate principal amount of Ohio Water Development Authority, State of Ohio Pollution Control Revenue Refunding Bonds, Series 2010-B (FirstEnergy Nuclear Generation Corp. Project) issued by the OWDA.

"***Pledge Agreements***" means collectively the BCIDA 2006-A Pledge Agreement and OWDA Pledge Agreement.

"***Revenue Bond Indentures***" means collectively the BCIDA 2006-A Revenue Bond Indenture and OWDA 2010-B Revenue Bond Indenture.

"***Revenue Bond Trustees***" means collectively the BCIDA 2006-A Revenue Bond Trustee and OWDA 2010-B Revenue Bond Trustee.

SECTION 1.03. *Rules of Construction.* All references to any agreement refer to such agreement as modified, varied, supplemented, amended or restated from time to time by the parties thereto (including any permitted successors or assigns) in accordance with its terms.

ARTICLE II

BONDS

SECTION 2.01. *Designation and Issuance of Bonds.* (a) The bonds of Guarantee Series F shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series F of 2016 due 2035" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Sixty Million Dollars ($60,000,000). The bonds of Guarantee Series F are to be issued and secured by the Lien of the Indenture.

(b) The bonds of Guarantee Series G shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series G of 2016 due 2033" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Fifty Four Million Six Hundred Thousand Dollars ($54,600,000). The bonds of Guarantee Series G are to be issued and secured by the Lien of the Indenture.

SECTION 2.02. *Form, Date, Maturity Date, Interest Rate and Interest Payment Dates of Bonds.*(a) The definitive bonds of August 2016 Series shall be in engraved, lithographed, printed or typewritten form and shall be registered bonds without coupons, and such bonds and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the respective forms included in Exhibits A and B hereto. The bonds of August 2016 Series shall be dated as provided in Section 3.03 of the Indenture.

(b) The bonds of Guarantee Series F shall bear interest from the Initial Interest Accrual Date as provided in the form of the bond of Guarantee Series F, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series F shall be as set forth in the form of the bond of Guarantee Series F.

(c) The interest on the bonds of Guarantee Series F so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(d) The bonds of Guarantee Series G shall bear interest from the Initial Interest Accrual Date as provided in the form of the bonds of Guarantee Series G, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series G shall be as set forth in the form of the bond of Guarantee Series G.

(e) The interest on the bonds of Guarantee Series G so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

SECTION 2.03. *Bonds Issued as Collateral Security.* The bonds of Guarantee Series F shall be issued, delivered, and pledged to, and registered in the name of, the BCIDA 2006-A Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal of and interest on the BCIDA 2006-A Revenue Bonds until the Release Date (as defined in the BCIDA 2006-A Pledge Agreement). The bonds of Guarantee Series G shall be issued, delivered, and pledged to, and registered in the name of, the OWDA 2010-B Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal and interest on the OWDA 2010-B Revenue Bonds until the Release Date (as defined in the OWDA 2010-B Pledge Agreement).

SECTION 2.04. *Credit for Payments under the Revenue Bonds*. (a) If and when the principal of any BCIDA 2006-A Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series F then outstanding; provided, however, that such payment of the bonds of Guarantee Series F is deemed to be made only when and to the extent that notice of such payment of such BCIDA 2006-A Revenue Bonds is given by the Company to the Trustee.

(b) If and when the principal of any OWDA 2010-B Revenue Bond is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series G then outstanding; provided, however, that such payment of the bonds of Guarantee Series G is deemed to be made only when and to the extent that notice of such payment of such OWDA 2010-B Revenue Bonds is given by the Company to the Trustee.

SECTION 2.05. *Execution of Bonds*. The bonds of August 2016 Series shall be executed on behalf of the Company in accordance with Section 3.03 of the Indenture.

SECTION 2.06. *Medium and Places of Payment of Principal of, and Interest on, Bonds; Transferability and Exchangeability* The principal of, and the interest on, the bonds of August 2016 Series shall be payable in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, and such principal and interest shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio. The Corporate Trust Office of the Trustee shall serve as the initial location of such office. Subject to the limitations provided herein, the bonds of August 2016 Series shall be transferable and exchangeable, in the manner provided in Sections 3.05 and 3.06 of the Indenture, at said office or agency. The bonds of August 2016 Series shall not be transferable except (i) to a successor to the respective Revenue Bond Trustee under the respective Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder thereof consequent upon an “Event of Default” as defined in the Indenture, or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company.

SECTION 2.07. *Denominations and Numbering of Bonds*. The bonds of August 2016 Series shall be issued in the denomination of $1,000 and any integral multiple thereof. Each series of the bonds of August 2016 Series shall each be numbered R-1 and consecutively upwards.

SECTION 2.08. *Temporary Bonds*. Until definitive bonds of August 2016 Series are ready for delivery, there may be authenticated and issued in lieu of any thereof and subject to all of the provisions, limitations, and conditions set forth in Section 3.04 of the Indenture, temporary registered bonds of August 2016 Series without coupons.

SECTION 2.09. *Mandatory Redemption*. The bonds of August 2016 Series shall be subject to mandatory redemption as provided in the respective forms thereof.

SECTION 2.10. *Confirmation of Lien.* The Company, for the equal and proportionate benefit and security of the holders of all Bonds at any time issued under the Indenture, hereby confirms the lien and security interest of the Indenture upon, and hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms to the Trustee, and grants to the Trustee a security interest in, the Mortgaged Property (as defined in the Indenture), but excluding from such lien, security interest and grant all property which, by virtue of any of the provisions of the Indenture, is excluded from the lien, security interests and granting clauses thereof.

ARTICLE III

MISCELLANEOUS

SECTION 3.01 Except as herein otherwise expressly provided, no duties, responsibilities or liabilities are assumed, or shall be construed to be assumed, by the Trustee by reason of this Supplemental Indenture; the Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals herein or in the bonds of August 2016 Series (except the Trustee's authentication certificate), all of which are made by the Company solely; and this Supplemental Indenture is executed and accepted by the Trustee, subject to all the terms and conditions set forth in the Indenture, as fully to all intents and purposes as if the terms and conditions of the Indenture were herein set forth at length.

SECTION 3.02 As supplemented by this Supplemental Indenture, the Indenture is in all respects ratified and confirmed, and the Indenture as herein defined, and this Supplemental Indenture, shall be read, taken and construed as one and the same instrument.

SECTION 3.03 Nothing in this Supplemental Indenture contained shall or shall be construed to confer upon any person other than a Holder of Bonds issued under the Indenture, the Company and the Trustee any right or interest to avail himself of any benefit under any provision of the Indenture or of this Supplemental Indenture.

SECTION 3.04 This Supplemental Indenture may be simultaneously executed in several counterparts and all such counterparts executed and delivered, each as an original, shall constitute but one and the same instrument.

[Remainder of this page intentionally left blank.]

IN WITNESS WHEREOF, FIRSTENERGY NUCLEAR GENERATION, LLC, party of the first part hereto, and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., party of the second part hereto, have caused these presents to be executed in their respective names as of the day and year first above written.

FIRSTENERGY NUCLEAR GENERATION, LLC

By: /s/ Steven R. Staub

Steven R. Staub

Vice President and Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By: /s/ Lisa J. Jennings

Lisa J. Jennings

Vice President

STATE OF OHIO)
)ss.:
COUNTY OF SUMMIT)

On the 15th day of August, 2016, personally appeared before me, a Notary Public in and for the said County and State aforesaid, Steven R. Staub, to me known and known to me to be the Vice President and Treasurer of FIRSTENERGY NUCLEAR GENERATION, LLC, the limited liability company which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President and Treasurer of FIRSTENERGY NUCLEAR GENERATION, LLC, the same is his free act and deed and the free and corporate act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 15th day of August, 2016.

/s/ Michele A. Buchtel
_____, Notary Public

Commission Expires Aug. 28, 2018

[NOTARIAL SEAL] Michele A. Buchtel
Resident Summit County
Notary Public, State of Ohio
My Commission Expires: 08/28/2016

STATE OF OHIO)
)ss.:
COUNTY OF CUYAHOGA)

On the 12 day of August, 2016, personally appeared before me, a Notary Public in and for the said County and State aforesaid, Lisa J. Jennings, to me known and known to me to be a Vice President of THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., the national banking association which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President for and on behalf of said national banking association and that the same is his free act and deed and the free and corporate act and deed of said national banking association.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 12 day of August, 2016.

/s/ Mary C. Keating

Mary C. Keating, Notary Public

Commission Expires 7-21-2021

[NOTARIAL SEAL] MARY C. KEATING
NOTARY PUBLIC
FOR THE
STATE OF OHIO
My Commission Expires
July 21, 2021

The Bank of New York Mellon Trust Company, N.A. hereby certifies that its precise name and address as Trustee is:

The Bank of New York Mellon Trust Company, N.A.
Global Corporate Trust
1660 West 2nd Street, Suite 830
Cleveland, Ohio 44113

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A.

By: /s/ Lisa J. Jennings

Lisa J. Jennings

Vice President

THIS INSTRUMENT PREPARED BY:

Lucas F. Torres
Akin Gump Strauss Hauer & Feld LLP
One Bryant Park
New York, NY 10036

Exhibit A

[FORM OF FIRST MORTGAGE BOND OF GUARANTEE SERIES F]

THIS BOND IS NOT TRANSFERABLE EXCEPT (I) TO A SUCCESSOR TRUSTEE UNDER THE TRUST INDENTURE, DATED AS OF APRIL 1, 2006, AS AMENDED, BETWEEN THE BEAVER COUNTY INDUSTRIAL DEVELOPMENT AUTHORITY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE, REFERRED TO HEREIN, (II) IN CONNECTION WITH THE EXERCISE OF THE RIGHTS AND REMEDIES OF THE HOLDER HEREOF CONSEQUENT UPON AN "EVENT OF DEFAULT" AS DEFINED IN THE INDENTURE REFERRED TO HEREIN OR (III) AS MAY BE NECESSARY TO COMPLY WITH A FINAL ORDER OF A COURT OF COMPETENT JURISDICTION IN CONNECTION WITH ANY BANKRUPTCY OR REORGANIZATION PROCEEDING OF THE COMPANY.

FIRSTENERGY NUCLEAR GENERATION, LLC

First Mortgage Bond, Guarantee Series F of 2016 due 2035

Due January 1, 2035

$60,000,000 No. R-1

FIRSTENERGY NUCLEAR GENERATION, LLC (formerly known as FirstEnergy Nuclear Generation Corp.), a limited liability company of the State of Ohio (herein, together with its successors and assigns, the "***Company***"), for value received promises to pay to The Bank of New York Mellon Trust Company, N.A., as trustee (the "***Revenue Bond Trustee***") under that certain Trust Indenture, dated as of April 1, 2006, as amended, between the Beaver County Industrial Development Authority and the Revenue Bond Trustee, securing $60,000,000 of Beaver County Industrial Development Authority Pollution Control Revenue Refunding Bonds, Series 2006-A (FirstEnergy Nuclear Generation Project) issued for the benefit of the Company (the "***Revenue Bonds***") (such Trust Indenture, as amended from time to time, hereinafter the "***Revenue Bond Indenture***"), or registered assigns, on January 1, 2035, the principal sum of Sixty Million Dollars, and to pay interest on the unpaid principal amount from the Initial Interest Accrual Date (as hereinafter defined) at the Revenue Bond Interest Rate (as hereinafter defined) per annum payable semi-annually on January 1 and July 1 in each year commencing on the January 1 or July 1 immediately succeeding the Initial Interest Accrual Date (each such date herein referred to as an "***Interest Payment Date***") on and until maturity, or, in the case of any Bonds of this series duly called for redemption, on and until the redemption date, or in the case of any default by the Company in the payment of the principal due on any Bonds of this series, until the Company's obligation with respect to the payment of such principal shall be discharged as provided in the Indenture (as hereinafter defined). The interest on each Bond of this series so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on the date of such payment. The principal of, and the interest on, this Bond shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

This Bond is one of an issue of Bonds of the Company known as its First Mortgage Bonds, issued and to be issued in one or more series under and secured by an Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009, duly executed by the Company to The Bank of New York Mellon Trust Company, N.A., a national banking association organized and existing under the laws of the United States of America, as Trustee (the "***Trustee***"), and indentures supplemental thereto, heretofore or hereafter executed, including the Fifth Supplemental Indenture dated as of August 15, 2016 (as amended, supplemented, modified or restated, the "***Supplemental Indenture***"), to which Open-End Mortgage, General Mortgage Indenture and Deed of Trust and all indentures supplemental thereto (collectively referred to as the "***Indenture***") reference is hereby made for a description of the property mortgaged and pledged, the nature and extent of the security, the terms and conditions upon which such Bonds are, and are to be, issued and secured, and the rights of the owners of such Bonds and the Trustee in respect of such security. As provided in the Indenture, such Bonds may be in various principal sums, are issuable in series, may mature at different times, may bear interest at different rates and may otherwise vary as therein provided; and this Bond is one Bond of a series entitled "First Mortgage Bonds, Guarantee Series F of 2016 due 2035," created by the Supplemental Indenture, as provided for in the Indenture, and authorized for issuance in an aggregate principal amount of up to $60,000,000.

If and when the principal of any Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the Bonds of this series then outstanding; provided, however, that such payment of the Bonds of this series is deemed to be made only when and to the extent that notice of such payment of such Revenue Bonds is given by the Company to the Trustee.

The Bonds of this series have been delivered and pledged to the Revenue Bond Trustee pursuant to a Pledge Agreement, dated August 15, 2016, between the Company and the Revenue Bond Trustee (the "***Pledge Agreement***"), as security for the Revenue Bonds until the Release Date (as defined in the Pledge Agreement). The Bonds of this series shall be redeemed by the Company in whole at any time prior to maturity at a redemption price of 100% of the principal amount thereof plus accrued and unpaid interest to the date of redemption following receipt by the Trustee of written demand for redemption (a "***Redemption Demand***") from an authorized representative of the Revenue Bond Trustee under the Revenue Bond Indenture stating that the principal amount of all the Revenue Bonds then outstanding under the Revenue Bond Indenture has been declared due and payable pursuant to the provisions of Section 11.02 of the Revenue Bond Indenture, specifying the date of the accelerated maturity of such Revenue Bonds and the date or dates from which interest on the Revenue Bonds has then accrued and is unpaid (specifying the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rates apply), stating such declaration of maturity has not been annulled and demanding payment of the principal amount of the Bonds of this series plus accrued interest thereon to the date fixed for such redemption. The date fixed for such redemption shall be set forth in the aforesaid Redemption Demand and shall not be earlier than the date specified in such Redemption Demand as the date of accelerated maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and not later than forty-five days after the Trustee's receipt of such Redemption Demand unless such forty-fifth day is earlier than such date of accelerated maturity. The Revenue Bond Trustee as the sole holder of the Bonds of this series, and any successor thereto, hereby irrevocably waives any requirement of notice of such redemption under Section 5.04 of the Indenture. Upon receipt of the aforesaid Redemption Demand, the earliest date from which unpaid interest on the Revenue Bonds has then accrued (as specified by the Revenue Bond Trustee in the Redemption Demand) shall become the initial interest accrual date (the "***Initial Interest Accrual Date***") with respect to the Bonds of this series; provided, however, on any demand for payment of the principal amount thereof at maturity as a result of the principal of the Revenue Bonds becoming due and payable on the maturity date of the Bonds of this series, the earliest date from which unpaid interest on the Revenue Bonds has then accrued shall become the Initial Interest Accrual Date with respect to the Bonds of this series, such date, together with each other different date from

which unpaid interest on the Revenue Bonds has then accrued, to be as stated in a written notice from the Revenue Bond Trustee to the Trustee, which notice shall also specify the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rate or rates apply. Such redemption shall become null and void for all purposes under the Indenture (including the fixing of the Initial Interest Accrual Date with respect to the Bonds of this series) upon receipt by the Trustee of written notice from the Revenue Bond Trustee of the annulment of the acceleration of the maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and of the rescission of the aforesaid Redemption Demand prior to the redemption date specified in the Redemption Demand, and thereupon no redemption of the Bonds of this series and no payment in respect thereof as specified in the Redemption Demand, shall be effected or required. But no such rescission shall extend to any subsequent Redemption Demand from the Revenue Bond Trustee or impair any right consequent on any such subsequent Redemption Demand.

The "***Revenue Bond Interest Rate***" shall be the same rate of interest per annum as is borne by the Revenue Bonds; provided, however, that if there are different rates of interest borne by the Revenue Bonds, or if interest is required to be paid on the Revenue Bonds more frequently than on each January 1 or July 1, the Revenue Bond Interest Rate shall be the rate that results in the total amount of interest payable on an Interest Payment Date, a redemption date or at maturity, as the case may be, or at any other time interest on this Bond is due and payable, to be equal to the total amount of unpaid interest that has accrued on all then outstanding Revenue Bonds.

The principal of this Bond may be declared or may become due before the maturity hereof, on the conditions, in the manner and at the times set forth in the Indenture, upon the happening of an "Event of Default" as therein defined.

From and after the Release Date, the Bonds of this series shall be deemed fully paid, satisfied and discharged and the obligation of the Company thereunder shall be terminated. On the Release Date or promptly following, the Bonds of this series shall be surrendered to and cancelled by the Trustee.

No recourse shall be had for the payment of the principal of or premium, or interest if any, on this Bond, or any part hereof, or for any claim based hereon or otherwise in respect hereof, or of the indebtedness represented hereby, or upon any obligation, covenant or agreement under the Indenture, against any incorporator, stockholder, officer or director, as such, past, present or future of the Company or of any predecessor or successor corporation (either directly or through the Company or a predecessor or successor corporation), whether by virtue of any constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability of incorporators, stockholders, officers and directors being released by the registered owner hereof by the acceptance of this Bond and being likewise waived and released by the terms of the Indenture.

This Bond is nontransferable except to (i) effect transfer to any successor to the Revenue Bond Trustee under the Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. But this Bond is exchangeable by the registered holder hereof, in person or by attorney duly authorized, at the Corporate Trust Office of the Trustee, any such permitted transfer or exchange to be made in the manner and upon the conditions prescribed in the Indenture, upon the surrender and cancellation of this Bond and the payment of any applicable taxes and fees required by law, and upon any such transfer or exchange a new registered Bond or Bonds of the same series and tenor, will be issued to the authorized transferee, or the registered holder, as the case may be. The Company and the Trustee may deem and treat the person in whose name this Bond is registered as the absolute owner for the purpose of receiving payment of or on account of the principal and interest due hereon and for all other purposes.

This Bond shall not be valid until authenticated by the manual signature of the Trustee, or a successor Trustee or Authenticating Agent appointed pursuant to the Indenture.

IN WITNESS WHEREOF, the Company has caused this Bond to be executed in its name by the manual or facsimile signature of an Authorized Executive Officer and attested by the manual or facsimile signature of another Authorized Executive Officer.
Dated: August 15, 2016

FIRSTENERGY NUCLEAR GENERATION, LLC

By:_____
Name: James F. Pearson
Title: Executive Vice President and Chief Financial Officer
Attest:

_____
Name: Ketan K. Patel
Title: Vice President and Corporate Secretary

[FORM OF TRUSTEE'S AUTHENTICATION CERTIFICATE]

TRUSTEE'S AUTHENTICATION CERTIFICATE

This is one of the Bonds of the series designated therein referred to in the within-mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By:_____
Authorized Signatory

Exhibit B

[FORM OF FIRST MORTGAGE BOND OF GUARANTEE SERIES G]

THIS BOND IS NOT TRANSFERABLE EXCEPT (I) TO A SUCCESSOR TRUSTEE UNDER THE TRUST INDENTURE, DATED AS OF NOVEMBER 15, 2010, BETWEEN THE OHIO WATER DEVELOPMENT AUTHORITY AND THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., AS TRUSTEE, REFERRED TO HEREIN, (II) IN CONNECTION WITH THE EXERCISE OF THE RIGHTS AND REMEDIES OF THE HOLDER HEREOF CONSEQUENT UPON AN "EVENT OF DEFAULT" AS DEFINED IN THE INDENTURE REFERRED TO HEREIN OR (III) AS MAY BE NECESSARY TO COMPLY WITH A FINAL ORDER OF A COURT OF COMPETENT JURISDICTION IN CONNECTION WITH ANY BANKRUPTCY OR REORGANIZATION PROCEEDING OF THE COMPANY.

FIRSTENERGY NUCLEAR GENERATION, LLC

First Mortgage Bond, Guarantee Series G of 2016 due 2033

Due June 1, 2033

$54,600,000 No. R-1

FIRSTENERGY NUCLEAR GENERATION, LLC (formerly known as FirstEnergy Nuclear Generation Corp.), a limited liability company of the State of Ohio (herein, together with its successors and assigns, the "***Company***"), for value received promises to pay to The Bank of New York Mellon Trust Company, N.A., as trustee (the "***Revenue Bond Trustee***") under that certain Trust Indenture, dated as of November 15, 2010, between the Ohio Water Development Authority and the Revenue Bond Trustee, securing $54,600,000 of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2010-B (FirstEnergy Nuclear Generation Corp. Project) issued for the benefit of the Company (the "***Revenue Bonds***") (such Trust Indenture, as amended from time to time, hereinafter the "***Revenue Bond Indenture***"), or registered assigns, on June 1, 2033, the principal sum of Fifty-Four Million Six Hundred Thousand Dollars, and to pay interest on the unpaid principal amount from the Initial Interest Accrual Date (as hereinafter defined) at the Revenue Bond Interest Rate (as hereinafter defined) per annum payable semi-annually on June 1 and December 1 in each year commencing on the June 1 or December 1 immediately succeeding the Initial Interest Accrual Date (each such date herein referred to as an "***Interest Payment Date***") on and until maturity, or, in the case of any Bonds of this series duly called for redemption, on and until the redemption date, or in the case of any default by the Company in the payment of the principal due on any Bonds of this series, until the Company's obligation with respect to the payment of such principal shall be discharged as provided in the Indenture (as hereinafter defined). The interest on each Bond of this series so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on the date of such payment. The principal of, and the interest on, this Bond shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

This Bond is one of an issue of Bonds of the Company known as its First Mortgage Bonds, issued and to be issued in one or more series under and secured by an Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 1, 2009, duly executed by the Company to The Bank of New York Mellon Trust Company, N.A., a national banking association organized and existing under the laws of the United States of America, as Trustee (the "***Trustee***"), and indentures supplemental thereto, heretofore or hereafter executed, including the Fifth Supplemental Indenture dated as of August 15, 2016 (as amended, supplemented, modified or restated, the "***Supplemental Indenture***"), to which Open-End Mortgage, General Mortgage Indenture and Deed of Trust and all indentures supplemental thereto (collectively referred to as the "***Indenture***") reference is hereby made for a description of the property mortgaged and pledged, the nature and extent of the security, the terms and conditions upon which such Bonds are, and are to be, issued and secured, and the rights of the owners of such Bonds and the Trustee in respect of such security. As provided in the Indenture, such Bonds may be in various principal sums, are issuable in series, may mature at different times, may bear interest at different rates and may otherwise vary as therein provided; and this Bond is one Bond of a series entitled "First Mortgage Bonds, Guarantee Series G of 2016 due 2033," created by the Supplemental Indenture, as provided for in the Indenture, and authorized for issuance in an aggregate principal amount of up to $54,600,000.

If and when the principal of any Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the Bonds of this series then outstanding; provided, however, that such payment of the Bonds of this series is deemed to be made only when and to the extent that notice of such payment of such Revenue Bonds is given by the Company to the Trustee.

The Bonds of this series have been delivered and pledged to the Revenue Bond Trustee pursuant to a Pledge Agreement, dated August 15, 2016, between the Company and the Revenue Bond Trustee (the "***Pledge Agreement***"), as security for the Revenue Bonds until the Release Date (as defined in the Pledge Agreement). The Bonds of this series shall be redeemed by the Company in whole at any time prior to maturity at a redemption price of 100% of the principal amount thereof plus accrued and unpaid interest to the date of redemption following receipt by the Trustee of written demand for redemption (a "***Redemption Demand***") from an authorized representative of the Revenue Bond Trustee under the Revenue Bond Indenture stating that the principal amount of all the Revenue Bonds then outstanding under the Revenue Bond Indenture has been declared due and payable pursuant to the provisions of Section 11.02 of the Revenue Bond Indenture, specifying the date of the accelerated maturity of such Revenue Bonds and the date or dates from which interest on the Revenue Bonds has then accrued and is unpaid (specifying the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rates apply), stating such declaration of maturity has not been annulled and demanding payment of the principal amount of the Bonds of this series plus accrued interest thereon to the date fixed for such redemption. The date fixed for such redemption shall be set forth in the aforesaid Redemption Demand and shall not be earlier than the date specified in such Redemption Demand as the date of accelerated maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and not later than forty-five days after the Trustee's receipt of such Redemption Demand unless such forty-fifth day is earlier than such date of accelerated maturity. The Revenue Bond Trustee as the sole holder of the Bonds of this series, and any successor thereto, hereby irrevocably waives any requirement of notice of such redemption under Section 5.04 of the Indenture. Upon receipt of the aforesaid Redemption Demand, the earliest date from which unpaid interest on the Revenue Bonds has then accrued (as specified by the Revenue Bond Trustee in the Redemption Demand) shall become the initial interest accrual date (the "***Initial Interest Accrual Date***") with respect to the Bonds of this series; provided, however, on any demand for payment of the principal amount thereof at maturity as a result of the principal of the Revenue Bonds becoming due and payable on the maturity date of the Bonds of this series, the earliest date from which unpaid interest on the Revenue Bonds has then accrued shall become the Initial Interest Accrual Date with respect to the Bonds of this series, such date, together with each other different date from

which unpaid interest on the Revenue Bonds has then accrued, to be as stated in a written notice from the Revenue Bond Trustee to the Trustee, which notice shall also specify the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rate or rates apply. Such redemption shall become null and void for all purposes under the Indenture (including the fixing of the Initial Interest Accrual Date with respect to the Bonds of this series) upon receipt by the Trustee of written notice from the Revenue Bond Trustee of the annulment of the acceleration of the maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and of the rescission of the aforesaid Redemption Demand prior to the redemption date specified in the Redemption Demand, and thereupon no redemption of the Bonds of this series and no payment in respect thereof as specified in the Redemption Demand, shall be effected or required. But no such rescission shall extend to any subsequent Redemption Demand from the Revenue Bond Trustee or impair any right consequent on any such subsequent Redemption Demand.

The "***Revenue Bond Interest Rate***" shall be the same rate of interest per annum as is borne by the Revenue Bonds; provided, however, that if there are different rates of interest borne by the Revenue Bonds, or if interest is required to be paid on the Revenue Bonds more frequently than on each June 1 or December 1, the Revenue Bond Interest Rate shall be the rate that results in the total amount of interest payable on an Interest Payment Date, a redemption date or at maturity, as the case may be, or at any other time interest on this Bond is due and payable, to be equal to the total amount of unpaid interest that has accrued on all then outstanding Revenue Bonds.

The principal of this Bond may be declared or may become due before the maturity hereof, on the conditions, in the manner and at the times set forth in the Indenture, upon the happening of an "Event of Default" as therein defined.

From and after the Release Date, the Bonds of this series shall be deemed fully paid, satisfied and discharged and the obligation of the Company thereunder shall be terminated. On the Release Date or promptly following, the Bonds of this series shall be surrendered to and cancelled by the Trustee.

No recourse shall be had for the payment of the principal of or premium, or interest if any, on this Bond, or any part hereof, or for any claim based hereon or otherwise in respect hereof, or of the indebtedness represented hereby, or upon any obligation, covenant or agreement under the Indenture, against any incorporator, stockholder, officer or director, as such, past, present or future of the Company or of any predecessor or successor corporation (either directly or through the Company or a predecessor or successor corporation), whether by virtue of any constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability of incorporators, stockholders, officers and directors being released by the registered owner hereof by the acceptance of this Bond and being likewise waived and released by the terms of the Indenture.

This Bond is nontransferable except to (i) effect transfer to any successor to the Revenue Bond Trustee under the Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. But this Bond is exchangeable by the registered holder hereof, in person or by attorney duly authorized, at the Corporate Trust Office of the Trustee, any such permitted transfer or exchange to be made in the manner and upon the conditions prescribed in the Indenture, upon the surrender and cancellation of this Bond and the payment of any applicable taxes and fees required by law, and upon any such transfer or exchange a new registered Bond or Bonds of the same series and tenor, will be issued to the authorized transferee, or the registered holder, as the case may be. The Company and the Trustee may deem and treat the person in whose name this Bond is registered as the absolute owner for the purpose of receiving payment of or on account of the principal and interest due hereon and for all other purposes.

This Bond shall not be valid until authenticated by the manual signature of the Trustee, or a successor Trustee or Authenticating Agent appointed pursuant to the Indenture.

IN WITNESS WHEREOF, the Company has caused this Bond to be executed in its name by the manual or facsimile signature of an Authorized Executive Officer and attested by the manual or facsimile signature of another Authorized Executive Officer.
Dated: August 15, 2016

FIRSTENERGY NUCLEAR GENERATION, LLC

By:_____
Name: James F. Pearson
Title: Executive Vice President and Chief Financial Officer

Attest:

_____
Name: Ketan K. Patel
Title: Vice President and Corporate Secretary

[FORM OF TRUSTEE'S AUTHENTICATION CERTIFICATE]

TRUSTEE'S AUTHENTICATION CERTIFICATE

This is one of the Bonds of the series designated therein referred to in the within-mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., as Trustee

By:_____
Authorized Signatory

EXHIBIT 4.19

EIGHTH SUPPLEMENTAL INDENTURE

FIRSTENERGY GENERATION, LLC

TO

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.
as Trustee

Dated as of August 15, 2016

Providing among other things for

First Mortgage Bonds, Guarantee Series I of 2016 due 2028

First Mortgage Bonds, Guarantee Series J of 2016 due 2029

First Mortgage Bonds, Guarantee Series K of 2016 due 2047

First Mortgage Bonds, Guarantee Series L of 2016 due 2028

Supplemental to Open-End Mortgage, General Mortgage Indenture and Deed of Trust, Dated as of June 19, 2008

THIS EIGHTH SUPPLEMENTAL INDENTURE (this "***Supplemental Indenture***"), dated as of August 15, 2016, between FIRSTENERGY GENERATION, LLC (formerly known as FirstEnergy Generation Corp.), a limited liability company organized and existing under the laws of the State of Ohio (hereinafter called the "***Company***"), and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A. (formerly known as The Bank of New York Trust Company, N.A.), a national banking association organized and existing under the laws of the United States of America, as Trustee (hereinafter called the "***Trustee***") under the Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 19, 2008 (hereinafter called the "***Original Indenture***") with the Company.

W I T N E S S E T H:

WHEREAS, the Company has heretofore duly executed and delivered to the Trustee the Original Indenture to secure Bonds of the Company, issuable in series, from time to time, in the manner and subject to the conditions set forth, and without limit as to principal amount except as provided in the Original Indenture which Original Indenture has been filed for record in the filing offices set forth on Schedule 1 attached hereto and incorporated herein by reference; and

WHEREAS, the Company has heretofore executed and delivered to the Trustee, a First Supplemental Indenture supplementing the Original Indenture dated as of June 25, 2008 (the "***First Supplemental Indenture***"), a Second Supplemental Indenture supplementing the Original Indenture dated as of March 1, 2009 (the "***Second Supplemental Indenture***"), a Third Supplemental Indenture supplementing the Original Indenture dated as of March 31, 2009 (the "***Third Supplemental Indenture***"), a Fourth Supplemental Indenture supplementing the Original Indenture dated as of June 15, 2009 (the "***Fourth Supplemental Indenture***"), a Fifth Supplemental Indenture supplementing the Original Indenture dated as of June 30, 2009 (the "***Fifth Supplemental Indenture***"), a Sixth Supplemental Indenture supplementing the Original Indenture dated as of December 1, 2009 (the "***Sixth Supplemental Indenture***"), a Seventh Supplemental Indenture supplementing the Original Indenture dated as of February 14, 2012 (the "***Seventh Supplemental Indenture***") and the Original Indenture, which, as supplemented by the aforementioned First Supplemental Indenture, Second Supplemental Indenture, Third Supplemental Indenture, Fourth Supplemental Indenture, Fifth Supplemental Indenture, Sixth Supplemental Indenture, Seventh Supplemental Indenture and this Supplemental Indenture and any other indentures supplemental to the Original Indenture, is herein referred to as the "***Indenture***"; and

WHEREAS, the Company, by appropriate corporate action in conformity with the terms of the Indenture, has duly determined to create five new series of Bonds under the Indenture, consisting of (i) $25,000,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series I of 2016 due 2028" (hereinafter referred to as the "***bonds of Guarantee Series I***"); (ii) $100,000,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series J of 2016 due 2029 (hereinafter referred to as the "***bonds of Guarantee Series J***"); (iii) $46,300,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series K of 2016 due 2047" (hereinafter referred to as the "***bonds of Guarantee Series K***"); (iv) $15,000,000 in aggregate principal amount to be designated as "First Mortgage Bonds, Guarantee Series L of 2016 due 2028" (hereinafter referred to as the "***bonds of Guarantee Series L***" and together with the bonds of Guarantee Series I, the bonds of Guarantee Series J, and the bonds of Guarantee Series K, the ***bonds of August 2016 Series***"), which shall bear interest at the respective rates per annum set forth in, shall be subject to certain redemption rights and obligations set forth in, and will otherwise be in the respective forms and have the terms and provisions provided for in this Supplemental Indenture; and

WHEREAS, the bonds of Guarantee Series I and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit A hereto; the bonds of Guarantee Series J and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit B hereto; the bonds of Guarantee Series K and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit C hereto; and the bonds of Guarantee Series L and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the form included in Exhibit D hereto; and

WHEREAS, it is provided in the Indenture, among other things, that the Company shall execute and file with the Trustee and the Trustee, at the request of the Company, when required by the Indenture, shall join in indentures supplemental thereto, and which thereafter shall form a part thereof, for the purpose, among others of providing for the creation of any series of Bonds and specifying the form and provisions of the Bonds of such series; and

WHEREAS, the Company deems it advisable to enter into this Supplemental Indenture for the purposes of establishing the form, terms and provisions of the bonds of Guarantee Series I, the bonds of Guarantee Series J, the bonds of Guarantee Series K and the bonds of Guarantee Series L as provided and contemplated by Sections 2.01(a) and 3.01(b) of the Indenture, and the Company has requested and hereby requests the Trustee to join in the execution of this Supplemental Indenture; and

WHEREAS, all acts and things have been done and performed which are necessary to make this Supplemental Indenture, when duly executed and delivered, a valid, binding and legal instrument in accordance with its terms and for the purposes herein expressed; and the execution and delivery of this Supplemental Indenture have been in all respects duly authorized.

NOW THEREFORE, in consideration of the premises and in further consideration of the sum of One Dollar in lawful money of the United States of America paid to the Company by the Trustee at or before the execution and delivery of this Supplemental Indenture, the receipt whereof is hereby acknowledged, and of other good and valuable consideration, it is agreed by and between the Company and the Trustee as follows:

ARTICLE I

DEFINITIONS

SECTION 1.01 *Terms Incorporated by Reference.*

Except for the terms defined in this Supplemental Indenture, all capitalized terms used in this Supplemental Indenture have the respective meanings set forth in the Original Indenture.

SECTION 1.02 *Additional Definitions*.

"***2002 A Pledge Agreement***" means the Pledge Agreement, dated August 15, 2016, between the Company and the 2002 A Revenue Bond Trustee pursuant to which the Company pledges and delivers the bonds of Guarantee Series L.

"***2002 A Revenue Bonds***" means the $15,000,000 aggregate principal amount of Exempt Facilities Revenue Bonds, Series 2002 A (Shippingport Project) issued by the Pennsylvania Economic Development Financing Authority.

"***2002 A Revenue Bond Indenture***" means the Amended and Restated Trust Indenture, dated as of November 1, 2012, between the Pennsylvania Economic Development Financing Authority and the 2002 A Revenue Bond Trustee, securing the 2002 A Revenue Bonds issued for the benefit of the Company.

"***2002 A Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A., as trustee under that certain 2002 A Revenue Bond Indenture.

"***2008-B Pledge Agreement***" means the Pledge Agreement, dated August 15, 2016, between the Company and the 2008-B Revenue Bond Trustee pursuant to which the Company pledges and delivers the bonds of Guarantee Series K.

"***2008-B Revenue Bonds***" means the $46,300,000 aggregate principal amount of Beaver County Pollution Control Revenue Refunding Bonds, Series 2008-B (FirstEnergy Generation Project) issued by the Beaver County Industrial Development Authority.

"***2008-B Revenue Bond Indenture***" means the Trust Indenture, dated as of September 1, 2008, between the Beaver County Industrial Development Authority and the 2008-B Revenue Bond Trustee, securing the 2008-B Revenue Bonds issued for the benefit of the Company.

"***2008-B Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A., as trustee under that certain 2008-B Revenue Bond Indenture.

"***2008-C Pledge Agreement***" means the Pledge Agreement, dated August 15, 2016, between the Company and the 2008-C Revenue Bond Trustee pursuant to which the Company pledges and delivers the bonds of Guarantee Series I.

"***2008-C Revenue Bonds***" means the $25,000,000 aggregate principal amount of Beaver County Industrial Development Authority Pollution Control Revenue Refunding Bonds, Series 2008-C (FirstEnergy Generation Project) to be issued by the Beaver County Industrial Development Authority.

"***2008-C Revenue Bond Indenture***" means the Trust Indenture, dated as of November 1, 2008, between the Beaver County Industrial Development Authority and the 2008-C Revenue Bond Trustee, securing the 2008-C Revenue Bonds issued for the benefit of the Company.

"***2008-C Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A., as trustee under that certain 2008-C Revenue Bond Indenture.

"***2009-D Pledge Agreement***" means the Pledge Agreement, dated on or about September 15, 2016, between the Company and the 2009-D Revenue Bond Trustee pursuant to which the Company pledges and delivers the bonds of Guarantee Series J.

"***2009-D Revenue Bonds***" means the $100,000,000 aggregate principal amount of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2009-D (FirstEnergy Generation Project) to be issued by the Ohio Air Quality Development Authority.

"***2009-D Revenue Bond Indenture***" means the Trust Indenture, dated as of June 1, 2009 as amended, between the Ohio Air Quality Development Authority and the 2009-D Revenue Bond Trustee, securing the 2009-D Revenue Bonds issued for the benefit of the Company.

"***2009-D Revenue Bond Trustee***" means The Bank of New York Mellon Trust Company, N.A., as trustee under that certain 2009-D Revenue Bond Indenture.

"***Bonds of August 2016 Series***" means collectively, the bonds of Guarantee Series I, the bonds of Guarantee Series J, the bonds of Guarantee Series K, and the bonds of Guarantee Series L.

"***Initial Interest Accrual Date***" shall have the respective meaning assigned to such term in the respective form of bond of Guarantee Series I, form of bond of Guarantee Series J, form of bond of Guarantee Series K, and form of bond of Guarantee Series L.

"***Interest Payment Date***" shall have the meaning assigned to such term in the respective form of bond of August 2016 Series.

"***Pledge Agreements***" means, collectively, the 2002 A Pledge Agreement, the 2008-B Pledge Agreement, the 2008-C Pledge Agreement, the 2009-A Pledge Agreement and the 2009-D Pledge Agreement.

"***Revenue Bond Indentures***" means, collectively, the 2002 A Revenue Bond Indenture, the 2008-B Revenue Bond Indenture, the 2008-C Revenue Bond Indenture, the 2009-A Revenue Bond Indenture and the 2009-D Revenue Bond Indenture.

"***Revenue Bond Trustees***" means, collectively, the 2002 A Revenue Bond Trustee, the 2008-B Revenue Bond Trustee, the 2008-C Revenue Bond Trustee, the 2009-A Revenue Bond Trustee, and the 2009-D Revenue Bond Trustee.

SECTION 1.03. *Rules of Construction.* All references to any agreement refer to such agreement as modified, varied, supplemented, amended or restated from time to time by the parties thereto (including any permitted successors or assigns) in accordance with its terms.

ARTICLE II

BONDS

SECTION 2.01. *Designation and Issuance of Bonds.* (a) The bonds of Guarantee Series I shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series I of 2016 due 2028" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Twenty-Five Million Dollars ($25,000,000). The bonds of Guarantee Series I are to be issued and secured by the Lien of the Indenture.

(b) The bonds of Guarantee Series J shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series J of 2016 due 2029" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of One Hundred Million Dollars ($100,000,000). The bonds of Guarantee Series J are to be issued and secured by the Lien of the Indenture.

(c) The bonds of Guarantee Series K shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series K of 2016 due 2047" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Forty-Six Million Three Hundred Thousand Dollars ($46,300,000). The bonds of Guarantee Series K are to be issued and secured by the Lien of the Indenture.

(d) The bonds of Guarantee Series L shall be designated, as hereinbefore recited, as the Company's "First Mortgage Bonds, Guarantee Series L of 2016 due 2028" and, subject to the provisions of the Indenture, shall be limited to the aggregate principal amount of Fifteen Million Dollars ($15,000,000). The bonds of Guarantee Series L are to be issued and secured by the Lien of the Indenture.

SECTION 2.02. *Form, Date, Maturity Date, Interest Rate and Interest Payment Dates of Bonds.*(a) The definitive bonds of August 2016 Series shall be in engraved, lithographed, printed or typewritten form and shall be registered bonds without coupons, and such bonds and the Trustee's certificate of authentication to be endorsed thereon shall be substantially in the respective forms included in Exhibits A, B, C, and D hereto. The bonds of August 2016 Series shall be dated as provided in Section 3.03 of the Indenture.

(b) The bonds of Guarantee Series I shall bear interest from the Initial Interest Accrual Date as provided in the form of the bond of Guarantee Series I, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series I shall be as set forth in the form of the bond of Guarantee Series I.

(c) The interest on the bonds of Guarantee Series I so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on such Interest Payment Date.

(d) The bonds of Guarantee Series J shall bear interest from the Initial Interest Accrual Date as provided in the form of the bond of Guarantee Series J, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series J shall be as set forth in the form of the bond of Guarantee Series J.

(e) The interest on the bonds of Guarantee Series J so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such bond is registered on such Interest Payment Date.

(f) The bonds of Guarantee Series K shall bear interest from the Initial Interest Accrual Date as provided in the form of the bond of Guarantee Series K, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series K shall be as set forth in the form of the bond of Guarantee Series K.

(g) The interest on the bonds of Guarantee Series K so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such bond is registered on such Interest Payment Date.

(h) The bonds of Guarantee Series L shall bear interest from the Initial Interest Accrual Date as provided in the form of the bond of Guarantee Series L, and such provisions are incorporated at this place as though set forth in their entirety. The interest rate and maturity date of the bonds of Guarantee Series L shall be as set forth in the form of the bond of Guarantee Series L.

(i) The interest on the bonds of Guarantee Series L so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such bond is registered on such Interest Payment Date.

SECTION 2.03. *Bonds Issued as Collateral Security.* The bonds of Guarantee Series I shall be issued, delivered, and pledged to, and registered in the name of, the 2008-C Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal of and interest on the 2008-C Revenue Bonds until the Release Date (as defined in the 2008-C Pledge Agreement). The bonds of Guarantee Series J shall be issued, delivered, and pledged to, and registered in the name of, the 2009-D Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal of and interest on the 2009-D Revenue Bonds until the Release Date (as defined in the 2009-D Pledge Agreement). The bonds of Guarantee Series K shall be issued, delivered, and pledged to, and registered in the name of, the 2008-B Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal of and interest on the 2008-B Revenue Bonds until the Release Date (as defined in the 2008-B Pledge Agreement). The bonds of Guarantee Series L shall be issued, delivered, and pledged to, and registered in the name of, the 2002 A Revenue Bond Trustee in order to secure and provide for, and as collateral security for, the due and punctual payment of the principal of and interest on the 2002 A Revenue Bonds until the Release Date (as defined in the 2002 APledge Agreement).

SECTION 2.04. *Credit for Payments of the Revenue Bonds.* (a) If and when the principal of any 2008-C Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series I then outstanding; provided, however, that such payment of the bonds of Guarantee Series I is deemed to be made only when and to the extent that notice of such payment of such 2008-C Revenue Bonds is given by the Company to the Trustee.

(b) If and when the principal of any 2009-D Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series J then outstanding; provided, however, that such payment of the bonds of Guarantee Series J is deemed to be made only when and to the extent that notice of such payment of such 2009-D Revenue Bonds is given by the Company to the Trustee.

(c) If and when the principal of any 2008-B Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series K then outstanding; provided, however, that such payment of the bonds of Guarantee Series K is deemed to be made only when and to the extent that notice of such payment of such 2008-B Revenue Bonds is given by the Company to the Trustee.

(d) If and when the principal of any 2002-A Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the bonds of Guarantee Series L then outstanding; provided, however, that such payment of the bonds of Guarantee Series L is deemed to be made only when and to the extent that notice of such payment of such 2002-A Revenue Bonds is given by the Company to the Trustee.

SECTION 2.05. *Execution of Bonds.* The bonds of August 2016 Series shall be executed on behalf of the Company in accordance with Section 3.03 of the Indenture.

SECTION 2.06. *Medium and Places of Payment of Principal of, and Interest on, Bonds; Transferability and Exchangeability.* The principal of, and the interest on, the bonds of August 2016 Series shall be payable in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts, and such principal and interest shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio. The Corporate Trust Office of the Trustee shall serve as the initial location of such office. Subject to the limitations provided herein, the bonds of August 2016 Series shall be transferable and exchangeable, in the manner provided in Sections 3.05 and 3.06 of the Indenture, at said office or agency. The bonds of August 2016 Series shall not be transferable except (i) to a successor to the respective Revenue Bond Trustee under the respective Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder thereof consequent upon an event of default as defined in the Indenture, or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. No charge shall be made by the Company to the registered owner of any bond of August 2016 Series for the registration of transfer of such Bond or for the exchange thereof for Bonds of the same series of other authorized denominations, except, in the case of any transfer, a charge sufficient to reimburse the Company for any stamp or other tax or governmental charge required to be paid by the Company or the Trustee.

SECTION 2.07. *Denominations and Numbering of Bonds.* The bonds of August 2016 Series shall be issued in the denomination of $1,000 and any integral multiple thereof. Each series of the bonds of August 2016 Series shall each be numbered R-1 and consecutively upwards.

SECTION 2.08. *Temporary Bonds.* Until definitive bonds of August 2016 Series are ready for delivery, there may be authenticated and issued in lieu of any thereof and subject to all of the provisions, limitations, and conditions set forth in Section 3.04 of the Indenture, temporary registered bonds of August 2016 Series without coupons.

SECTION 2.09. *Mandatory Redemption.* The bonds of August 2016 Series shall be subject to mandatory redemption as provided in the respective forms thereof.

SECTION 2.10. *Confirmation of Lien.* The Company, for the equal and proportionate benefit and security of the holders of all Bonds at any time issued under the Indenture, hereby confirms the lien and security interest of the Indenture upon, and hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms to the Trustee, and grants to the Trustee a security interest in, the Mortgaged Property, including all Additional Property heretofore made subject to the Indenture by virtue of one or more supplemental indentures..

ARTICLE III

MISCELLANEOUS

SECTION 3.01 Except as herein otherwise expressly provided, no duties, responsibilities or liabilities are assumed, or shall be construed to be assumed, by the Trustee by reason of this Supplemental Indenture; the Trustee shall not be responsible in any manner whatsoever for or in respect of the validity or sufficiency of this Supplemental Indenture or for or in respect of the recitals herein or in the bonds of August 2016 Series (except the Trustee's authentication certificate), all of which are made by the Company solely; and this Supplemental Indenture is executed and accepted by the Trustee, subject to all the terms and conditions set forth in the Indenture, as fully to all intents and purposes as if the terms and conditions of the Indenture were herein set forth at length.

SECTION 3.02 As supplemented by this Supplemental Indenture, the Indenture is in all respects ratified and confirmed, and the Indenture as herein defined, and this Supplemental Indenture, shall be read, taken and construed as one and the same instrument.

SECTION 3.03 Nothing in this Supplemental Indenture contained shall or shall be construed to confer upon any person other than a Holder of Bonds issued under the Indenture, the Company and the Trustee any right or interest to avail himself of any benefit under any provision of the Indenture or of this Supplemental Indenture.

SECTION 3.04 This Supplemental Indenture may be simultaneously executed in several counterparts and all such counterparts executed and delivered, each as an original, shall constitute but one and the same instrument.

[Remainder of this page intentionally left blank.]

IN WITNESS WHEREOF, FIRSTENERGY GENERATION, LLC, party of the first part hereto, and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., party of the second part hereto, have caused these presents to be executed in their respective names as of the day and year first above written.

FIRSTENERGY GENERATION, LLC

By: /s/ Steven R. Staub

Steven R. Staub

Vice President and Treasurer

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A. as Trustee

By: /s/ Lisa J. Jennings

Lisa J. Jennings

Vice President

STATE OF OHIO)

)ss.:

COUNTY OF SUMMIT)

On the 15th day of August, 2016, personally appeared before me, a Notary Public in and for the said County and State aforesaid, Steven R. Staub, to me known and known to me to be the Vice President and Treasurer of FIRSTENERGY GENERATION, LLC, the limited liability company which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President and Treasurer of FIRSTENERGY GENERATION, LLC, the same is his free act and deed and the free and company act and deed of said limited liability company.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 15th day of August, 2016.

/s/ Michele A. Buchtel

_____, Notary Public

Commission Expires Aug. 28, 2016

[NOTARIAL SEAL] Michele A. Buchtel
Resident Summit County
Notary Public, State of Ohio
My Commission Expires: 08/28/2016

STATE OF OHIO)
)ss.:
COUNTY OF CUYAHOGA)

On the 12 day of August, 2016, personally appeared before me, a Notary Public in and for the said County and State aforesaid, Lisa J. Jennings, to me known and known to me to be a Vice President of THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., the national banking association which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President for and on behalf of said national banking association and that the same is his free act and deed and the free and corporate act and deed of said national banking association.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 12 day of August, 2016.

/s/ Mary C. Keating

Mary C. Keating, Notary Public

Commission Expires 7-21-2021

[NOTARIAL SEAL]MARY C. KEATING
NOTARY PUBLIC
FOR THE
STATE OF OHIO
My Commission Expires
July 21, 2021

The Bank of New York Mellon Trust Company, N.A. hereby certifies that its precise name and address as Trustee is:

The Bank of New York Mellon Trust Company, N.A.
Global Corporate Trust
1660 West 2nd Street, Suite 830
Cleveland, Ohio 44113

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A.

By: /s/ Lisa J. Jennings

Lisa J. Jennings

Vice President

THIS INSTRUMENT PREPARED BY:

Lucas F. Torres
Akin Gump Strauss Hauer & Feld LLP
One Bryant Park
New York, NY 10036

Exhibit B

[FORM OF FIRST MORTGAGE BOND OF GUARANTEE SERIES J]

This Bond is not transferable except (i) to a successor trustee under the Trust Indenture, dated as of June 1, 2009 as amended, between the Ohio Air Quality Development Authority and The Bank of New York Mellon Trust Company, N.A., as trustee, referred to herein, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture referred to herein or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company.

FIRSTENERGY GENERATION, LLC

First Mortgage Bond, Guarantee Series J of 2016 due 2029

Due August 1, 2029

$100,000,000 No. R-1

FIRSTENERGY GENERATION, LLC (formerly known as FirstEnergy Generation Corp.), a limited liability company of the State of Ohio (herein, together with its successors and assigns, the "***Company***"), for value received promises to pay to The Bank of New York Mellon Trust Company, N.A., as trustee (the "***Revenue Bond Trustee***") under that certain Trust Indenture, dated as of June 1, 2009 as amended, between the Ohio Air Quality Development Authority and the Revenue Bond Trustee, securing $100,000,000 of State of Ohio Pollution Control Revenue Refunding Bonds, Series 2009-D (FirstEnergy Generation Project) issued for the benefit of the Company (the "***Revenue Bonds***") (such Trust Indenture, as amended from time to time, hereinafter the "***Revenue Bond Indenture***"), or registered assigns, on August 1, 2029, the principal sum of One Hundred Million Dollars, and to pay interest on the unpaid principal amount from the Initial Interest Accrual Date (as hereinafter defined) at the Revenue Bond Interest Rate (as hereinafter defined) per annum payable semi-annually on March 15 and September 15 in each year commencing on the March 15 or September 15 immediately succeeding the Initial Interest Accrual Date (each such date herein referred to as an "***Interest Payment Date***") on and until maturity, or, in the case of any Bonds of this series duly called for redemption, on and until the redemption date, or in the case of any default by the Company in the payment of the principal due on any Bonds of this series, until the Company's obligation with respect to the payment of such principal shall be discharged as provided in the Indenture (as hereinafter defined). The interest on each Bond of this series so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on the date of such payment. The principal of, and the interest on, this Bond shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

This Bond is one of an issue of Bonds of the Company known as its First Mortgage Bonds, issued and to be issued in one or more series under and secured by an Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 19, 2008, duly executed by the Company to The Bank of New York Mellon Trust Company, N.A. (formerly known as The Bank of New York Trust Company, N.A.), a national banking association organized and existing under the laws of the United States of America, as Trustee (the " ***Trustee***"), and indentures supplemental thereto, heretofore or hereafter executed, including the Eighth Supplemental Indenture dated as of August 15, 2016 (as amended, supplemented, modified or restated, the "***Supplemental Indenture***"), to which Open-End Mortgage, General Mortgage Indenture and Deed of Trust and all indentures supplemental thereto (collectively referred to as the "***Indenture***") reference is hereby made for a description of the property mortgaged and pledged, the nature and extent of the security, the terms and conditions upon which such Bonds are, and are to be, issued and secured, and the rights of the owners of such Bonds and the Trustee in respect of such security. As provided in the Indenture, such Bonds may be in various principal sums, are issuable in series, may mature at different times, may bear interest at different rates and may otherwise vary as therein provided; and this Bond is one Bond of a series entitled "First Mortgage Bonds, Guarantee Series J of 2016 due 2029," created by the Supplemental Indenture, as provided for in the Indenture, and authorized for issuance in an aggregate principal amount of up to $100,000,000.

If and when the principal of any Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the Bonds of this series then outstanding; provided, however, that such payment of the Bonds of this series is deemed to be made only when and to the extent that notice of such payment of such Revenue Bonds is given by the Company to the Trustee.

The Bonds of this series shall have been delivered and pledged to the Revenue Bond Trustee pursuant to a Pledge Agreement, dated September 15, 2016, between the Company and the Revenue Bond Trustee (the "***Pledge Agreement***"), as security for the Revenue Bonds until the Release Date (as defined in the Pledge Agreement). The Bonds of this series shall be redeemed by the Company in whole at any time prior to maturity at a redemption price of 100% of the principal amount thereof plus accrued and unpaid interest to the date of redemption following receipt by the Trustee of written demand for redemption (a "***Redemption Demand***") from an authorized representative of the Revenue Bond Trustee under the Revenue Bond Indenture stating that the principal amount of all the Revenue Bonds then outstanding under the Revenue Bond Indenture has been declared due and payable pursuant to the provisions of Section 11.02 of the Revenue Bond Indenture, specifying the date of the accelerated maturity of such Revenue Bonds and the date or dates from which interest on the Revenue Bonds has then accrued and is unpaid (specifying the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rates apply), stating such declaration of maturity has not been annulled and demanding payment of the principal amount of the Bonds of this series plus accrued interest thereon to the date fixed for such redemption. The date fixed for such redemption shall be set forth in the aforesaid Redemption Demand and shall not be earlier than the date specified in such Redemption Demand as the date of accelerated maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and not later than forty-five days after the Trustee's receipt of such Redemption Demand unless such forty-fifth day is earlier than such date of accelerated maturity. The Revenue Bond Trustee as the sole holder of the Bonds of this series, and any successor thereto, hereby irrevocably waives any requirement of notice of such redemption under Section 5.04 of the Indenture. Upon receipt of the aforesaid Redemption Demand, the earliest date from which unpaid interest on the Revenue Bonds has then accrued (as specified by the Revenue Bond Trustee in the Redemption Demand) shall become the initial interest accrual date (the "***Initial Interest Accrual Date***") with respect to the Bonds of this series; provided, however, on any demand for payment of the principal amount thereof at maturity as a result of the principal of the Revenue Bonds becoming due and payable on the maturity date of the Bonds of this series, the earliest date from which unpaid interest on the Revenue Bonds has then accrued shall become the Initial Interest Accrual Date with respect to the Bonds of this series, such date, together with each other different date from

which unpaid interest on the Revenue Bonds has then accrued, to be as stated in a written notice from the Revenue Bond Trustee to the Trustee, which notice shall also specify the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rate or rates apply. Such redemption shall become null and void for all purposes under the Indenture (including the fixing of the Initial Interest Accrual Date with respect to the Bonds of this series) upon receipt by the Trustee of written notice from the Revenue Bond Trustee of the annulment of the acceleration of the maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and of the rescission of the aforesaid Redemption Demand prior to the redemption date specified in the Redemption Demand, and thereupon no redemption of the Bonds of this series and no payment in respect thereof as specified in the Redemption Demand, shall be effected or required. But no such rescission shall extend to any subsequent Redemption Demand from the Revenue Bond Trustee or impair any right consequent on any such subsequent Redemption Demand.

The "***Revenue Bond Interest Rate***" shall be the same rate of interest per annum as is borne by the Revenue Bonds; provided, however, that if there are different rates of interest borne by the Revenue Bonds, or if interest is required to be paid on the Revenue Bonds more frequently than on each March 15 or September 15, the Revenue Bond Interest Rate shall be the rate that results in the total amount of interest payable on an Interest Payment Date, a redemption date or at maturity, as the case may be, or at any other time interest on this Bond is due and payable, to be equal to the total amount of unpaid interest that has accrued on all then outstanding Revenue Bonds.

The principal of this Bond may be declared or may become due before the maturity hereof, on the conditions, in the manner and at the times set forth in the Indenture, upon the happening of an Event of Default as therein defined.

From and after the Release Date, the Bonds of this series shall be deemed fully paid, satisfied and discharged and the obligation of the Company thereunder shall be terminated. On the Release Date or promptly following, the Bonds of this series shall be surrendered to and cancelled by the Trustee.

No recourse shall be had for the payment of the principal of or premium, or interest if any, on this Bond, or any part hereof, or for any claim based hereon or otherwise in respect hereof, or of the indebtedness represented hereby, or upon any obligation, covenant or agreement under the Indenture, against any incorporator, stockholder, officer or director, as such, past, present or future of the Company or of any predecessor or successor corporation (either directly or through the Company or a predecessor or successor corporation), whether by virtue of any Constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability of incorporators, stockholders, officers and directors being released by the registered owner hereof by the acceptance of this Bond and being likewise waived and released by the terms of the Indenture.

This Bond is nontransferable except to (i) effect transfer to any successor to the Revenue Bond Trustee under the Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an “Event of Default” as defined in the Indenture or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. But this Bond is exchangeable by the registered holder hereof, in person or by attorney duly authorized, at the Corporate Trust Office of the Trustee, any such permitted transfer or exchange to be made in the manner and upon the conditions prescribed in the Indenture, upon the surrender and cancellation of this Bond and the payment of any applicable taxes and fees required by law, and upon any such transfer or exchange a new registered Bond or Bonds of the same series and tenor, will be issued to the authorized transferee, or the registered holder, as the case may be. The Company and the Trustee may deem and treat the person in whose name this Bond is registered as the absolute owner for the purpose of receiving payment of or on account of the principal and interest due hereon and for all other purposes.

This Bond shall not be valid until authenticated by the manual signature of the Trustee, or a successor Trustee or Authenticating Agent appointed pursuant to the Indenture.

IN WITNESS WHEREOF, the Company has caused this Bond to be executed in its name by the manual or facsimile signature of an Authorized Executive Officer and attested by the manual or facsimile signature of another Authorized Executive Officer.

Dated: September 15, 2016

FIRSTENERGY GENERATION, LLC

By:
Name: James F. Pearson
Title: Executive Vice President and Chief Financial Officer

Attest:

Name: Ketan K. Patel
Title: Vice President and Corporate Secretary

[FORM OF TRUSTEE'S AUTHENTICATION CERTIFICATE]

TRUSTEE'S AUTHENTICATION CERTIFICATE

This is one of the Bonds of the series designated therein referred to in the within-mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., *as Trustee*

By:
Authorized Signatory

Exhibit C

[FORM OF FIRST MORTGAGE BOND OF GUARANTEE SERIES K]

This Bond is not transferable except (i) to a successor trustee under the Trust Indenture, dated as of September 1, 2008 as amended, between the Beaver County Industrial Development Authority and The Bank of New York Mellon Trust Company, N.A., as trustee, referred to herein, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture referred to herein or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company.

FIRSTENERGY GENERATION, LLC

First Mortgage Bond, Guarantee Series K of 2016 due 2047

Due October 1, 2047

$46,300,000 No. R-1

FIRSTENERGY GENERATION, LLC (formerly known as FirstEnergy Generation Corp.), a limited liability company of the State of Ohio (herein, together with its successors and assigns, the "***Company***"), for value received promises to pay to The Bank of New York Mellon Trust Company, N.A., as trustee (the "***Revenue Bond Trustee***") under that certain Trust Indenture, dated as of September 1, 2008 as amended, between the Beaver County Industrial Development Authority and the Revenue Bond Trustee, securing $46,300,000 of Beaver County Industrial Development Authority Pollution Control Revenue Refunding Bonds, Series 2008-B (FirstEnergy Generation Project) issued for the benefit of the Company (the "***Revenue Bonds***") (such Trust Indenture, as amended from time to time, hereinafter the "***Revenue Bond Indenture***"), or registered assigns, on October 1, 2047, the principal sum of Forty Six Million Three Hundred Thousand Dollars, and to pay interest on the unpaid principal amount from the Initial Interest Accrual Date (as hereinafter defined) at the Revenue Bond Interest Rate (as hereinafter defined) per annum payable semi-annually on April 1 and October 1 in each year commencing on the April 1 or October 1 immediately succeeding the Initial Interest Accrual Date (each such date herein referred to as an "***Interest Payment Date***") on and until maturity, or, in the case of any Bonds of this series duly called for redemption, on and until the redemption date, or in the case of any default by the Company in the payment of the principal due on any Bonds of this series, until the Company's obligation with respect to the payment of such principal shall be discharged as provided in the Indenture (as hereinafter defined). The interest on each Bond of this series so payable on any Interest Payment Date shall, subject to the exceptions provided in Section 3.07 of the Indenture, be paid to the person in whose name such Bond is registered on the date of such payment. The principal of, and the interest on, this Bond shall be payable at the office or agency of the Company in the City of Cleveland, State of Ohio in any coin or currency of the United States of America which at the time of payment is legal tender for the payment of public and private debts.

This Bond is one of an issue of Bonds of the Company known as its First Mortgage Bonds, issued and to be issued in one or more series under and secured by an Open-End Mortgage, General Mortgage Indenture and Deed of Trust, dated as of June 19, 2008, duly executed by the Company to The Bank of New York Mellon Trust Company, N.A. (formerly known as The Bank of New York Trust Company, N.A.), a national banking association organized and existing under the laws of the United States of America, as Trustee (the " ***Trustee***"), and indentures supplemental thereto, heretofore or hereafter executed, including the Eighth Supplemental Indenture dated as of August 15, 2016 (as amended, supplemented, modified or restated, the "***Supplemental Indenture***"), to which Open-End Mortgage, General Mortgage Indenture and Deed of Trust and all indentures supplemental thereto (collectively referred to as the "***Indenture***") reference is hereby made for a description of the property mortgaged and pledged, the nature and extent of the security, the terms and conditions upon which such Bonds are, and are to be, issued and secured, and the rights of the owners of such Bonds and the Trustee in respect of such security. As provided in the Indenture, such Bonds may be in various principal sums, are issuable in series, may mature at different times, may bear interest at different rates and may otherwise vary as therein provided; and this Bond is one Bond of a series entitled "First Mortgage Bonds, Guarantee Series K of 2016 due 2047," created by the Supplemental Indenture, as provided for in the Indenture, and authorized for issuance in an aggregate principal amount of up to $46,300,000.

If and when the principal of any Revenue Bonds is paid, then there is deemed to be paid an equal principal amount of the Bonds of this series then outstanding; provided, however, that such payment of the Bonds of this series is deemed to be made only when and to the extent that notice of such payment of such Revenue Bonds is given by the Company to the Trustee.

The Bonds of this series shall have been delivered and pledged to the Revenue Bond Trustee pursuant to a Pledge Agreement, dated August 15, 2016, between the Company and the Revenue Bond Trustee (the "***Pledge Agreement***"), as security for the Revenue Bonds until the Release Date (as defined in the Pledge Agreement). The Bonds of this series shall be redeemed by the Company in whole at any time prior to maturity at a redemption price of 100% of the principal amount thereof plus accrued and unpaid interest to the date of redemption following receipt by the Trustee of written demand for redemption (a "***Redemption Demand***") from an authorized representative of the Revenue Bond Trustee under the Revenue Bond Indenture stating that the principal amount of all the Revenue Bonds then outstanding under the Revenue Bond Indenture has been declared due and payable pursuant to the provisions of Section 11.02 of the Revenue Bond Indenture, specifying the date of the accelerated maturity of such Revenue Bonds and the date or dates from which interest on the Revenue Bonds has then accrued and is unpaid (specifying the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rates apply), stating such declaration of maturity has not been annulled and demanding payment of the principal amount of the Bonds of this series plus accrued interest thereon to the date fixed for such redemption. The date fixed for such redemption shall be set forth in the aforesaid Redemption Demand and shall not be earlier than the date specified in such Redemption Demand as the date of accelerated maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and not later than forty-five days after the Trustee's receipt of such Redemption Demand unless such forty-fifth day is earlier than such date of accelerated maturity. The Revenue Bond Trustee as the sole holder of the Bonds of this series, and any successor thereto, hereby irrevocably waives any requirement of notice of such redemption under Section 5.04 of the Indenture. Upon receipt of the aforesaid Redemption Demand, the earliest date from which unpaid interest on the Revenue Bonds has then accrued (as specified by the Revenue Bond Trustee in the Redemption Demand) shall become the initial interest accrual date (the "***Initial Interest Accrual Date***") with respect to the Bonds of this series; provided, however, on any demand for payment of the principal amount thereof at maturity as a result of the principal of the Revenue Bonds becoming due and payable on the maturity date of the Bonds of this series, the earliest

date from which unpaid interest on the Revenue Bonds has then accrued shall become the Initial Interest Accrual Date with respect to the Bonds of this series, such date, together with each other different date from which unpaid interest on the Revenue Bonds has then accrued, to be as stated in a written notice from the Revenue Bond Trustee to the Trustee, which notice shall also specify the rate or rates of such accrual and the principal amount of the particular Revenue Bonds to which such rate or rates apply. Such redemption shall become null and void for all purposes under the Indenture (including the fixing of the Initial Interest Accrual Date with respect to the Bonds of this series) upon receipt by the Trustee of written notice from the Revenue Bond Trustee of the annulment of the acceleration of the maturity of the Revenue Bonds then outstanding under the Revenue Bond Indenture and of the rescission of the aforesaid Redemption Demand prior to the redemption date specified in the Redemption Demand, and thereupon no redemption of the Bonds of this series and no payment in respect thereof as specified in the Redemption Demand, shall be effected or required. But no such rescission shall extend to any subsequent Redemption Demand from the Revenue Bond Trustee or impair any right consequent on any such subsequent Redemption Demand.

The "***Revenue Bond Interest Rate***" shall be the same rate of interest per annum as is borne by the Revenue Bonds; provided, however, that if there are different rates of interest borne by the Revenue Bonds, or if interest is required to be paid on the Revenue Bonds more frequently than on each April 1 or October 1, the Revenue Bond Interest Rate shall be the rate that results in the total amount of interest payable on an Interest Payment Date, a redemption date or at maturity, as the case may be, or at any other time interest on this Bond is due and payable, to be equal to the total amount of unpaid interest that has accrued on all then outstanding Revenue Bonds.

The principal of this Bond may be declared or may become due before the maturity hereof, on the conditions, in the manner and at the times set forth in the Indenture, upon the happening of an Event of Default as therein defined.

From and after the Release Date, the Bonds of this series shall be deemed fully paid, satisfied and discharged and the obligation of the Company thereunder shall be terminated. On the Release Date or promptly following, the Bonds of this series shall be surrendered to and cancelled by the Trustee.

No recourse shall be had for the payment of the principal of or premium, or interest if any, on this Bond, or any part hereof, or for any claim based hereon or otherwise in respect hereof, or of the indebtedness represented hereby, or upon any obligation, covenant or agreement under the Indenture, against any incorporator, stockholder, officer or director, as such, past, present or future of the Company or of any predecessor or successor corporation (either directly or through the Company or a predecessor or successor corporation), whether by virtue of any Constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise, all such liability of incorporators, stockholders, officers and directors being released by the registered owner hereof by the acceptance of this Bond and being likewise waived and released by the terms of the Indenture.

This Bond is nontransferable except to (i) effect transfer to any successor to the Revenue Bond Trustee under the Revenue Bond Indenture, (ii) in connection with the exercise of the rights and remedies of the holder hereof consequent upon an "Event of Default" as defined in the Indenture or (iii) as may be necessary to comply with a final order of a court of competent jurisdiction in connection with any bankruptcy or reorganization proceeding of the Company. But this Bond is exchangeable by the registered holder hereof, in person or by attorney duly authorized, at the Corporate Trust Office of the Trustee, any such permitted transfer or exchange to be made in the manner and upon the conditions prescribed in the Indenture, upon the surrender and cancellation of this Bond and the payment of any applicable taxes and fees required by law, and upon any such transfer or exchange a new registered Bond or Bonds of the same series and tenor, will be issued to the authorized transferee, or the registered holder, as the case may be. The Company and the

Trustee may deem and treat the person in whose name this Bond is registered as the absolute owner for the purpose of receiving payment of or on account of the principal and interest due hereon and for all other purposes.

This Bond shall not be valid until authenticated by the manual signature of the Trustee, or a successor Trustee or Authenticating Agent appointed pursuant to the Indenture.

IN WITNESS WHEREOF, the Company has caused this Bond to be executed in its name by the manual or facsimile signature of an Authorized Executive Officer and attested by the manual or facsimile signature of another Authorized Executive Officer.

Dated: August 15, 2016

FIRSTENERGY GENERATION, LLC

By:
Name: James F. Pearson
Title: Executive Vice President and Chief Financial Officer

Attest:

Name: Ketan K. Patel
Title: Vice President and Corporate Secretary

[FORM OF TRUSTEE'S AUTHENTICATION CERTIFICATE]

TRUSTEE'S AUTHENTICATION CERTIFICATE

This is one of the Bonds of the series designated therein referred to in the within-mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., *as Trustee*

By:
Authorized Signatory

EXHIBIT 4.20

OPEN-END MORTGAGE,
GENERAL MORTGAGE INDENTURE
AND
DEED OF TRUST

FIRSTENERGY NUCLEAR GENERATION CORP.

TO

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.,
as Trustee

Dated As Of
June 1, 2009

This Instrument Contains After-Acquired Property Provisions

This Indenture constitutes a financing statement filed as a fixture filing under Article 9 of the Uniform Commercial Code (as in effect in the relevant jurisdiction) consisting of "goods" (as defined in such Uniform Commercial Code) which now are or later may become fixtures relating to the real property described in Exhibit A of this Indenture.

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OPEN-END MORTGAGE, GENERAL MORTGAGE INDENTURE AND DEED OF TRUST, dated as of June 1, 2009, between FIRSTENERGY NUCLEAR GENERATION CORP., a corporation organized and existing under the laws of the State of Ohio, the post office address of which is 76 South Main Street, Akron, Ohio 44308, and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., a national banking association organized and existing under the laws of the United States of America, the post office address of which is 1660 West 2nd Street, Suite 830, Cleveland, Ohio 44113, as Trustee.

WITNESSETH:

WHEREAS, all capitalized terms used in this Indenture have the respective meanings set forth in Article I; and

WHEREAS, the Company deems it necessary to borrow and, pursuant to this Indenture, to issue Bonds for its corporate purposes from time to time, and to mortgage and pledge the property hereinafter described to secure payment of the Bonds; and

WHEREAS, all acts and things have been done and performed which are necessary to make this Indenture, when duly executed and delivered, a valid and binding mortgage and deed of trust for the security of all Bonds duly issued hereunder and Outstanding from time to time; and the execution and delivery of this Indenture have been in all respects duly authorized.

NOW, THEREFORE, to secure the payment of the principal of, premium, if any, and interest, if any, on all Bonds issued and Outstanding under this Indenture when payable in accordance with the provisions thereof and hereof, and to secure the performance by the Company of, and its compliance with, the covenants and conditions of this Indenture, and in consideration of the premises and of One Dollar paid to the Company by the Trustee, the Company hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms to The Bank of New York Mellon Trust Company, N.A., as Trustee, and grants to the Trustee a security interest in, the following:

GRANTING CLAUSE FIRST

All right, title and interest of the Company, as of the date of the execution and delivery of this Indenture, in and to all property, real, personal and mixed located in the State of Ohio or the Commonwealth of Pennsylvania (other than Excepted Property), in any case used or to be used in or in connection with the Primary Purposes of the Company's Business (whether or not such use is the sole use of such property), including without limitation all right, title and interest of the Company in and to the following property so located (other than Excepted Property): (a) all real property owned in fee, easements and other interests in real property which are specifically described or referred to in Exhibit A attached hereto and incorporated herein by this reference; (b) all licenses, permits to use the real property of others, franchises to use public roads, streets and other public properties, rights of way and other rights or interests relating to the occupancy or use of real property, including without limitation all of the same which are specifically described or referred to in Exhibit B attached hereto and incorporated herein by this reference; (c) all facilities, machinery, equipment and fixtures for the generation or

production of electric energy including, but not limited to, all plants, powerhouses, dams, diversion works, generators, turbines, engines, boilers, fuel handling and transportation facilities, air and water pollution control and sewage and solid waste disposal facilities, switchyards, towers, substations, transformers, poles, lines, cables, conduits, ducts, conductors, meters, regulators and all other property used or to be used for any or all of such purposes; (d) all buildings, offices, warehouses, structures or improvements in addition to those referred to or otherwise included in clauses (a) and (c) above; (e) all computers, data processing, data storage, data transmission or telecommunications facilities, equipment and apparatus necessary for the operation or maintenance of any facilities, machinery, equipment or fixtures described or referred to in clauses (c) above; and (f) all of the foregoing property in the process of construction;

GRANTING CLAUSE SECOND

Subject to the applicable exceptions permitted by Section 8.10, Section 13.03 and Section 13.05, all right, title and interest of the Company in and to all property located in the State of Ohio or the Commonwealth of Pennsylvania (other than Excepted Property) of the kind and nature described in Granting Clause First which may be hereafter acquired by the Company, it being the intention of the Company that all such property acquired by the Company after the date of the execution and delivery of this Indenture shall be as fully embraced within and subjected to the Lien hereof as if such property were owned by the Company as of the date of the execution and delivery of this Indenture;

GRANTING CLAUSE THIRD

All right, title and interest of the Company in and to any Excepted Property, and any other property, real, personal or mixed, not described in Granting Clause First or Granting Clause Second, which may, from time to time after the date of the execution and delivery of this Indenture, by delivery or by one or more indentures supplemental hereto, be subjected to the Lien hereof by the Company or by anyone in its behalf, the Trustee being hereby authorized to receive the same at any time as additional security hereunder; it being understood that any such subjection to the Lien hereof of any Excepted Property or other property as additional security may be made subject to such reservations, limitations or conditions respecting the use and disposition of such property or the proceeds thereof as shall be set forth in such instrument; and

GRANTING CLAUSE FOURTH

All right, title and interest of the Company in and to all other property of whatever kind and nature subjected or intended to be subjected to the Lien of this Indenture by any of the terms and provisions hereof;

EXCEPTED PROPERTY

Expressly excepting and excluding, however, from the Lien and operation of this Indenture all right, title and interest of the Company in and to the following property, whether now owned or hereafter acquired (the "Excepted Property"):

(a) all cash on hand, in banks or in other financial institutions, deposit accounts, shares of stock, interests in general or limited partnerships, bonds, notes, other

evidences of indebtedness and other securities, securities entitlements and investment properties, of whatsoever kind and nature, not hereafter paid or delivered to, deposited with, or held by, the Trustee hereunder or required so to be (including without limitation all right, title and interest to any such cash or property held, in trust or otherwise, for current or projected decommissioning expenditures of the Company in respect of any of its facilities);

(b) all contracts, leases, operating agreements and other agreements of whatsoever kind and nature (including pole attachment agreements and joint pole agreements) (except to the extent that any of the same are specifically described in clause (a) or (b) of Granting Clause First of this Indenture, in which case they are included within the Lien of this Indenture); collections from former, present or future customers that are permitted by applicable law to be applied to, or pledged as security for, the repayment of securities issued by or on behalf of the Company, contract rights, bills, notes, chattel paper and other instruments (except to the extent that any of the same constitute securities, in which case they may be separately excepted from the Lien of this Indenture under clause (a) above); all revenues, income and earnings; all accounts, accounts receivable and unbilled revenues, and all rents, tolls, issues, product and profits, claims, credits, demands and judgments; all governmental and other licenses, permits, franchises, consents and allowances, including but not limited to permits licenses and rights (however characterized) granted by any governmental entity with respect to air, water or other types of pollution or pollution credits (except to the extent that any of the same are specifically described in clause (b) of Granting Clause First of this Indenture, in which case they are included within the Lien of this Indenture); and all patents, patent licenses and other patent rights, patent applications, trade names, trademarks, copyrights, domain names, claims, credits, choses in action and other intangible property and general intangibles including, but not limited to, computer software;

(c) all motor vehicles, automobiles, buses, trucks, truck cranes, tractors, trailers and similar vehicles and movable equipment; all rolling stock, rail cars, containers and other railroad equipment; all vessels, boats, barges and other marine equipment, all airplanes, helicopters, aircraft engines and other flight equipment, and all components, parts, accessories, supplies and fuel used or to be used in connection with any of the foregoing and all personal property of such character that the perfection of a security interest therein or other Lien thereon is not governed by the Uniform Commercial Code as in effect in the jurisdiction in which such property is located;

(d) all goods, stock in trade, wares, merchandise and inventory acquired or otherwise held for the purpose of sale or lease in the ordinary course of business; all spare parts and tools held for use or consumption in, or in the operation of, any properties of the Company; all equipment and other property held in advance of use thereof for maintenance, replacement or fixed capital purposes; all materials, supplies and inventory and other personal property which are consumable (otherwise than by ordinary wear and tear) in their use in or in connection with the operation of the Mortgaged Property; all fuel, including nuclear fuel, whether or not in a form consumable in the operation of the Mortgaged Property, including separate assemblies and components thereof in the forms in which such assemblies and components exist at any time before, during or after the

period of the use thereof as fuel (that is, in the case of nuclear fuel, the process, whether physical or chemical, by which the component parts of nuclear fuel are processed, enriched, designed or fabricated into assemblies, which, when loaded into a nuclear reactor, are intended to produce heat through the fission or any other process and thereafter are utilized, disengaged, cooled, stored or reprocessed);

(e) all satellites and other equipment and materials used or to be used in outer space; all business machines; all communications equipment (including telephone equipment); all computer equipment; all hand and other portable tools and equipment; all furniture and furnishings; and computers and data processing, data storage, data transmission, telecommunications, record production, storage and retrieval equipment and other facilities, equipment and apparatus, which, in any case, are used primarily for administrative or clerical purposes or are otherwise not necessary for the operation or maintenance of the facilities, machinery, equipment or fixtures described or referred to in clause (c) or (d) of Granting Clause First of this Indenture; and all components, spare parts, accessories, programs (other than computer software) and supplies used or to be used in connection with any of the foregoing;

(f) all sand, gravel, rocks, earth, natural gas, coal, lignite, ore, uranium, gas, oil and other minerals and all crops and timber, and all rights and interests in any of the foregoing (including without limitation rights to explore therefor), whether or not such minerals or crops and timber shall have been mined, extracted or harvested or otherwise separated from the land; all mineral rights, leases and royalties and income therefrom; all gas or oil wells or any lease or real estate acquired for the purpose of obtaining gas or oil rights; and all electric energy, gas (natural or artificial), steam, water, ice and other products generated, produced, manufactured, purchased or otherwise acquired by the Company; provided, that the Company's interest as lessee under that certain Lease Agreement dated as of May 14, 1976, between the State of Ohio (as lessor) and Cleveland Electric Illuminating Company (as lessee), which Lease Agreement was recorded in Volume 22, Page 738 of Lake County, Ohio Records (as such Lease Agreement has heretofore been assigned), shall not be deemed to be Excepted Property pursuant to this clause (f) (it being acknowledged that the Company's interest in such Lease Agreement shall instead be deemed to be Excepted Property pursuant to Excepted Property clauses (b) and (h));

(g) all real property, leaseholds, gas rights, wells, gathering, tap or other pipe lines, or facilities, equipment or apparatus, in any case used or to be used primarily for the production or gathering of natural gas;

(h) all property which is the subject of a lease agreement designating the Company as lessee and all right, title and interest of the Company in and to such property and in, to and under such lease agreement, including without limitation in and to leasehold improvements, whether or not such lease agreement is intended as security (except to the extent that any of the same are specifically described in clause (a) or (b) of Granting Clause First of this Indenture, in which case they are included within the Lien of this Indenture);

(i) all facilities, machinery, equipment and fixtures for the appropriation, storage, transmission and distribution of water including, but not limited to, water works, reservoirs, diversion works, stations and substations, transmission pipelines, canals, raceways, flumes, waterways, aqueducts, storage facilities, tanks, purifiers, valves, regulators, pumps, mains, pipes, service pipes, conduits, fittings and connections, services, meters and any and all other property used or to be used for any or all of such purposes;

(j) all permits, licenses, franchises and rights not specifically subjected or required to be subjected to the Lien hereof by the express provisions of this Indenture, whether now owned or hereafter acquired by the Company, which by their terms or by reason of applicable law would become void or voidable if mortgaged or pledged hereunder by the Company or which cannot be granted, conveyed, mortgaged, transferred or assigned by this Indenture without the consent of other parties whose consent is not secured, or without subjecting the Trustee to a liability not otherwise contemplated by the provisions of this Indenture, or which otherwise may not be, or are not, hereby lawfully and effectively granted, conveyed, mortgaged, transferred and assigned by the Company;

(k) all property, real, personal and mixed, which subsequent to the date of the execution and delivery of this Indenture, has been released from the Lien of this Indenture, and any improvements, extensions and additions to such properties and renewals, replacements and substitutions of or for any parts thereof;

(l) all property, real, personal and mixed, which meets all the following conditions:

(i) not specifically described in the Granting Clauses of this Indenture,

(ii) not specifically subjected or required to be subjected to the Lien hereof by the express provisions of this Indenture, and

(iii) not part of or used or for use in connection with any property specifically subjected or required to be subjected to the Lien hereof by the express provisions of this Indenture;

(m) the Company's franchise to be a corporation; and

(n) all books and records;

provided, however, that, subject to the provisions of Section 13.03, (x) if, at any time after the occurrence of an Event of Default, the Trustee, or any separate trustee or co-trustee appointed under Section 11.14 or any receiver appointed pursuant to Section 10.08 or otherwise, shall have entered into possession of all or substantially all of the Mortgaged Property, all the Excepted Property described or referred to in clauses (b), (c), and (d) then owned or held or thereafter acquired by the Company, to the extent that the same is used in connection with, or otherwise relates or is attributable to, the Mortgaged Property, shall immediately, and, in the case of any Excepted Property described or referred to in clause (h), to the extent that the same is used in connection with, or otherwise relates or is attributable to, the Mortgaged Property, upon demand

of the Trustee or such other trustee or receiver, become subject to the Lien of this Indenture to the extent not prohibited by law or by the terms of any other Lien at that time existing on such Excepted Property, and if not so prohibited, junior and subordinate to any such other Lien at that time existing on such Excepted Property, and the Trustee or such other trustee or receiver may, to the extent not prohibited by law or by the terms of any such other Lien (and subject to the rights of the holders of all such other Liens), at the same time likewise take possession thereof, and (y) whenever all Events of Default shall have been cured and the possession of all or substantially all of the Mortgaged Property shall have been restored to the Company, such Excepted Property shall again be excepted and excluded from the Lien hereof to the extent set forth above; it being understood, however, that (i) the Company may pursuant to Granting Clause Third, subject to the Lien of this Indenture any Excepted Property, whereupon the same shall cease to be Excepted Property and (ii) any property which was Excepted Property and becomes Mortgaged Property, for whatever reason, shall become Mortgaged Property subject to any Liens thereon which exist at the time such property becomes Mortgaged Property.

TO HAVE AND TO HOLD all such property, real, personal and mixed, unto the Trustee and its successors and assigns forever.

SUBJECT, HOWEVER, to (a) Permitted Liens, (b) Liens which have been granted by the Company to other Persons prior to the date of the execution and delivery of this Indenture, and (c) as to any property acquired by the Company after the date of execution and delivery of this Indenture, Liens existing or placed thereon at the time of the acquisition thereof (including, but not limited to, Purchase Money Liens and the Lien of any Class “A” Mortgage), it being understood that with respect to any of such property which is now or hereafter becomes subject to the Lien of any Class “A” Mortgage, the Lien of this Indenture shall at all times be junior and subordinate to the Lien of such Class “A” Mortgage;

BUT IN TRUST, NEVERTHELESS, for the equal and ratable benefit and security of all present and future Holders of the Bonds, and to secure the payment of the principal of, premium, if any, and interest, if any, on the Bonds issued and Outstanding under this Indenture when payable in accordance with the provisions thereof and hereof, and to secure the performance by the Company of, and its compliance with, the covenants and conditions of this Indenture without any preference, priority or distinction of any one Bond over any other Bond by reason of priority in the time of issue or negotiation thereof or otherwise;

UPON THE CONDITION that, until the happening of an Event of Default and subject to the provisions of Article VIII, the Company shall be permitted to possess and use the Mortgaged Property, except cash, securities and other personal property deposited and pledged, or required to be deposited and pledged, with the Trustee and to receive and use the rents, issues, profits, revenues and other income of the Mortgaged Property;

PROVIDED, HOWEVER, that the right, title and interest of the Trustee in and to the Mortgaged Property shall cease, terminate and become void in accordance with, and subject to the conditions set forth in, Article IX hereof, and if, thereafter, the principal of and premium, if any, and interest, if any, on the Bonds shall have been paid to the Holders thereof, or shall have been paid to the Company pursuant to Section 6.03(e) hereof, then and in that case this Indenture shall terminate, and, upon request of the Company, the Trustee shall execute and deliver to the

Company such instruments as the Company shall require to evidence such termination; otherwise this Indenture, and the estate and rights hereby granted, shall be and remain in full force and effect; and

IT IS HEREBY COVENANTED AND AGREED, by and between the Company and the Trustee, that all Bonds are to be authenticated and delivered and that all Mortgaged Property is to be held, subject to the further covenants, conditions, and trusts hereinafter set forth, and the Company, for itself and its successors and assigns, does hereby covenant and agree to and with the Trustee and its successors in trust, for the equal and ratable benefit of all Holders of the Bonds, as follows:

ARTICLE I

DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICATION

Section 1.01 General Definitions.

For all purposes of this Indenture, except as otherwise expressly provided or unless the context otherwise requires:

(a) the terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular;

(b) all terms used herein (and which are not specifically defined herein) which are defined in the Trust Indenture Act or by Commission rule under the Trust Indenture Act, either directly or by reference therein, have the meanings assigned to them therein;

(c) all terms used herein (and which are not specifically defined herein) which are defined in the Uniform Commercial Code (as in effect in the relevant jurisdiction) have the meanings assigned to them therein;

(d) the word “or” is not exclusive;

(e) all accounting terms not otherwise defined herein have the meanings assigned to them in accordance with Generally Accepted Accounting Principles;

(f) the words “herein”, “hereof” and “hereunder” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision; and

(g) all references in this instrument to designated Articles, Sections and other subdivisions are to the designated Articles, Sections and other subdivisions of this Indenture.

“Accountant” means a Person engaged in the accounting profession or otherwise qualified to pass on accounting matters (including, but not limited to, a Person certified or licensed as a public accountant, whether or not then engaged in the public accounting

profession), which Person, unless required to be Independent, may be employed by or Affiliated with the Company.

"Act" , when used with respect to any Holder, has the meaning specified in Section 1.07(a).

"Adjusted Net Earnings" means the amount calculated in accordance with Section 1.03(a); provided, however, that if any of the property of the Company owned by it at the time of the making of any Net Earnings Certificate (a) shall have been acquired during or after any period for which Adjusted Net Earnings of the Company are to be computed, (b) shall not have been acquired in exchange or substitution for property the net earnings of which have been included in the Adjusted Net Earnings of the Company, and (c) had been operated as a separate unit and items of revenue and expense attributable thereto are readily ascertainable, then the net earnings of such property (computed in the manner provided for the computation of the Adjusted Net Earnings of the Company) during such period or such part of such period as shall have preceded the acquisition thereof, to the extent that the same have not otherwise been included in the Adjusted Net Earnings of the Company, shall be so included.

"AEA" means, as of any time, the Atomic Energy Act of 1954, or any successor statute, as in force at such time.

"Affiliate" of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person; "Affiliated" has a meaning correlative to the foregoing. For the purposes of this definition, control" when used with respect to any specified Person means the power to direct generally the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative to the foregoing.

"Annual Interest Requirements" means the amount calculated in accordance with Section 1.03(b).

"Applicable Procedures" of a Depository means, with respect to any matter at any time, the policies and procedures of such Depository, if any, that are applicable to such matter at such time.

"Appraiser" means a Person engaged in the business of appraising property or competent to determine the Fair Value or fair market value of the particular property in question, and who or which, unless required to be Independent, may be employed by or Affiliated with the Company.

"Appraiser's Certificate" means a certificate signed by an Appraiser; any Appraiser's Certificate which is relied upon by an Independent Engineer, for purposes of an Independent Engineer's Certificate, shall be signed by an Independent Appraiser.

"Authenticating Agent" means any Person (other than the Company or an Affiliate of the Company) authorized by the Trustee to act on behalf of the Trustee to authenticate one or more series of Bonds, or any Tranche thereof.

"Authorized Executive Officer" means the Chairman of the Board, the Chief Executive Officer, the President, any Vice President (whether or not his or her title includes a modifier such as "Executive", "Senior" or the like), the Treasurer, any Assistant Treasurer, the Corporate Secretary, any Assistant Corporate Secretary or any other officer of the Company designated in an Officer's Certificate delivered to the Trustee to be an Authorized Executive Officer.

"Authorized Publication" means a newspaper or financial journal of general circulation, printed in the English language and customarily published on each Business Day, whether or not published on Saturdays, Sundays or holidays; or, in the alternative, shall mean such form of communication as may have come into general use for the dissemination of information of similar import. In the event that successive weekly publications in an Authorized Publication are required hereunder they may be made (unless otherwise expressly provided herein) on the same or different days of the week and in the same or in different Authorized Publications. In case, by reason of the suspension of publication of any Authorized Publication, or by reason of any other cause, it shall be impractical without extraordinary expense to make publication of any notice in an Authorized Publication as required by this Indenture, then such method of publication or notification as shall be made with the approval of the Trustee shall be deemed the equivalent of the required publication of such notice in an Authorized Publication.

"Authorized Purposes" means the authentication and delivery of Bonds, the release of property or the withdrawal of cash under any of the provisions of this Indenture.

"Board of Directors" duly means any of (a) the board of directors of the Company, (b) any authorized committee of that board or (c) any officer of the Company duly authorized by the Board of Directors to take a specified action.

"Board Resolution" means a copy of a resolution certified by the Corporate Secretary or an Assistant Corporate Secretary of the Company to have been duly adopted by the Board of Directors and to be in full force and effect on the date of such certification, and delivered to the Trustee. Where any provision of this Indenture refers to action to be taken pursuant to a Board Resolution, such action may be taken by the Board of Directors, any duly authorized committee of that board or any officer of the Company duly authorized by the Board of Directors to take such action.

"Bonded" has the meaning specified in Section 1.02(a).

"Bond Register" and "Bond Registrar" have the respective meanings specified in Section 3.05(a).

"Bonds" means any bonds authenticated and delivered under this Indenture.

"Business Day" when used with respect to a Place of Payment or any other particular location specified in the Bonds or this Indenture, means any day, other than a Saturday or Sunday, which is not a day on which banking institutions or trust companies in such Place of Payment or other location are generally authorized or required by law, regulation or executive order to remain closed, except as may be otherwise specified as contemplated by Section 3.01.

"Class "A" Bonds" means bonds or other obligations now or hereafter issued and Outstanding under any Class "A" Mortgage.

"Class "A" Mortgage" means, collectively, each mortgage or deed of trust or similar indenture, as amended and supplemented from time to time, to which any corporation that is subsequently merged into or consolidated with the Company was a party at the time of such merger or consolidation and which is hereafter designated an additional Class "A" Mortgage in an indenture supplemental hereto executed and delivered in accordance with Section 7.06.

"Commission" means the Securities and Exchange Commission, as from time to time constituted, created under the Exchange Act, or, if at any time after the execution of this instrument such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body (if any) performing such duties at such time.

"Company" means FirstEnergy Nuclear Generation Corp., a corporation of the State of Ohio, until a successor Person shall have become such pursuant to the applicable provisions of this Indenture, and thereafter "Company" shall mean such successor Person.

"Company Order" or "Company Request"

means a written order or request signed in the name of the Company by an Authorized Executive Officer and delivered to the Trustee.

"Corporate Trust Office"

means the office of the Trustee at which at any particular time its corporate trust business shall be principally administered, which office at the date of execution of this Indenture is located at 1660 West 2nd Street, Cleveland, Ohio 44113 Attention: Global Corporate Trust.

"corporation" means a corporation, association, company (including limited liability company), joint-stock company, business trust or other similar entity.

"Cost" with respect to Property Additions has the meaning specified in Section 1.04(c).

"Customary Exceptions" means, with respect to any Opinion of Counsel required to be delivered hereunder, such exceptions to opinions as are customarily expressed in opinions of counsel rendered in connection with similar transactions at the time such Opinion of Counsel is to be delivered and, in any event, shall include exceptions based upon limitations imposed by (a) bankruptcy, insolvency, fraudulent transfer and conveyance, reorganization, moratorium or other laws relating to or affecting mortgagees' and other creditors' rights and remedies generally, (b) general principles of equity, including principles of commercial reasonableness, good faith and fair dealing (regardless of whether such enforceability is considered in a proceeding at law or in equity) and (c) laws affecting creation, attachment, perfection or priority of, or remedies for the enforcement of, security interests.

"date of execution and delivery of this Indenture" means June 1, 2009.

"Defaulted Interest" has the meaning specified in Section 3.07(b).

"Depository" means, with respect to any Bonds of any series issuable or issued in whole or in part in the form of one or more Global Bonds, the clearing agency registered under the Exchange Act and any other applicable statute or regulation specified for that purpose with respect to such Bonds as contemplated by Section 3.01.

"Discount Bond" means any Bond which provides for an amount less than the principal amount thereof to be due and payable upon a declaration of acceleration of the Maturity thereof pursuant to Section 10.02(a).

"Dollar" or "$" means a dollar or other equivalent unit in such coin or currency of the United States as at the time shall be legal tender for the payment of public and private debts.

"Eligible Obligations" means:

(a) with respect to Bonds denominated in Dollars, Government Obligations; or

(b) with respect to Bonds denominated in a currency other than Dollars or in a composite currency, such other obligations or instruments as shall be specified with respect to such Bonds, as contemplated by Section 3.01.

"Engineer" means a Person engaged in the engineering profession or otherwise qualified to pass on engineering matters (including, without limitation, a Person licensed as a professional engineer, whether or not then engaged in the engineering profession) or a Person engaged in the business of appraising property or otherwise competent to determine the Fair Value or fair market value of the particular property in question, who, in each case, unless required to be Independent, may be employed by or Affiliated with the Company.

"Engineer's Certificate" means a certificate signed by an Authorized Executive Officer and by an Engineer; provided, however, that, in connection with the release of any property from the Lien of this Indenture, the Engineer's Certificate as to the Fair Value of such property, and as to the nonimpairment by reason of such release of the security of this Indenture in contravention of the provisions hereof, shall be made by an Independent Engineer if the Fair Value of such property and of all other property released since the commencement of the then current calendar year, as set forth in the certificates required by this Indenture, is 10% or more of the sum of (a) the aggregate principal amount of the Bonds at the time Outstanding, and (b) the aggregate principal amount of the Class "A" Bonds at the time Outstanding (other than Pledged Bonds); but such a certificate of an Independent Engineer shall not be required in the case of any release of property, if the Fair Value thereof as set forth in the certificates required by this Indenture is less than $25,000 or less than 1% of the sum of (i) the principal amount of the Bonds at the time Outstanding, and (ii) the principal amount of the Class "A" Bonds at the time Outstanding (other than Pledged Bonds).

"Event of Default" has the meaning specified in Section 10.01.

"Excepted Property" has the meaning specified in the "Excepted Property" clause set forth above.

"Exchange Act" means, as of any time, the Securities Exchange Act of 1934, as amended, or any successor statute, as in force at such time.

"Expiration Date" has the meaning specified in Section 1.07(g).

"Fair Value" , with respect to property, means the fair value of such property as may be determined by reference to (a) the amount which would be likely to be obtained in an arm's-length transaction with respect to such property between an informed and willing buyer and an informed and willing seller, under no compulsion, respectively, to buy or sell, (b) the amount of investment with respect to such property which, together with a reasonable return thereon, would be likely to be recovered through ordinary business operations or otherwise, (c) the Cost, accumulated depreciation and replacement cost with respect to such property and/or (d) any other relevant factors; provided, however, that the Fair Value of property (x) shall be determined without deduction for any Prior Liens (except as otherwise provided in Section 8.03) and (y) shall not reflect any reduction relating to the fact that such property may be of less value to a Person which is not the owner or operator of the Mortgaged Property or any portion thereof than to a Person which is such owner or operator. Fair Value may be determined, without physical inspection, by the use of accounting and engineering records and other data maintained by the Company or otherwise available to the Engineer or Appraiser certifying the same.

"Funded Cash" has the meaning specified in Section 1.02(b).

"Generally Accepted Accounting Principles" means, at any time, (i) with respect to any computation required or permitted under this Indenture, such accounting principles as are generally accepted in the United States at the date of such computation or, at the option of the Company from time to time, at the date of the execution and delivery of this Indenture or any Class "A" Mortgage which then remains in effect and (ii) if at such time the Company is required to prepare its financial statements for reports filed with the Commission under Section 13 or 15(d) of the Exchange Act pursuant to standards other than those specified in clause (i) (which may include International Financial Reporting Standards), such other standards, in each case which are in effect at such time; provided, however, that in determining generally accepted accounting principles applicable to the Company for purposes of making any computation required or permitted hereunder, the Company may, but shall not be required to, reflect any accounting pronouncement, order, rule or regulation of any administrative agency, regulatory authority or other governmental body having jurisdiction over the Company.

"Global Bond" means a Bond that evidences all or part of the Bonds of any series and bears the legend required by Section 2.03 (or such legend as may be specified as contemplated by Section 3.01 for such Bonds) and has been issued to the Depository or its nominee and registered in the name of such Depository or nominee.

"Governmental Authority" means the government of the United States or any state or territory thereof or of the District of Columbia or of any county, municipality or other political subdivision of any thereof, or any department, agency, authority or other instrumentality of any of the foregoing.

"Government Obligations" means:

(a) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America, and which are entitled to the benefit of the full faith and credit thereof; and

(b) certificates, depositary receipts or other instruments which evidence a direct ownership interest in obligations described in clause (a) above or in any specific interest or principal payments due in respect thereof, provided, however, that the custodian of such obligations or specific interest or principal payments shall be a bank or trust company subject to federal or state supervision or examination with a combined capital and surplus of at least $50,000,000; and provided, further, that except as may be otherwise required by law, such custodian shall be obligated to pay to the holders of such certificates, depositary receipts or other instruments the full amount received by such custodian in respect of such obligations or specific payments and shall not be permitted to make any deduction therefrom.

"Holder" means a Person in whose name a Bond is registered in the Bond Register.

"Indenture" means this instrument as originally executed, and as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof, including the terms of particular series of Bonds established as contemplated by Section 3.01, including, for all purposes of this instrument and any such supplemental indenture, the provisions of the Trust Indenture Act, that are deemed to be a part of and govern this instrument and any such supplemental indenture, respectively.

"Independent" when applied to any Person, means such a Person who (a) is in fact independent, (b) does not have any direct material financial interest in the Company or in any other obligor upon the Bonds or in any Affiliate of the Company or of such other obligor, (c) is not connected with the Company or such other obligor as an officer, employee, promoter, underwriter, trustee, partner, director or any Person performing similar functions, (d) is selected by an Authorized Officer of the Company and (e) is approved by the Trustee. The acceptance by the Trustee of a certificate or opinion of an Engineer, Accountant or Appraiser shall be sufficient evidence that the signer or signers have been approved by the Trustee.

"Independent Engineer's Certificate" means an Engineer's Certificate signed by an Independent Engineer.

"Interest Payment Date" when used with respect to any Bond, means the Stated Maturity of an installment of interest on such Bond.

"Investment Securities" means any of the following obligations or securities on which neither the Company nor an Affiliate thereof is the obligor: (a) Government Obligations; (b) interest bearing deposit accounts (which may be represented by certificates of deposit) in national or state banks (which may include the Trustee, an Affiliate of the Trustee or any Paying Agent) having a combined capital and surplus of not less than $10,000,000, or savings and loan associations having total assets of not less than $40,000,000; (c) bankers' acceptances drawn on and accepted by commercial banks (which may include the Trustee, an Affiliate of the Trustee or

any Paying Agent) having a combined capital and surplus of not less than $10,000,000; (d) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, any state or territory of the United States of America or the District of Columbia, or any political subdivision of any of the foregoing, which are rated in any of the three highest rating categories (without regard to modifiers) by a nationally recognized statistical rating organization; (e) bonds or other obligations of any agency or instrumentality of the United States of America; (f) commercial or finance company paper which is rated in any of the two highest rating categories (without regard to modifiers) by a nationally recognized statistical rating organization; (g) corporate debt securities rated in any of the three highest rating categories (without regard to modifiers) by a nationally recognized statistical rating organization; (h) repurchase agreements with banking or financial institutions having a combined capital and surplus of not less than $10,000,000 (which may include the Trustee, an Affiliate of the Trustee or any Paying Agent) with respect to any of the foregoing obligations or securities; (i) securities issued by any regulated investment company (including any investment company for which the Trustee is the advisor), as defined in Section 851 of the Internal Revenue Code of 1986, as amended, or any successor section of such Code or successor federal statute, provided that the portfolio of such investment company is limited to obligations that are bonds, notes, certificates of indebtedness, treasury bills or other securities now or hereafter issued, which are guaranteed as to principal and interest by the full faith and credit of the United States of America, which portfolio may include repurchase agreements which are fully collateralized by any of the foregoing obligations; and (j) any other obligations or securities which may lawfully and prudently be purchased by the Trustee.

"licensed activity" means a "licensed activity" as defined in Section 11(p) of the AEA. 'Lien" means any mortgage, pledge, security interest, encumbrance, easement, lease, reservation, restriction, servitude, charge or similar right or lien of any kind, including, without limitation, any conditional sale or other title retention agreement, any lease in the nature thereof, any filing of, or agreement to give, any financing statement under the Uniform Commercial Code of any jurisdiction, and any uninsured defect or irregularity in record title.

"Matured Event of Default" , when used with respect to any Class "A" Mortgage, means the occurrence of any default or any other event under such Class "A" Mortgage, and the expiration of the applicable grace period, if any, specified in such Class "A" Mortgage, if the effect of such default or other event is to accelerate, or to permit the acceleration of, only the maturity of any amount due under such Class "A" Mortgage.

"Maturity" , when used with respect to any Bond, means the date on which the principal of such Bond or an installment of principal becomes due and payable as provided in such Bond or in this Indenture, whether at the Stated Maturity, by declaration of acceleration, upon call for redemption or otherwise.

"Mortgaged Property" means as of any particular time all property which at said time is subject, or is intended by the terms of this Indenture to be subject, to the Lien of this Indenture.

"Net Earnings Certificate" has the meaning specified in Section 1.03.

"Notice of Default" means a written notice of the kind specified in Section 10.01(c).

"Nuclear Facility" means a "utilization facility" as defined in Section 11(cc) of the AEA or a "production facility" as defined in Section 11(v) of the AEA.

"Officer's Certificate" means a certificate signed by an Authorized Executive Officer.

"Opinion of Counsel" means a written opinion of counsel, who may be employed by or Affiliated with the Company or be counsel to the Company.

"Outstanding" , when used:

(a) with respect to Bonds, means, as of the date of determination, all Bonds theretofore authenticated and delivered under this Indenture, except:

(i) Bonds theretofore paid, retired, redeemed, discharged or canceled, or delivered to the Bond Registrar or Trustee for cancellation;

(ii) Bonds deemed to have been paid in accordance with Section 9.01;

(iii) Bonds deposited with or held in pledge by the Trustee under any of the provisions of this Indenture, including any so held under any sinking, improvement, maintenance, replacement or analogous fund; and

(iv) Bonds in exchange for or in lieu of which other Bonds have been authenticated and delivered pursuant to this Indenture, other than any such Bonds in respect of which there shall have been presented to the Trustee proof satisfactory to it and the Company that such Bonds are held by a protected purchaser (within the meaning of Section 8-303 of the Uniform Commercial Code) in whose hands such Bonds are valid obligations of the Company;

provided, however, that in determining whether or not the Holders of the requisite principal amount of the Bonds Outstanding under this Indenture, or the Outstanding Bonds of any series or Tranche, have given any request, demand, authorization, direction, notice, consent or waiver hereunder or whether or not a quorum is present at a meeting of Holders of Bonds:

(w) Bonds owned by the Company or any other obligor upon the Bonds or any Affiliate of the Company or of such other obligor (unless the Company, such Affiliate or such obligor owns all Bonds Outstanding under this Indenture, or all Outstanding Bonds of each such series and each such Tranche, as the case may be, determined without regard to this clause (w)) shall be disregarded and deemed not to be Outstanding, except that, in determining whether the Trustee shall be protected in relying upon any such request, demand, authorization, direction, notice, consent or waiver or upon any such determination as to the presence of a quorum, only Bonds which the Trustee knows to be so owned shall be so disregarded; provided, however, that Bonds so owned which have been pledged in good faith may be regarded as Outstanding if it is established to the

reasonable satisfaction of the Trustee that the pledgee, and not the Company or any such other obligor or Affiliate of either thereof, has the right so to act with respect to such Bonds and that the pledgee is not the Company or any other obligor upon the Bonds or any Affiliate of the Company or of such other obligor;

(x) the principal amount of a Discount Bond that shall be deemed to be Outstanding for such purposes shall be the amount of the principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the Maturity thereof pursuant to Section 10.02(a);

(y) if, as of such date, the principal amount payable at the Stated Maturity of a Bond is not determinable, the principal amount of such Bond which shall be deemed to be Outstanding shall be the amount as specified or determined as contemplated by Section 3.01; and

(z) the principal amount of a Bond denominated in one or more foreign currencies, composite currencies or currency units which shall be deemed to be Outstanding shall be the Dollar equivalent, determined as of such date in the manner provided as contemplated by Section 3.01, of the principal amount of such Bond (or, in the case of a Bond described in clause (x) or (y) above, of the amount determined as provided in such clause); and

(b) with respect to Class "A" Bonds, has the meaning specified in the related Class "A" Mortgage provided, however, that in determining whether the Pledged Bonds constitute a majority in aggregate principal amount of the Class "A" Bonds Outstanding under a Class "A" Mortgage for purposes of Section 7.05(b), Class "A" Bonds issued after the date of execution and delivery of this Indenture (other than Pledged Bonds or Class "A" Bonds issued to replace any mutilated, lost, destroyed or wrongfully taken Class "A" Bonds issued prior to the date of execution and delivery of this Indenture or to effect exchanges and transfers of Class "A" Bonds issued prior to the date of execution and delivery of this Indenture) shall be disregarded and deemed not to be Outstanding.

"Paying Agent" means any Person, including the Company or an Affiliate of the Company, authorized by the Company to pay the principal of and premium, if any, or interest, if any, on any Bonds on behalf of the Company.

"Periodic Offering" means an offering of Bonds of a series from time to time any or all of the specific terms of which Bonds, including without limitation the rate or rates of interest, if any, thereon, the Stated Maturity or Maturities thereof and the redemption provisions, if any, with respect thereto, are to be determined by the Company or its agents at or about the time of the issuance of such Bonds.

"Permitted Liens" means, at any time, any of the following:

(a) the Lien of this Indenture and all Liens and encumbrances junior thereto;

(b) Liens for taxes, assessments and other governmental charges or requirements not delinquent or which are currently being contested in good faith by appropriate proceedings;

(c) mechanics', workmen's, repairmen's, materialmen's, warehousemen's and carriers' Liens, Liens or privileges of any employees of the Company for salary or wages earned, but not yet payable, and other Liens, including without limitation Liens for worker's compensation awards, arising in the ordinary course of business for charges or requirements which are not delinquent or which are being contested in good faith and by appropriate proceedings;

(d) any attachment, judgment and other similar Lien arising in connection with court proceedings (i) in an amount not in excess of the greater of $5,000,000 or 3% of the principal amount at the time such attachment, judgment or Lien arises of the sum of (x) the aggregate principal amount of Bonds Outstanding, and (y) the principal amount of the Class "A" Bonds Outstanding (other than Pledged Bonds), or (ii) with respect to which the Company shall (A) in good faith be prosecuting an appeal or other proceeding for review and with respect to which the Company shall have secured a stay of execution pending such appeal or other proceeding, or (B) have the right to prosecute an appeal or other proceeding for review;

(e) easements, leases, reservations or other rights of others in, on or over, and laws, regulations and restrictions affecting, and defects and irregularities in record title to, the Mortgaged Property or any part thereof; provided, however, that such easements, leases, reservations, rights, laws, regulations, restrictions, defects and irregularities do not in the aggregate materially impair the use by the Company of the Mortgaged Property considered as a whole for the purposes for which it is held by the Company;

(f) any defects or irregularities in title to any rights-of-way or to any real estate used or to be used primarily for right-of-way purposes or held under lease, easement, license or similar right; provided, however, that (i) the Company shall have obtained from the apparent owner of the lands or estates therein covered by any such right-of-way a sufficient right, by the terms of the instrument granting such right-of-way, lease, easement, license or similar right, to the use thereof for the purpose for which the Company acquired the same, (ii) the Company has power under eminent domain, or similar statutes, to remove such defects or irregularities, or (iii) such defects or irregularities may be otherwise remedied without undue effort or expense;

(g) Liens securing indebtedness neither created, assumed nor guaranteed by the Company, nor on account of which it customarily pays interest, upon property hereafter acquired by the Company, at the time of the acquisition thereof by the Company;

(h) leases existing at the date of execution and delivery of this Indenture affecting property owned by the Company at said date and renewals and extensions thereof; and leases affecting such properties entered into after such date or affecting properties acquired by the Company after such date which, in either case (i) have respective terms (or periods at the end of which the Company may terminate the lease) of not more than ten (10) years (including

extensions or renewals at the option of the tenant), or (ii) do not materially impair the use by the Company of such properties for the respective purposes for which they are held by the Company;

(i) any Lien vested in any lessor, licensor or permitted for rent to become due or for other obligations or acts to be performed, the payment of which rent or the performance of which other obligations or acts is required under leases, subleases, licenses or permits, so long as the payment of such rent or the performance of such other obligations or acts is not delinquent or is being contested in good faith and by appropriate proceedings;

(j) any controls, restrictions, obligations, duties or other burdens imposed by any federal, state, municipal or other law, or by any rule, regulation or order of any Governmental Authority, upon any property of the Company or the operation or use thereof or upon the Company with respect to any of its property or the operation or use thereof or with respect to any franchise, grant, license, permit or public purpose requirement, or any rights reserved to or otherwise vested in any Governmental Authority to impose any such controls, restrictions, obligations, duties or other burdens;

(k) Liens granted on air or water pollution control, sewage or solid waste disposal, or other similar facilities of the Company in connection with the issuance of pollution control revenue bonds, in connection with financing the cost of, or the construction, acquisition, improvement, repair or maintenance of, such facilities;

(l) any right which any Governmental Authority may have by virtue of any franchise, license, contract or statute to purchase, or designate a purchaser of or order the sale of, any property of the Company upon payment of cash or reasonable compensation therefor or to terminate any franchise, license or other rights or to regulate the property and business of the Company;

(m) any Liens which have been bonded for the full amount in dispute or for the payment of which other adequate security arrangements have been made;

(n) (i) rights and interests of Persons other than the Company arising out of contracts, agreements and other instruments to which the Company is a party and which relate to the common ownership or joint use of property; and (ii) all Liens on the interests of Persons other than the Company in property owned in common by such Persons and the Company if and to the extent that the enforcement of such Liens would not adversely affect the interests of the Company in such property in any material respect;

(o) Liens securing indebtedness incurred by a Person, other than the Company, which indebtedness has been neither assumed nor guaranteed by the Company nor on which it customarily pays interest, existing on property which the Company owns jointly or in common with such Person or such Person and others, if there is a bar against partition of such property, which would preclude the sale of such property by such other Person or the holder of such Lien without the consent of the Company;

(p) Liens in favor of a government or governmental entity securing (i) payments pursuant to a statute (other than taxes and assessments), or (ii) indebtedness

incurred to finance all or part of the purchase price or cost of construction of the property subject to such Lien;

(q) any other Liens or encumbrances of whatever nature or kind which do not, individually or in the aggregate, materially impair the Lien of this Indenture or the security afforded thereby for the benefit of the Bondholders, as evidenced by an Opinion of Counsel to such effect;

(r) any trustee's Lien hereunder; and

(s) Prepaid Liens.

"Person" means any individual, corporation, association, partnership, joint venture, trust or unincorporated organization or any Governmental Authority.

"Place of Payment" when used with respect to the Bonds of any series, or any Tranche when used with respect to the Bonds of any series, or any Tranche thereof, means the place or places, specified as contemplated by Section 3.01, at which, subject to Section 6.02, principal of and premium, if any, and interest, if any, on the Bonds of such series or Tranche are payable upon presentation.

"Pledged Bonds" means Class "A" Bonds issued and delivered to, and held by, the Trustee hereunder.

"Predecessor Bond" of any particular Bond means every previous Bond evidencing all or a portion of the same debt as that evidenced by such particular Bond; and, for the purposes of this definition, any Bond authenticated and delivered under Section 3.06 in exchange for or in lieu of a mutilated, destroyed, lost or wrongfully taken Bond shall be deemed to evidence the same debt as the mutilated, destroyed, lost or wrongfully taken Bond.

"Prepaid Lien" means any Lien securing indebtedness for the payment of which money in the necessary amount (taking into consideration the amount of income reasonably projected to be earned on such amount) shall have been irrevocably deposited in trust with the trustee or other holder of such Lien; provided however, that if such indebtedness is to be redeemed or otherwise prepaid prior to the stated maturity thereof, any notice requisite to such redemption or prepayment shall have been given in accordance with the mortgage or other instrument creating such lien or irrevocable instructions to give such notice shall have been given to such trustee or other holder.

"Primary Purposes of the Company's Business" means the generation and production of electric energy.

"Prior Lien" means each Class "A" Mortgage and any other mortgage, lien, charge, encumbrance, security interest on or in, or pledge of, any Mortgaged Property existing both at and immediately prior to the time of the acquisition by the Company of such Mortgaged Property, or created as a Purchase Money Lien on such Mortgaged Property at the time of, or in connection with, its acquisition by the Company, in each case ranking prior to or on a parity with the Lien of this Indenture.

"Property Additions" has the meaning specified in Section 1.04(a).

"Purchase Money Lien" means, with respect to any property being acquired or disposed of by the Company or being released from the Lien of this Indenture, a Lien on such property which

(a) is taken or retained by the transferor of such property to secure all or part of the purchase price thereof;

(b) is granted to one or more Persons other than the transferor which, by making advances or incurring an obligation, give value to enable the grantor of such Lien to acquire rights in or the use of such property;

(c) is granted to any other Person in connection with the release of such property from the Lien of this Indenture on the basis of the deposit with the Trustee or the trustee or other holder of a Lien prior to the Lien of this Indenture of obligations secured by such Lien on such property (as well as any other property subject thereto);

(d) is held by a trustee or agent for the benefit of one or more Persons described in clause (a), (b) or (c) above, provided that such Lien may be held, in addition, for the benefit of one or more other Persons which shall have theretofore given, or may thereafter give, value to or for the benefit or account of the grantor of such Lien for one or more other purposes; or

(e) otherwise constitutes a purchase money mortgage or a purchase money security interest under applicable law;

and, without limiting the generality of the foregoing, for purposes of this Indenture, the term Purchase Money Lien shall be deemed to include any Lien described above whether or not such Lien (x) shall permit the issuance or other incurrence of additional indebtedness secured by such Lien on such property, (y) shall permit the subjection to such Lien of additional property and the issuance or other incurrence of additional indebtedness on the basis thereof or (z) shall have been granted prior to the acquisition, disposition or release of such property, shall attach to or otherwise cover property other than the property being acquired, disposed of or released or shall secure obligations issued prior or subsequent to the issuance of the obligations delivered in connection with such acquisition, disposition or release.

"Redemption Date" when used with respect to any Bond to be redeemed, means the date fixed for such redemption by or pursuant to this Indenture.

"Redemption Price" when used with respect to any Bond to be redeemed, means the price at which it is to be redeemed pursuant to this Indenture.

"Regular Record Date" for the interest payable on any Interest Payment Date on the Bonds of any series means the date specified for that purpose as contemplated by Section 3.01.

"Required Currency" has the meaning specified in Section 3.11.

"Responsible Officer" when used with respect to the Trustee, means any officer of the Trustee assigned by the Trustee to administer its corporate trust matters.

"Retired Bonds" means any Bonds authenticated and delivered under this Indenture which (a) no longer remain Outstanding by reason of the applicability of subclause (i), (ii) or (iii) of clause (a) in the definition of "Outstanding", (b) have not been made the basis under any of the provisions of this Indenture of one or more Authorized Purposes, and (c) have not been, and are not to be, paid, redeemed, purchased or otherwise retired by the application thereto of Funded Cash.

"Special Record Date" for the payment of any Defaulted Interest on the Bonds of any series means a date fixed by the Trustee pursuant to Section 3.07.

"Stated Interest Rate" means a rate more than zero at which an obligation by its terms is stated to bear simple interest, which rate may be a variable rate. Any calculation or other determination to be made under this Indenture by reference to the Stated Interest Rate on a Bond shall be made without regard to the effective interest cost to the Company of such Bond and without regard to the Stated Interest Rate on, or the effective cost to the Company of, any other obligation for which such Bond is pledged or otherwise delivered as security.

"Stated Maturity" when used with respect to any obligation or any installment of principal thereof or interest thereon, means the date on which the principal of such obligation or such installment of principal (whether as a result of scheduled amortization or otherwise) or interest is due and payable (without regard to any provisions for redemption, prepayment, acceleration, purchase or extension).

"Successor Corporation" has the meaning set forth in Section 13.01(b).

"Tranche" means those Bonds of a series which, as among themselves, have identical terms and the same original date of issuance but which, as to other Bonds of the same series, differ as to one or more terms or have a different original date of issuance.

"Trust Indenture Act" means, as of any time, the Trust Indenture Act of 1939, or any successor statute, as in force at such time.

"Trustee" means The Bank of New York Mellon Trust Company, N.A., a national banking association organized and existing under the laws of the United States of America, until a successor Trustee shall have become such with respect to one or more series of Bonds pursuant to the applicable provisions of this Indenture, and thereafter "Trustee" shall mean or include each Person who is then a Trustee hereunder, and if at any time there is more than one such Person, "Trustee" as used with respect to the Bonds of any series shall mean the Trustee with respect to Bonds of that series.

"Unbonded" as applied to Bonds (including Retired Bonds), Class "A" Bonds or Property Additions means that such Bonds, Class "A" Bonds or Property Additions are not Bonded.

"United States" means the United States of America, its territories, its possessions and other areas subject to its political jurisdiction.

Section 1.02 Bonded; Funded Cash.

(a) "Bonded" as applied to Bonds (including Retired Bonds), Class "A" Bonds or Property Additions means that such Bonds, Class "A" Bonds or Property Additions are within one or more of the following classes:

(i) the aggregate amount of Property Additions which have been used as a basis for the authentication and delivery of Bonds pursuant to Section 4.03 or the withdrawal of cash pursuant to Section 4.05(c) or Section 8.06(a)(i);

(ii) Bonds which have been used as a basis for the authentication and delivery of Bonds pursuant to Section 4.04 or the withdrawal of cash pursuant to Section 4.05(c) or Section 8.06(a)(ii), and Bonds paid, purchased or redeemed with money used or applied by the Trustee pursuant to Section 8.06(a)(iv) or (v);

(iii) Bonds, Class "A" Bonds and the aggregate amount of Property Additions which have been used as the basis of the release of property from the Lien of this Indenture;

(iv) Bonds, Class "A" Bonds and the aggregate amount of Property Additions which have been allocated or used as a basis for any credit against the requirements of any sinking, improvement, maintenance, replacement or analogous fund for any series or Tranche of Bonds; provided, however, that any such Bonds, Class "A" Bonds or amount of Property Additions so allocated or used shall be reinstated as Unbonded when all of the Bonds of the series or Tranche of Bonds in connection with such fund was established are retired;

(v) Class "A" Bonds which (x) have been used as a basis for the authentication and delivery of Bonds pursuant to Section 4.02 or (y) cannot, at the time of determination, be used as a basis for the issuance of Class "A" Bonds under a Class "A" Mortgage;

(vi) the aggregate amount of Property Additions designated in an Engineer's Certificate delivered to the Trustee pursuant to clause (iii) of Section 7.07(a) to be deemed to have been made the basis of the authentication and delivery of Bonds then Outstanding in connection with discharge of a Class "A" Mortgage.

(b) "Funded Cash" means:

(i) cash held by the Trustee hereunder, to the extent that it represents the proceeds of insurance on, or cash deposited in connection with the release of, property, or the proceeds of the release of obligations secured by a Purchase Money Lien which obligations have been delivered to the Trustee pursuant to Article VIII and used as a credit in any application for the release of property

hereunder, or the proceeds of payment to the Trustee on account of the principal of obligations secured by a Purchase Money Lien which obligations have been delivered to it pursuant to Article VIII and used as a credit in any application for the release of property hereunder, all subject, however, to the provisions of Section 8.06(c);

(ii) any cash deposited with the Trustee under Section 4.05; and

(iii) any cash received by the Trustee from the payment of the principal of Pledged Bonds.

Section 1.03 Net Earnings Certificate; Adjusted Net Earnings; Annual Interest Requirements

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A "Net Earnings Certificate" means a certificate signed by an Authorized Executive Officer and an Accountant (who may be employed by or Affiliated with the Company), stating:

(a) the "Adjusted Net Earnings" of the Company for a period of twelve (12) consecutive calendar months within the eighteen (18) calendar months immediately preceding the first day of the month in which the Company Order requesting the authentication and delivery under this Indenture of Bonds is delivered to the Trustee, specifying:

(i) its operating revenues (which may include revenues of the Company subject when collected or accrued to possible refund at a future date);

(ii) its operating expenses, excluding (A) expenses for taxes on income or profits and other taxes measured by, or dependent on, net income, (B) provisions for reserves for renewals, replacements, depreciation, depletion or retirement of property (or any expenditures therefor), or provisions for amortization of property, (C) expenses or provisions for interest on any indebtedness of the Company, for the amortization of debt discount, premium, expense or loss on reacquired debt, for any maintenance and replacement, improvement or sinking fund or other device for the retirement of any indebtedness, or for other amortization, (D) expenses or provisions for any non-recurring charge to income or to retained earnings of whatever kind or nature (including without limitation the recognition of expense or impairment due to the non-recoverability of assets or expense), whether or not recorded as a non-recurring charge in the Company's books of account, and (E) provisions for any refund of revenues previously collected or accrued by the Company subject to possible refund;

(iii) the amount remaining after deducting the amount required to be stated in such certificate by clause (ii) above from the amount required to be stated therein by clause (i) above;

(iv) its other income, net of related expenses (excluding expenses or provisions for any non-recurring charge to the income or retained earnings of the

entity which is the source of such other income of whatever kind or nature (including without limitation the recognition of expense or impairment due to the nonrecoverability of assets or expense), whether or not recorded and a non-recurring charge in such entity's books of account), which other income may include any portion of capitalized interest and other deferred costs (or any analogous amounts) which is not included in "other income" (or any analogous item) in the Company's books of account; and

(v) the Adjusted Net Earnings of the Company for such period of twelve (12) consecutive calendar months (being the sum of the amounts required to be stated in such certificate by clauses (iii) and (iv) above); and

(b) the "Annual Interest Requirements", being the interest requirements for one year, at the respective Stated Interest Rates, if any, borne prior to Maturity, upon:

(i) all Bonds Outstanding hereunder at the date of such certificate, except any for the payment or redemption of which the Bonds applied for are to be issued; provided, however, that, if Outstanding Bonds of any series bear interest at a variable rate or rates, then the interest requirement on the Bonds of such series shall be determined by reference to the rate or rates in effect on the day immediately preceding the date of such certificate;

(ii) all Bonds then applied for in pending applications for the original issuance of Bonds, including the application in connection with which such certificate is made; provided, however, that if Bonds of any series are to bear interest at a variable rate or rates, then the interest requirement on the Bonds of such series shall be determined by reference to the rate or rates to be in effect at the time of the initial authentication and delivery of such Bonds; and provided, further, that the determination of the interest requirement on Bonds of a series subject to a Periodic Offering shall be further subject to the provisions of clause (iv) of Section 4.01(a);

(iii) all Class "A" Bonds Outstanding under Class "A" Mortgages at the date of such certificate, except any Pledged Bonds and except any for the payment or redemption of which the Bonds applied for are to be issued; provided, however, that, if the Outstanding Class "A" Bonds of any series bear interest at a variable rate or rates, then the interest requirement on the Class "A" Bonds of such series shall be determined by reference to the rate or rates in effect on the day immediately preceding the date of such certificate; and

(iv) the principal amount of all other indebtedness (except (A) Pledged Bonds, (B) indebtedness of the Company the repayment of which supports or is supported by other indebtedness included in Annual Interest Requirements pursuant to one of the other clauses of this definition, (C) indebtedness for the payment of which the Bonds applied for are to be issued, and (D) indebtedness secured by a Prepaid Lien prior to the Lien of this Indenture upon property subject to the Lien of this Indenture), outstanding on the date of such certificate and

secured by a Lien on a parity with or prior to the Lien of this Indenture upon property subject to the Lien of this Indenture, if such indebtedness has been issued, assumed or guaranteed by the Company or if the Company customarily pays the interest upon the principal thereof or collections from the Company's customers are applied to, or pledged as security for the payment of such interest; provided, however, that if any such indebtedness bears interest at a variable rate or rates, then the interest requirement on such indebtedness shall be determined by reference to the rate or rates in effect on the day immediately preceding the date of such certificate; and provided, further, that any amounts collected by others to be applied to debt service on indebtedness of the Company, and not otherwise treated on the Company's books as revenue, shall be added to the Company's operating revenues when determining Adjusted Net Earnings.

In any case where a Net Earnings Certificate is required as a condition precedent to the authentication and delivery of Bonds, such certificate shall be accompanied by a certificate signed by an Independent Accountant if the aggregate principal amount of Bonds then applied for plus the aggregate principal amount of Bonds authenticated and delivered hereunder since the commencement of the then current calendar year (other than those with respect to which a Net Earnings Certificate is not required, or with respect to which a Net Earnings Certificate accompanied by a certificate signed by an Independent Accountant has previously been furnished to the Trustee) is 10% or more of the sum of (a) the aggregate principal amount of the Bonds at the time Outstanding, and (b) the aggregate principal amount of the Class "A" Bonds at the time Outstanding (other than Pledged Bonds), which certificate shall provide that such Independent Accountant has reviewed the Net Earnings Certificate and that such Independent Accountant has no knowledge that any statements in such Net Earnings Certificate are not true; but no such certificate need be signed by an Independent Accountant, as to dates or periods not covered by annual reports required to be filed by the Company, in the case of conditions precedent which depend upon a state of facts as of a date or dates or for a period or periods different from that required to be covered by such annual reports.

Section 1.04 Property Additions; Cost

(a) "Property Additions" means, as of any particular time, any item, unit or element of property which at such time is owned by the Company and is subject to the Lien of this Indenture. Property Additions:

(i) need not consist of a specific or completed development, plant, betterment, addition, extension, improvement or enlargement, but may include construction work in progress and property in the process of purchase insofar as the Company shall have acquired legal title to such property, and may include the following:

(A) fractional and other undivided interests of the Company in property owned jointly or in common with other Persons, whether or not there are with respect to such property, other agreements or obligations on the part of the Company, if there is a bar against partition of such property which would preclude the sale of such property by any or all of such other

Persons or the holder or holders of any Lien or Liens on the interest of any of such other Persons in such property, without the consent of the Company;

(B) engineering, economic, environmental, financial, geological and legal or other surveys, data processing equipment and software, preliminary to or associated with the acquisition or construction of property included or intended to be included in the Mortgaged Property, provided that any such property is not Excepted Property or, if it is Excepted Property, such property has been subjected to the Lien and operation of this Indenture as provided in Granting Clause Third;

(C) paving, grading and other improvements to, under or upon highways, bridges, parks or other public property of analogous character required for or in connection with the installation or repair of overhead, surface or underground facilities and paid for and used or to be used by the Company, notwithstanding that the Company may not hold legal title thereto;

(D) property located over, on or under property owned by other Persons, including governmental or municipal agencies, bodies or subdivisions, under permits, licenses, easements, franchises and other similar privileges, if the Company shall have the right to remove the same;

(E) intangible property (including any acquisition premium paid in connection with the acquisition of any property); and

(ii) may include renewals, replacements and substitution of property not excluded from the definition of "Property Additions" by virtue of clause (iii) below; but

(iii) shall not include:

(A) Excepted Property (other than Excepted Property which has been subjected to the Lien and operation of this Indenture as provided in Granting Clause Third); or

(B) any property the cost of acquisition or construction of which is properly chargeable to an operating expense account of the Company.

(b) When any Property Additions are certified to the Trustee as the basis of any Authorized Purpose (except as otherwise provided in Section 8.06):

(i) there shall be deducted from the Cost or Fair Value thereof to the Company, as the case may be (as of the date so certified), an amount (which amount shall not be less than zero) equal to the Cost (or as to Property Additions of which the Fair Value to the Company at the time the same became Property

Additions was less than the Cost as determined pursuant to subsection (c) of this Section, then such Fair Value in lieu of Cost) of all Property Additions retired on and after the date of execution and delivery of this Indenture (other than the Property Additions, if any, in connection with the application for release of which such certificate is filed), minus the aggregate Cost of all Property Additions acquired or constructed by the Company which are included in the Mortgaged Property after the date of execution and delivery of this Indenture; and

(ii) there may, at the option of the Company, be added to the Cost of Property Additions acquired or constructed by the Company which are included in the Mortgaged Property after the date of execution and delivery of this Indenture, the sum of:

(A) the principal amount of any obligations secured by a Purchase Money Lien and any cash (other than proceeds of such obligations secured by a Purchase Money Lien), not already included in such Cost, received by the Trustee representing the proceeds of insurance on, or of the release or other disposition of, Property Additions retired; and

(B) to the extent not already included in such Cost, an amount equal to 20/15ths of the principal amount of any Bond or Bonds, or portion of such principal amount, the right to the authentication and delivery of which under the provisions of Section 4.04 and subclause (B) of clause (iii) of Section 8.05(a) shall at any time theretofore have been waived as the basis of the release of Property Additions retired.

(c) The term "Cost" with respect to Property Additions made the basis for one or more Authorized Purposes shall mean the sum of (i) any cash or its equivalent forming a part of such Cost, plus all costs and capitalized financing costs thereof, capitalized future environmental remediation costs and other deferred costs relating to such construction, but only to the extent of the greater of the amount permitted by Generally Accepted Accounting Principles or the amount permitted by accounting regulations or orders issued by any governmental regulatory commission, (ii) an amount equivalent to the fair market value in cash (as of the date of delivery) of any securities or other property delivered in payment therefor or for the acquisition thereof and (iii) the principal amount of any indebtedness incurred or assumed as all or part of the Cost to the Company of such Property Additions; provided, however, that, notwithstanding any other provision of this Indenture, in any case where Property Additions shall have been acquired (otherwise than by construction) by the Company without any consideration consisting of cash, securities or other property or the incurring or assumption of indebtedness, no determination of Cost shall be required, and wherever in this Indenture provision is made for Cost or Fair Value, the Cost, in such case, shall mean an amount equal to the greater of (x) the Fair Value thereof, or (y) the book value of such acquired Property Additions at the time of the acquisition thereof.

(d) If any Property Additions are shown by the Engineer's Certificate provided for in clause (ii) of Section 4.03(b) to include property which has been used or operated by a Person or Persons other than the Company in a business similar to that in which it has been

or is to be used or operated by the Company, the Cost thereof may include the amount of cash or the value of any portion of the securities paid or delivered for any goodwill, going concern value rights and intangible property simultaneously acquired for which no separate or distinct consideration shall have been paid or apportioned, and in such case the term Property Additions as defined herein may include such goodwill, going concern value rights and intangible property, regardless of whether such Cost is permitted to be recorded in the plant account of the Company or is permitted to be recovered by the Company through the rates that it charges its customers.

(e) For the purposes of the deductions required by this Section, the Cost or the Fair Value to the Company of Property Additions retired shall be the Cost or the Fair Value thereof to the Company at the time such property became Property Additions.

(f) All Property Additions which shall be retired, abandoned, destroyed, released or otherwise disposed of (including damaged or destroyed Property Additions (or portions thereof) for which the Company shall have received proceeds pursuant to Section 6.07(b) but with respect to which the Company shall have elected not to rebuild or repair) shall for the purpose of this Section 1.04 be deemed Property Additions retired and for other purposes of this Indenture shall thereupon cease to be Property Additions, but may at any time thereafter again become Property Additions as provided in this Indenture. Neither any reduction in the Cost or book value of property recorded in the plant account of the Company, nor the transfer of any amount appearing in such account to intangible or adjustment accounts, otherwise than in connection with actual retirements of physical property abandoned, destroyed, released or disposed of, and otherwise than in connection with the removal of such property in its entirety from the plant account, shall be deemed to constitute a retirement of Property Additions.

Section 1.05 Compliance Certificates and Opinions.

(a) Except as otherwise expressly provided in this Indenture and as may otherwise be required under the Trust Indenture Act, upon any application or request by the Company to the Trustee to take any action under any provision of this Indenture, the Company shall furnish to the Trustee an Officer's Certificate stating that all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent, if any, have been complied with and, in such case, otherwise complying with the requirements of the Trust Indenture Act and any other requirements set forth in this Indenture, it being understood that in the case of any such application or request as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or request, no additional certificate or opinion need be furnished.

(b) Every certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture (other than certificates provided pursuant to Section 6.10 of this Indenture) shall include:

(i) a statement that each Person signing such certificate or opinion has read such covenant or condition and the definitions herein relating thereto;

(ii) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(iii) a statement that, in the opinion of each such Person, such Person has made such examination or investigation as is necessary to enable such Person to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(iv) a statement as to whether, in the opinion of each such Person, such condition or covenant has been complied with.

Section 1.06 Content and Form of Documents Delivered to Trustee

.

(a) Any Officer's Certificate may be based (without further examination or investigation), insofar as it relates to or is dependent upon legal matters, upon an opinion of, or representations by, counsel, and, insofar as it relates to or is dependent upon matters which are subject to verification by Accountants, upon a certificate or opinion of, or representations by, an Accountant, and, insofar as it relates to or is dependent upon matters which are required in this Indenture to be covered by a certificate or opinion of, or representations by, an Engineer, upon the certificate or opinion of, or representations by, an Engineer and, insofar as it relates to or dependent upon matters with respect to the Fair Value or fair market value of property, upon a certificate or opinion, or representations by, an Appraiser, unless, in any case, such officer has actual knowledge that the certificate or opinion or representations with respect to the matters upon which such Officer's Certificate may be based as aforesaid are erroneous.

Any Engineer's Certificate may be based (without further examination or investigation), insofar as it relates to or is dependent upon legal matters, upon an opinion of, or representations by, counsel, and insofar as it relates to or is dependent upon factual matters information with respect to which is in the possession of the Company and which are not subject to verification by Engineers, upon statements made by the Company in documents filed with any Governmental Authority or upon a certificate or opinion of, or representations by, an officer or officers of the Company and, insofar as it relates to or is dependent upon matters with respect to the Fair Value or fair market value of property, upon a certificate or opinion, or representations by, an Appraiser, and, where the property constitutes a Nuclear Facility, upon assumptions to the substantial effect that (i) decommissioning trust funds available for such Mortgaged Property will be sufficient to offset applicable future decommissioning liabilities and (ii) any then currently Nuclear Facility operating license applicable to such Mortgaged Property will be renewed or extended in a timely manner, unless, in any case, such Engineer has actual knowledge that any such statements, certificate or opinion or representations or assumptions with respect to the matters upon which such Engineer's Certificate may be based as aforesaid are erroneous.

Any certificate of an Accountant may be based (without further examination or investigation), insofar as it relates to or is dependent upon legal matters, upon an opinion of, or representations by, counsel, and insofar as it relates to or is dependent upon factual matters information with respect to which is in the possession of the Company and which are not subject

to verification by Accountants, upon statements made by the Company in documents filed with any Governmental Authority or upon a certificate of, or representations by, an officer or officers of the Company and, insofar as it relates to or is dependent upon matters with respect to the Fair Value or fair market value of property, upon a certificate or opinion, or representations by, an Appraiser, unless, in any case, such Accountant has actual knowledge that any such statements, certificate or opinion or representations with respect to the matters upon which such certificate may be based as aforesaid are erroneous.

Any Appraiser's Certificate may be based (without further examination or investigation), insofar as it relates to or is dependent upon legal matters, upon an opinion of, or representations by, counsel, and insofar as it relates to or is dependent upon factual matters information with respect to which is in the possession of the Company and which are not subject to verification by Appraisers, upon statements made by the Company in documents filed with any Governmental Authority or upon a certificate or opinion of, or representations by, an officer or officers of the Company, unless, in any case, such Appraiser has actual knowledge that any such statements, certificate or opinion or representations with respect to the matters upon which such Appraiser's Certificate may be based as aforesaid are erroneous.

Any Opinion of Counsel may be based (without further examination or investigation), insofar as it relates to or is dependent upon factual matters information with respect to which is in the possession of the Company, upon statements made by the Company in documents filed with any Governmental Authority or upon a certificate or opinion of, or representations by, an officer or officers of the Company, and, insofar as it relates to or is dependent upon matters which are subject to verification by Accountants upon a certificate or opinion of, or representations by, an Accountant, and, insofar as it relates to or is dependent upon matters required in this Indenture to be covered by a certificate or opinion of, or representations by, an Engineer, upon the certificate or opinion of, or representations by, an Engineer and, insofar as it relates to or is dependent upon matters with respect to the Fair Value or fair market value of property, upon a certificate or opinion, or representations by, an Appraiser, unless, in any case, such counsel has actual knowledge that any such statements, certificate or opinion or representations with respect to the matters upon which his opinion may be based as aforesaid are erroneous. In addition, any Opinion of Counsel may be based (without further examination or investigation), insofar as it relates to or is dependent upon matters covered in an Opinion of Counsel rendered by other counsel, upon such other Opinion of Counsel, unless such counsel has actual knowledge that the Opinion of Counsel rendered by such other counsel with respect to the matters upon which such Opinion of Counsel may be based as aforesaid are erroneous. Further, any Opinion of Counsel with respect to the status of title to or the sufficiency of descriptions of property, and/or the existence of Liens thereon, or the recording or filing of documents, or any similar matters, may be based (without further examination or investigation) upon (i) title insurance policies or commitments and reports, lien search results, reports or certificates and other similar documents, (ii) certificates of, or representations by, officers, employees, agents or other representatives of the Company, (iii) prior opinions of counsel, including in-house counsel, for the Company or any of its subsidiaries, or (iv) any combination of the documents referred to in (i), (ii) and (iii), unless, in any case, such counsel has actual knowledge that the document or documents with respect to the matters upon which his opinion may be based as aforesaid are erroneous. If, in order to render any Opinion of Counsel provided for herein, the signer thereof shall deem it necessary that additional facts or matters be stated in any Officer's Certificate,

certificate of an Accountant or Engineer's Certificate provided for herein, then such certificate may state all such additional facts or matters as the signer of such Opinion of Counsel may request.

(b) In any case where several matters are required to be certified by, or covered by an opinion of, any specified Person, it is not necessary that all such matters be certified by, or covered by the opinion of, only one such Person, or that they be so certified or covered by only one document, but one such Person may certify or give an opinion with respect to some matters and one or more other such Persons as to other matters, and any such Person may certify or give an opinion as to such matters in one or several documents.

(c) Where any Person is required to make, give or execute two or more applications, requests, consents, certificates, statements, opinions or other instruments under this Indenture, they may, but need not, be consolidated and form one instrument.

(d) Whenever, subsequent to the receipt by the Trustee of any Board Resolution, Officer's Certificate, Engineer's Certificate, Net Earnings Certificate, Opinion of Counsel or other document or instrument, a clerical, typographical or other inadvertent or unintentional error or omission shall be discovered therein, a new document or instrument may be substituted therefor in corrected form with the same force and effect as if originally filed in the corrected form and, irrespective of the date or dates of the actual execution or delivery thereof, such substitute document or instrument shall be deemed to have been executed or delivered as of the date or dates required with respect to the document or instrument for which it is substituted. Anything in this Indenture to the contrary notwithstanding, if any such corrective document or instrument indicates that action has been taken by or at the request of the Company which could have been taken only if the original document or instrument had contained such error or omission, the action so taken shall not be invalidated or otherwise rendered ineffective but shall be and remain in full force and effect, except to the extent that such action was a result of willful misconduct or bad faith. Without limiting the generality of the foregoing, any Bonds issued under the authority of such defective document or instrument shall nevertheless be the valid obligations of the Company entitled to the benefit of the Lien of this Indenture equally and ratably with all other Outstanding Bonds, except as aforesaid.

Section 1.07 Acts of Holders.

(a) Any request, demand, authorization, direction, notice, consent, election, waiver or other action provided by this Indenture to be made, given or taken by Holders may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such Holders in person or by an agent duly appointed in writing or, alternatively, may be embodied in and evidenced by the record of Holders voting in favor thereof, either in person or by proxies duly appointed in writing, at any meeting of Holders duly called and held in accordance with the provisions of Article XV, or a combination of such instruments and any such record. Except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments or record or both are delivered to the Trustee and, where it is hereby expressly required, to the Company. Such instrument or instruments and any such record (and the action embodied therein and evidenced thereby) are herein sometimes referred to as the "Act" of the Holders signing such instrument or instruments and so voting at any such meeting.

Proof of execution of any such instrument or of a writing appointing any such agent, or of the holding by any Person of a Bond, shall be sufficient for any purpose of this Indenture and (subject to Section 11.01) conclusive in favor of the Trustee and the Company, if made in the manner provided in this Section. The record of any meeting of Holders shall be proved in the manner provided in Section 15.06.

Without limiting the generality of this Section, unless otherwise provided in or pursuant to this Indenture, (i) a Holder, including a Depository or its nominee that is a Holder of a Global Bond, may give, make or take, by an agent or agents duly appointed in writing, any request, demand, authorization, direction, notice, consent, election, waiver or other action provided in or pursuant to this Indenture to be given, made or taken by Holders, and a Depository or its nominee that is a Holder of a Global Bond may duly appoint in writing as its agent or agents members of, or participants in, such Depository holding interests in such Global Bond in the records of such Depository; and (ii) with respect to any Global Bond the Depository for which is The Depository Trust Company ("DTC"), any consent or other action given, made or taken by an "agent member" of DTC by electronic means in accordance with the Automated Tender Offer Procedures system or other Applicable Procedures of, and pursuant to authorization by, DTC shall be deemed to constitute the "Act" of the Holder of such Global Bond, and such Act shall be deemed to have been delivered to the Company and the Trustee upon the delivery by DTC of an "agent's message" or other notice of such consent or other action having been so given, made or taken in accordance with the Applicable Procedures of DTC.

(b) The fact and date of the execution by any Person of any such instrument or writing may be proved by the affidavit of a witness of such execution or by a certificate of a notary public or other officer authorized by law to take acknowledgments of deeds, certifying that the individual signing such instrument or writing acknowledged to him the execution thereof or may be proved in any other manner which the Trustee and the Company deem sufficient. Where such execution is by a signer acting in a capacity other than his or her individual capacity, such certificate or affidavit shall also constitute sufficient proof of his or her authority.

(c) The ownership of and the principal amount (except as otherwise contemplated in clause (y) of the proviso to clause (a) of the definition of "Outstanding") and serial numbers of Bonds held by any Person, and the date of holding the same, shall be proved by the Bond Register.

(d) Any request, demand, authorization, direction, notice, consent, election, waiver or other Act of a Holder shall bind every future Holder of the same Bond and the Holder of every Bond issued upon the registration of transfer thereof or in exchange therefor or in lieu thereof in respect of anything done, omitted or suffered to be done by the Trustee or the Company in reliance thereon, whether or not notation of such action is made upon such Bond.

(e) Until such time as written instruments shall have been delivered to the Trustee with respect to the requisite percentage of principal amount of Bonds for the action contemplated by such instruments, any such instrument executed and delivered by or on behalf of the Holder may be revoked with respect to any or all of such Bonds by written notice by such Holder or any subsequent Holder, proven in the manner in which such instrument was proven.

(f) Bonds of any series, or any Tranche thereof, authenticated and delivered after any Act of Holders may, and shall if required by the Trustee, bear a notation in form approved by the Trustee as to any action taken by such Act of Holders. If the Company shall so determine, new Bonds of any series, or any Tranche thereof, so modified as to conform, in the opinion of the Trustee and the Company, to such action may be prepared and executed by the Company and authenticated and delivered by the Trustee in exchange for Outstanding Bonds of such series or Tranche.

(g) The Company may set any day as a record date for the purpose of determining the Holders of Outstanding Bonds of any Series entitled to give, make or take any request, demand, authorization, direction, notice, consent, election, waiver or other action provided or permitted by this Indenture to be given, made or taken by Holders of Bonds of such series; provided, however, that the Company may not set a record date for, and the provisions of this paragraph shall not apply with respect to, the giving, making or taking of any notice, declaration, request or direction referred to in the next paragraph. If any record date is set pursuant to this paragraph, the Holders of Outstanding Bonds of the relevant series on such record date, and no other Holders, shall be entitled to give, make or take the relevant action, whether or not such Holders remain Holders after such record date; provided, however, that no such action shall be effective hereunder unless given, made or taken on or prior to the applicable Expiration Date by Holders of the requisite aggregate principal amount of Outstanding Bonds of such series on such record date. Nothing in this paragraph shall be construed to prevent the Company from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be cancelled and of no effect), and nothing in this paragraph shall be construed to render ineffective any action given, made or taken by Holders of the requisite aggregate principal amount of Outstanding Bonds of the relevant series on the date such action is given, made or taken. Promptly after any record date is set pursuant to this paragraph, the Company, at its own expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Trustee in writing and to each Holder of Bonds of the relevant series in the manner set forth in Section 1.09.

The Trustee may set any day as a record date for the purpose of determining the Holders of Outstanding Bonds of any series entitled to join in the giving, making or taking of (i) any Notice of Default, (ii) any notice of declaration of acceleration referred to in Section 10.02, if an Event of Default has occurred and is continuing and the Trustee shall not have given such notice of declaration of acceleration to the Company, (iii) any request to institute proceedings referred to in Section 10.11(b) or (iv) any direction referred to in Section 10.16, in each case with respect to Bonds of such series. If any record date is set pursuant to this paragraph, the Holders of Outstanding Bonds of such series on such record date, and no other Holders, shall be entitled to give, make or take such notice, declaration, request or direction, whether or not such Holders remain Holders after such record date; provided, however, that no such action shall be effective hereunder unless given, made or taken on or prior to the applicable Expiration Date by Holders of such series of the requisite aggregate principal amount of Outstanding Bonds on such record date. Nothing in this paragraph shall be construed to prevent the Trustee from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be cancelled and of no effect), and nothing in this paragraph shall be construed to

render ineffective any action given, made or taken by Holders of the requisite aggregate principal amount of Outstanding Bonds of the relevant series on the date such action is given, made or taken. Promptly after any record date is set pursuant to this paragraph, the Trustee, at the Company's expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Company in writing and to each Holder of Bonds of the relevant series in the manner set forth in Section 1.09.

With respect to any record date set pursuant to this Section, the party hereto which sets such record date may designate any day as the "Expiration Date" and from time to time may change the Expiration Date to any earlier or later day; provided, however, that no such change shall be effective unless notice of the proposed new Expiration Date is given to the other party hereto in writing, and to each Holder of Bonds of the relevant series in the manner set forth in Section 1.09, on or prior to the existing Expiration Date. If an Expiration Date is not designated with respect to any record date set pursuant to this Section, the party hereto which set such record date shall be deemed to have initially designated the 180th day after such record date as the Expiration Date with respect thereto, subject to its right to change the Expiration Date to an earlier day as provided in this paragraph. Notwithstanding the foregoing, no Expiration Date shall be later than the 180th day after the applicable record date.

Without limiting the foregoing, a Holder entitled hereunder to give, make or take any action hereunder with regard to any particular Bond may do so, or duly appoint in writing any Person or Persons as its agent or agents to do so, with regard to all or any part of the principal amount of such Bond.

Section 1.08 Notices, Etc. to Trustee and Company.

(a) Any request, demand, authorization, direction, notice, consent, election, waiver or Act of Holders or other document provided or permitted by this Indenture to be made, given or furnished to, or filed with, the Trustee by any Holder or by the Company, or the Company by the Trustee or by any Holder, shall be sufficient for every purpose hereunder (unless otherwise expressly provided herein) if the same shall be in writing and delivered personally to an officer or other responsible employee of the addressee, or transmitted by telecopy or other direct written electronic means, or transmitted by registered or certified mail or reputable overnight courier, charges prepaid to the applicable address set under such party's name below or to such other address as either party hereto may, from time to time designate:

If to the Trustee, to:

The Bank of New York Mellon Trust Company, N.A.
1660 West 2nd Street, Suite 830
Cleveland, Ohio 44113
Attention: Global Corporate Trust

If to the Company, to:

FirstEnergy Nuclear Generation Corp.
76 South Main Street

Akron, Ohio 44308
Attention: Treasurer

(b) Any communication contemplated herein shall be deemed to have been made, given, furnished and filed if personally delivered, on the date of delivery, if transmitted by telecopy or other direct written electronic means, on the date of transmission, and if transmitted by registered or certified mail or reputable overnight courier, on the date of receipt. For purposes hereof, "electronic means" includes a writing or other communication delivered by e-mail transmission addressed to the relevant party at the e-mail address as such party may designate in writing from time to time and further includes, but is not limited to, documents and writings attached to emails in Portable Document Format (a/k/a .pdf). The initial email address for the Trustee is biagio.impala@bnymellon.com.

Section 1.09 Notice to Holders of Bonds; Waiver.

(a) Except as otherwise expressly provided herein, where this Indenture provides for notice to Holders of any event, such notice shall be sufficiently given, and shall be deemed given, to Holders if in writing and mailed, first-class postage prepaid, to each Holder affected by such event, at the address of such Holder as it appears in the Bond Register, not later than the latest date, and not earlier than the earliest date, prescribed for the giving of such notice.

(b) In case by reason of the suspension of regular mail service or by reason of any other cause it shall be impracticable to give such notice to Holders by mail, then such notification as shall be made with the approval of the Trustee shall constitute a sufficient notification for every purpose hereunder. In any case where notice to Holders is given by mail, neither the failure to mail such notice, nor any defect in any notice so mailed, to any particular Holder shall affect the sufficiency of such notice with respect to other Holders.

(c) Any notice required by this Indenture may be waived in writing by the Person entitled to receive such notice, either before or after the event otherwise to be specified therein, and such waiver shall be the equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

(d) Where this Indenture provides for notice of any event to a Holder of a Global Bond, such notice shall be sufficiently given if given to the Depository for such Bond (or its designee), pursuant to its Applicable Procedures, not later than the latest date (if any), and not earlier than the earliest date (if any), prescribed for the giving of such notice.

Section 1.10 Conflict with Trust Indenture Act.

If any provision of this Indenture limits, qualifies or conflicts with any duties under any required provision of the Trust Indenture Act imposed hereon by Section 318(c) thereof, or any successor section of such Act, such required provision shall control. If any provision of this Indenture modifies or excludes any provision of the Trust Indenture Act that may be so modified or excluded, the provision of the Trust Indenture Act shall be deemed to apply to this Indenture as so modified or shall be excluded, as the case may be.

Section 1.11 Effect of Headings and Table of Contents

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The Article and Section headings in this Indenture and the Table of Contents are for convenience only and shall not affect the construction hereof.

Section 1.12 Successors and Assigns.

All covenants and agreements in this Indenture by the Company shall bind its successors and assigns, whether so expressed or not.

Section 1.13 Separability Clause.

In case any provision in this Indenture or the Bonds shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 1.14 Benefits of Indenture.

Nothing in this Indenture or the Bonds, express or implied, shall give to any Person, other than the parties hereto, their successors hereunder and the Holders, any benefit or any legal or equitable right, remedy or claim under this Indenture, except as may otherwise be provided pursuant to Section 3.01 with respect to any Bonds of a particular series or under this Indenture with respect to such Bonds.

Section 1.15 Governing Law.

This Indenture and the Bonds shall be governed by and construed in accordance with the laws of the State of Ohio, except (a) to the extent that the law of any other jurisdiction shall be mandatorily applicable, (b) to the extent that perfection and the effect of perfection of the Lien of this Indenture may be governed by the laws of states other than the State of Ohio as provided by law, and (c) that the rights, duties, obligations, privileges and immunities of the Trustee under this Indenture and the Bonds shall be governed by the laws of the State of New York, in the case of The Bank of New York Mellon Trust Company, N.A., and of the jurisdiction in which the Corporate Trust Office of the Trustee is located in all other cases.

Section 1.16 Legal Holidays.

In any case where any Interest Payment Date, Redemption Date or Stated Maturity of any Bond shall not be a Business Day at any Place of Payment, then (notwithstanding any other provision of this Indenture or of the Bonds other than a provision in Bonds of any series, or any Tranche thereof, or in the indenture supplemental hereto which establishes the terms of such Bonds or Tranche, which specifically states that such provision shall apply in lieu of this Section), payment of interest or principal and premium, if any, need not be made at such Place of Payment on such date, but may be made on the next succeeding Business Day at such Place of Payment with the same force and effect as if made on the Interest Payment Date or Redemption Date, or at the Stated Maturity, and, if such payment is made or duly provided for on such Business Day, no interest shall accrue on the amount so payable for

the period from and after such Interest Payment Date, Redemption Date or Stated Maturity, as the case may be, to such Business Day.

Section 1.17 Investment of Cash Held by Trustee

.

Any cash held by the Trustee or any Paying Agent under any provision of this Indenture shall, except as otherwise provided in Article IX, at the request of the Company evidenced by Company Order, be invested or reinvested in Investment Securities designated by the Company, and any interest on such Investment Securities shall be promptly paid over to the Company as received free and clear of the Lien of this Indenture or any Lien arising by or through the Trustee, provided, however, that following the occurrence and during the continuance of an Event of Default, the Trustee shall not pay such interest over to the Company, but shall instead hold such interest as part of the Mortgaged Property. Such Investment Securities shall be held subject to the same provisions hereof as the cash used to purchase the same, but upon a like request of the Company shall be sold, in whole or in designated part, and the proceeds of such sale shall be held subject to the same provisions hereof as the cash used to purchase the Investment Securities so sold. If such sale shall produce a net sum less than the cost of the Investment Securities so sold, the Company shall pay to the Trustee or any such Paying Agent, as the case may be, such amount in cash as, together with the net proceeds from such sale, shall equal the cost of the Investment Securities so sold, and if such sale shall produce a net sum greater than the cost of the Investment Securities so sold, the Trustee or any such Paying Agent, as the case may be, shall promptly pay over to the Company an amount in cash equal to such excess, free and clear of any Lien.

Section 1.18 Approval of Signers.

The acceptance by the Trustee of any document, the signer of which is required by some provision hereof to be approved by the Trustee, shall be sufficient evidence of its approval of the signer within the meaning of this Indenture.

Section 1.19 No Adverse Interpretation of Other Agreements.

This Indenture may not be used to interpret any other indenture, loan or other agreement of the Company or of any other Person. Any such indenture, loan or other agreement may not be used to interpret this Indenture.

Section 1.20 Language of Notices, Etc.

Any request, demand, authorization, direction, notice, consent, waiver or Act of a Holder required or permitted under this Indenture shall be in the English language, except that any published notice may be in an official language of the country of publication.

Section 1.21 Security Agreement; Fixture Filing.

(a) The parties hereto intend for this Indenture to create a Lien on the Mortgaged Property in favor of the Trustee. The parties hereto acknowledge that some of the Mortgaged Property may be determined under applicable law to be personal property or fixtures. To the extent that any Mortgaged Property may be or be determined to be personal property or

fixtures, the Company, as debtor, hereby grants the Trustee, as secured party, a security interest in all such Mortgaged Property, to secure payment and performance of the Bonds. This Indenture constitutes a security agreement under the Uniform Commercial Code as in effect in each jurisdiction in which the Mortgaged Property is located, as amended or recodified from time to time, covering all such Mortgaged Property.

(b) This Indenture constitutes a financing statement filed as a fixture filing under Article 9 of the Uniform Commercial Code (as in effect in the relevant jurisdiction) consisting of "goods" (as defined in such Uniform Commercial Code) which now are or later may become fixtures relating to the real property described in Exhibit A of this Indenture. For this purpose, the respective addresses of the Company, as debtor, and the Trustee, as secured party, are as set forth in the preamble of this Indenture, the Company is the record owner of the real property (except as otherwise set forth on Exhibit A), and the Company's organizational identification number is 1533943.

ARTICLE II

BOND FORMS

Section 2.01 Forms Generally.

(a) The definitive Bonds of each series shall be in substantially the form or forms thereof established in the indenture supplemental hereto establishing such series, or in a Board Resolution establishing such series, or in an Officer's Certificate pursuant to a supplemental indenture or Board Resolution, in each case with such appropriate insertions, omissions, substitutions and other variations as are required or permitted by this Indenture, and may have such letters, numbers or other marks of identification and such legends or endorsements placed thereon as may be required to comply with the rules of any securities exchange or as may, consistently herewith, be determined by the officers executing such Bonds, as evidenced by their execution of such Bonds. If the form or forms of Bonds of any series are established in a Board Resolution or in an Officer's Certificate pursuant to a supplemental indenture or a Board Resolution, such Board Resolution and Officer's Certificate, if any, shall be delivered to the Trustee at or prior to the delivery of the Company Order contemplated by clause (ii) of Section 4.01(a) for the authentication and delivery of such Bonds.

(b) Bonds of each series shall be issuable in registered form without coupons. The definitive Bonds shall be produced in such manner as shall be determined by the officers executing such Bonds, as evidenced by their execution thereof.

Section 2.02 Form of Trustee's Certificate of Authentication.

The Trustee's certificate of authentication shall be in substantially the form set forth below:

This is one of the Bonds of the series designated therein referred to in the within-mentioned Indenture.

_____
as Trustee

By: _____
Authorized Signatory

Section 2.03 Form of Legend for Global Bonds

.

Unless otherwise specified as contemplated by Section 3.01 for the Bonds evidenced thereby, every Global Bond authenticated and delivered hereunder shall bear a legend in substantially the following form:

THIS BOND IS A GLOBAL BOND WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITORY OR A NOMINEE THEREOF. THIS BOND MAY NOT BE EXCHANGED IN WHOLE OR IN PART FOR A BOND REGISTERED, AND NO TRANSFER OF THIS BOND IN WHOLE OR IN PART MAY BE REGISTERED, IN THE NAME OF ANY PERSON OTHER THAN SUCH DEPOSITORY OR A NOMINEE THEREOF, EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE.

ARTICLE III

THE BONDS

Section 3.01 Amount of Bonds Unlimited; Issuable in Series

.

(a) The aggregate principal amount of Bonds which may be authenticated and delivered under this Indenture shall be unlimited.

(b) The Bonds may be issued in one or more series, each of which series may be issued in Tranches. Subject to subsection (c) of this Section, there shall be established in one or more indentures supplemental hereto, or in a Board Resolution, or in an Officer's Certificate pursuant to an indenture supplemental hereto or a Board Resolution, prior to the issuance of Bonds of any series:

(i) the title of the Bonds of such series (which title shall distinguish the Bonds of such series from Bonds of all other series);

(ii) any limit upon the aggregate principal amount of the Bonds of such series which may be authenticated and delivered under this Indenture (except for Bonds authenticated and delivered upon registration of transfer of, or in

exchange for, or in lieu of, other Bonds of such series pursuant to Section 3.04, 3.05, 3.06, 5.06 or 14.06 and except for any Bonds which, pursuant to Section 3.03(e), are deemed never to have been authenticated and delivered hereunder);

(iii) the Person (without specific identification) to whom interest on the Bonds of such series, or any Tranche thereof, shall be payable on any Interest Payment Date, if other than the Person in whose name that Bond (or one or more Predecessor Bonds) is registered at the close of business on the Regular Record Date for such interest;

(iv) the date or dates on which the principal of the Bonds of such series (including any scheduled amortization payments payable prior to the final Maturity of the Bonds), or any Tranche thereof, is payable or any formulary or other method or other means by which such date or dates shall be determined, by reference to an index or other fact or event ascertainable outside this Indenture or otherwise (without regard to any provisions for redemption, prepayment, acceleration, purchase or extension);

(v) the rate or rates at which the Bonds of such series, or any Tranche thereof, shall bear interest, if any (including the rate or rates at which overdue principal, premium or interest shall bear interest, if any), or any method or methods by which such rate or rates shall be determined, the date or dates from which such interest shall accrue, the Interest Payment Dates on which such interest shall be payable and the Regular Record Date, if any, for the interest payable on the Bonds on any Interest Payment Date; and the basis of computation of interest, if other than as provided in Section 3.10;

(vi) the place or places where or manner or method by which (A) the principal of (including installments of principal, if any, payable prior to the final Maturity of the Bonds) and premium, if any, and interest, if any, on the Bonds of such series, or any Tranche thereof, shall be payable upon presentation thereof (and, if payments of principal are to be paid prior to the final Maturity thereof, the method, if any, of evidencing the payment of such principal amounts), (B) Bonds of such series, or any Tranche thereof, may be surrendered for registration of transfer, (C) Bonds of such series, or any Tranche thereof may be surrendered for exchange, and (D) notices and demands to or upon the Company in respect of the Bonds of such series, or any Tranche thereof, and this Indenture may be served;

(vii) the period or periods within which, the price or prices at which and the terms and conditions upon which the Bonds of such series, or any Tranche thereof, may be redeemed, in whole or in part, at the option of the Company and any notice to be given in connection therewith (if other than as provided in Section 5.04);

(viii) the obligation, if any, of the Company to redeem or purchase the Bonds of such series, or any Tranche thereof, pursuant to any sinking fund or

analogous provisions or at the option of a Holder thereof and the period or periods within which, the price or prices at which and the terms and conditions upon which such Bonds shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(ix) the denominations in which Bonds of such series, or any Tranche thereof, shall be issuable if other than denominations of $1,000 and any integral multiple thereof;

(x) the currency or currencies, including composite currencies, in which payment of the principal of and premium, if any, and interest, if any, on the Bonds of such series, or any Tranche thereof, shall be payable (if other than in Dollars) and the manner of determining the equivalent thereof in Dollars for any purpose, including for the purposes of making payment in the currency of Dollars and applying the definition of "Outstanding" in Section 1.01; provided, however, that, unless otherwise expressly provided herein, for purposes of calculations under this Indenture (including calculations of Annual Interest Requirements contemplated by Section 1.03 and calculations of principal amount under Article IV), any amounts denominated in a currency other than Dollars or in a composite currency shall be converted to Dollar equivalents by calculating the amount of Dollars which could have been purchased by the amount of such other currency based (A) on the average of the mean of the buying and selling spot rates quoted by three banks which are members of the New York Clearing House Association selected by the Company in effect at 11:00 A.M. (New York time) in The City of New York on the fifth Business Day preceding the date of such calculation, or (B) if on such fifth Business Day it shall not be possible or practical to obtain such quotations from such three banks, on such other quotations or alternative methods of determination as shall be selected by an Authorized Executive Officer and which shall be reasonably acceptable to the Trustee;

(xi) if the principal of or premium, if any, or interest, if any, on the Bonds of such series, or any Tranche thereof, are to be payable, at the election of the Company or a Holder thereof, in a currency or currencies, including composite currencies, other than that in which the Bonds are stated to be payable, the currency or currencies, including composite currencies, in which the principal of or any premium or interest on such Bonds as to which such election is made shall be payable, the period or periods within which, and the terms and conditions upon which, such election may be made and the amount so payable (or the manner in which such amount shall be determined);

(xii) if the principal of or premium, if any, or interest, if any, on the Bonds of such series, or any Tranche thereof, are to be payable, or are to be payable at the election of the Company or a Holder thereof, in securities or other property, the type and amount of such securities or other property, or the method by which such amount shall be determined, and the period or periods within which, and the terms and conditions upon which, any such election may be made;

provided, however, that, notwithstanding any provision of this Indenture to the contrary, for purposes of calculations under this Indenture (including without limitation calculations under Article IV), any such election shall be disregarded;

(xiii) if the amount of payments of principal of or premium, if any, or interest, if any, on the Bonds of such series, or any Tranche thereof, may be determined with reference to an index, formula or other method or other fact or event ascertainable outside of this Indenture, the manner in which such amounts shall be determined;

(xiv) if other than the principal amount thereof, the portion of the principal amount of Bonds of such series, or any Tranche thereof, which shall be payable upon declaration of acceleration of the Maturity thereof pursuant to Section 10.02(a);

(xv) if the principal amount payable at the Stated Maturity of any Bonds of such series, or any Tranche thereof, will not be determinable as of any one or more dates prior to the Stated Maturity, the amount which shall be deemed to be the principal amount of such Bond as of any such date for any purpose thereunder or hereunder, including the principal amount thereof which shall be due and payable upon any Maturity other than the Stated Maturity or which shall be deemed to be Outstanding as of any date prior to the Stated Maturity (or, in any such case, the manner in which such amount deemed to be the principal amount shall be determined);

(xvi) the terms, if any, pursuant to which the Bonds of such series, or Tranche thereof, may be converted into or exchanged for shares of capital stock or other securities of the Company or any other Person;

(xvii) the obligations or instruments, if any, which shall be considered Eligible Obligations in respect of the Bonds of such series, or any Tranche thereof, denominated in a currency other than Dollars or in a composite currency, and any additional or alternative provisions for the reinstatement of the Company's indebtedness in respect of such Bonds after the satisfaction and discharge thereof as provided in Section 9.01;

(xviii) if a service charge will be made for the registration of transfer or exchange of Bonds of such series, or any Tranche thereof, the amount or terms thereof;

(xix) any exceptions to Section 1.16, or variation in the definition "Business Day", with respect to the Bonds of such series, or any Tranche thereof;

(xx) the terms of any sinking, improvement, maintenance, replacement or analogous fund for any series;

(xxi) if applicable, that any Bonds of such series, or any Tranche thereof, shall be issuable in whole or in part in the form of one or more Global Bonds and,

in such case, (A) the respective Depositories for such Global Bonds, (B) the form of any legend or legends which shall be borne by any such Global Bond in addition to or in lieu of that set forth in Section 2.03, (C) any addition to, elimination of or other change in the circumstances set forth in Clause (2) of Section 3.05(h) in which any such Global Bond may be exchanged in whole or in part for Bonds registered, and any transfer of such Global Bond in whole or in part may be registered, in the name or names of Persons other than the Depository for such Global Bond or a nominee thereof, (D) any limitations on the rights of the Holder or Holders thereof to transfer or exchange such Bonds or to obtain the registration of transfer thereof, (E) any limitations on the rights of the Holder or Holders thereof to obtain certificates therefor, (F) any other provisions governing exchanges or transfers of such Global Bonds, and (G) any and all other matter incidental to the issuance of such Bonds in global form;

(xxii) any addition to, elimination of or other change in the covenants set forth in Article VI which applies to Bonds of such series, or any Tranche thereof;

(xxiii) any provisions necessary to permit or facilitate the issuance, payment or conversion of any Bonds of such series, or any Tranche thereof, that may be converted into securities or other property other than Bonds of the same series and Tranche and of like tenor, whether in addition to, or in lieu of, any payment of principal or other amount and whether at the option of the Company or otherwise;

(xxiv) if applicable, that Persons other than those specified in Section 1.14 shall have such benefits, rights, remedies and claims with respect to any Bonds of such series, or any Tranche thereof, or under this Indenture with respect to such Bonds, as and to the extent provided for such Bonds; and

(xxv) any other terms of the Bonds of such series, or any Tranche thereof, not inconsistent with the provisions of this Indenture.

(c) With respect to Bonds of a series subject to a Periodic Offering, the indenture supplemental hereto or the Board Resolution, or Officer's Certificate pursuant to an indenture supplemental hereto or Board Resolution, as the case may be, which establishes such series may provide general terms or parameters for Bonds of such series and provide either that the specific terms of particular Bonds of such series shall be specified in a Company Order or that such terms shall be determined by the Company or its agent in accordance with a Company Order as contemplated by clause (ii) of Section 4.01(a).

(d) All Bonds of any one series shall be substantially identical except as to denomination and except as may otherwise be provided in or pursuant to the indenture supplemental hereto or the Board Resolution, or Officer's Certificate pursuant to an indenture supplemental hereto or Board Resolution, as the case may be, which establishes such series.

Section 3.02 Denominations.

Unless otherwise provided as contemplated by Section 3.01 with respect to any series of Bonds, the Bonds of each series shall be issuable in denominations of $1,000 and any integral multiple thereof.

Section 3.03 Execution, Dating, Certificate of Authentication.

(a) The Bonds shall be executed on behalf of the Company by an Authorized Executive Officer, and may (but shall not be required to) have the corporate seal of the Company affixed thereto or reproduced thereon and attested by any other Authorized Executive Officer. The signature of any or all of these officers on the Bonds may be manual or facsimile.

(b) Bonds bearing the manual or facsimile signatures of individuals who were at any time the proper officers of the Company shall bind the Company, notwithstanding that such individuals or any of them have ceased to hold such offices prior to the authentication and delivery of such Bonds or did not hold such offices at the date of such Bonds.

(c) Each Bond shall be dated the date of its authentication.

(d) If the form or terms of the Bonds of any series have been established by or pursuant to a Board Resolution as permitted by Sections 2.01 or 3.01, the Trustee shall not be required to authenticate such Bonds if the issuance of such Bonds pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Bonds and this Indenture or otherwise in a manner which is not reasonably acceptable to the Trustee.

(e) No Bond shall be entitled to any benefit under this Indenture or be valid or obligatory for any purpose unless there appears on such Bond a certificate of authentication substantially in the form provided for herein executed by the Trustee or an Authenticating Agent by manual signature, and such certificate upon any Bond shall be conclusive evidence, and the only evidence, that such Bond has been duly authenticated and delivered hereunder and is entitled to the benefits of this Indenture. Notwithstanding the foregoing, if any Bond shall have been authenticated and delivered hereunder to the Company, or any Person acting on its behalf, but shall never have been issued and sold by the Company, and the Company shall deliver such Bond to the Bond Registrar for cancellation or shall cancel such Bond and deliver evidence of such cancellation to the Trustee, together with a written statement (which need not comply with Section 1.05 and need not be accompanied by an Opinion of Counsel) stating that such Bond has never been issued and sold by the Company, for all purposes of this Indenture such Bond shall be deemed never to have been authenticated and delivered hereunder and shall never be entitled to the benefits hereof.

Section 3.04 Temporary Bonds.

(a) Pending the preparation of definitive Bonds of any series, the Company may execute, and upon Company Order the Trustee shall authenticate and deliver, temporary Bonds which are printed, lithographed, typewritten, mimeographed, photocopied or otherwise produced, in any authorized denomination, substantially of the tenor of the definitive Bonds in lieu of which they are issued, with such appropriate insertions, omissions, substitutions and other

variations as the officers executing such Bonds may determine, as evidenced by their execution of such Bonds,provided, however, that temporary Bonds need not recite specific redemption, sinking fund, conversion or exchange provisions.

(b) After the preparation of definitive Bonds of such series, the temporary Bonds of such series shall be exchangeable for definitive Bonds of such series upon surrender of the temporary Bonds of such series at the office or agency of the Company maintained pursuant to Section 6.02 in a Place of Payment for such series, without charge to the Holder. Upon surrender for cancellation of any one or more temporary Bonds of any series, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor definitive Bonds of the same series, of authorized denominations and of like tenor and aggregate principal amount.

(c) Until exchanged in full as hereinabove provided, the temporary Bonds shallin all respects be entitled to the same benefits under this Indenture as definitive Bonds of the same series and Tranche and of like tenor authenticated and delivered hereunder.

Section 3.05 Registration, Registration of Transfer and Exchange.

(a) The Company shall cause to be kept in each office designated pursuant to Section 6.02 a register (all registers kept in accordance with this Section being collectively referred to herein as the "Bond Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall provide for the registration of Bonds and the registration of transfer thereof. All Persons maintaining a Bond Register are referred to herein collectively as the "Bond Registrar." Anything herein to the contrary notwithstanding, the Company may designate one or more of its offices as an office in which the Bond Register shall be maintained, in which event the Company shall act as Bond Registrar. The Bond Register shall be in written form or in any other form capable of being converted into written form within a reasonable time. The Bond Register shall be open for inspection by the Trustee and the Company at all reasonable times. The Trustee, if not a Bond Registrar, shall be entitled to receive and shall be fully protected in relying upon a certificate of a Bond Registrar as to the names and addresses of the holders of Bonds and the principal amounts and numbers of such Bonds. Anything herein to the contrary notwithstanding, the Company hereby appoints the Trustee as initial Bond Registrar.

(b) Upon surrender for registration of transfer of any Bond at the office or agency of the Company maintained pursuant to Section 6.02 in a Place of Payment for such series, the Company shall execute, and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Bonds of the same series and Tranche, of authorized denominations and of like tenor and aggregate principal amount.

(c) At the option of the Holder, any Bond may be exchanged for one or more new Bonds of the same series and Tranche, of authorized denominations and of like tenor and aggregate principal amount, upon surrender of the Bonds to be exchanged at any such office or agency. Whenever any Bonds are so surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Bonds which the Holder making the exchange is entitled to receive.

(d) All Bonds issued upon any registration of transfer or exchange of Bonds shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Bonds surrendered upon such registration of transfer or exchange.

(e) Every Bond presented or surrendered for registration of transfer or for exchange shall (if so required by the Company or the Trustee or any transfer agent) be duly endorsed or shall be accompanied by a written instrument of transfer in form satisfactory to the Company and the Bond Registrar or any transfer agent duly executed by the Holder thereof or his attorney duly authorized in writing.

(f) Unless otherwise provided in the indenture supplemental hereto, a Board Resolution or Officer's Certificate pursuant to a supplemental indenture or a Board Resolution with respect to Bonds of any series, or any Tranche thereof, no service charge shall be made for any registration of transfer or exchange of Bonds, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with any registration of transfer or exchange of Bonds, other than exchanges pursuant to Section 3.04, 5.06 or 14.06 not involving any transfer.

(g) The Company shall not be required to issue and the Bond Registrar shall not be required to register the transfer of or to exchange (a) Bonds of any series during a period of fifteen (15) days immediately preceding the date notice is given identifying the serial numbers of the Bonds of such series called for redemption, or (b) any Bond so selected for redemption in whole or in part, except the unredeemed portion of any Bond being redeemed in part.

(h) The provisions of Clauses (1), (2), (3), (4), (5) and (6) below shall apply only to Global Bonds:

(1) Each Global Bond authenticated under this Indenture shall be registered in the name of the Depository designated for such Global Bond or a nominee thereof and delivered to such Depository or a nominee thereof or custodian therefor, and each such Global Bond shall constitute a single Bond for all purposes of this Indenture.

(2) Notwithstanding any other provision in this Indenture, and subject to such applicable provisions, if any, as may be specified as contemplated by Section 3.01, no Global Bond may be exchanged in whole or in part for Bonds registered, and no transfer of a Global Bond in whole or in part may be registered, in the name of any Person other than the Depository for such Global Bond or a nominee thereof unless (A) such Depository has notified the Company that it (i) is unwilling or unable to continue as Depository for such Global Bond or (ii) has ceased to be a clearing agency registered under the Exchange Act, (B) there shall have occurred and be continuing an Event of Default or (C) the Company has executed and delivered to the Trustee a Company Order stating that such Global Bond shall be exchanged in whole for Bonds that are not Global Bonds (in which case such exchange shall promptly be effected by the Trustee). If the Company receives a notice of the kind specified in Clause (A) above or has delivered a Company Order of the kind specified in Clause (C) above, the Company may, in its sole discretion, designate a successor Depository for such Global Bond within sixty (60) days

after receiving such notice or delivery of such order, as the case may be. If the Company designates a successor Depository as aforesaid, such Global Bond shall promptly be exchanged in whole for one or more other Global Bonds registered in the name of the successor Depository, whereupon such designated successor shall be the Depository for such successor Global Bond or Global Bonds and the provisions of Clauses (1), (2), (3), (4) (5) and (6) of this Section shall continue to apply thereto.

(3) Subject to Clause (2) above, any exchange of a Global Bond for other Bonds may be made in whole or in part, and all Bonds issued in exchange for a Global Bond or any portion thereof shall be registered in such names as the Depository for such Global Bond shall direct.

(4) Every Bond authenticated and delivered upon registration of transfer of, or in exchange for or in lieu of, a Global Bond or any portion thereof, whether pursuant to this Section, Section 3.04, 3.05, 3.06, 5.06 or 14.06 or otherwise, shall be authenticated and delivered in the form of, and shall be, a Global Bond, unless such Bond is registered in the name of a Person other than the Depository for such Global Bond or a nominee thereof.

(5) Neither the Company, the Trustee nor any agent of the Company or the Trustee shall have any responsibility or liability for any aspect of the records relating to or payments made on account of beneficial ownership interests of a global bond, or for maintaining, supervising or reviewing any records relating to such beneficial ownership interests.

(6) Members of, or participants in, the depository ("participants") shall have no rights under this Indenture with respect to any global bond held on their behalf by the depository, or the Trustee as its custodian, or under such global bond, and the depository may be treated by the Company, the Trustee and any agent of the Company or the Trustee as the absolute owner of such global bond for all purposes whatsoever. Notwithstanding the foregoing, nothing herein shall prevent the Company, the Trustee or any agent of the Company or the Trustee from giving effect to any written certification, proxy or other authorization furnished by the depository or impair, as between the depository and participants, the operation of customary practices governing the rights of a holder of any bond.

Section 3.06 Mutilated, Destroyed, Lost and Wrongfully Taken Bonds

.

(a) If any mutilated Bond is surrendered to the Trustee, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a new Bond of the same series, and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

(b) If both (i) there shall be delivered to the Company and the Trustee (A) a claim by a Holder as to the destruction, loss or wrongful taking of any Bond of such Holder and a request thereby for a new replacement Bond, and (B) such indemnity bond as may be required by them to save each of them and any agent of either of them harmless and (ii) such other

reasonable requirements as may be imposed by the Company as permitted by Section 8-405 of the Uniform Commercial Code have been satisfied, then, in the absence of notice to the Company or the Trustee that such Bond has been acquired by a "protected purchaser" within the meaning of Section 8-303 of the Uniform Commercial Code, the Company shall execute and the Trustee shall authenticate and deliver, in lieu of any such destroyed, lost or wrongfully taken Bond, a new Bond of the same series and Tranche, and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

(c) Notwithstanding the foregoing, in case any such mutilated, destroyed, lost or wrongfully taken Bond has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Bond, pay such Bond.

(d) Upon the issuance of any new Bond under this Section, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other reasonable expenses (including the fees and expenses of the Trustee) connected therewith.

(e) Every new Bond of any series issued pursuant to this Section in lieu of any destroyed, lost or wrongfully taken Bond shall constitute an original additional contractual obligation of the Company, whether or not the destroyed, lost or wrongfully taken Bond shall be at any time enforceable by anyone, and any such new Bond shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Bonds of such series duly issued hereunder.

(f) The provisions of this Section are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or wrongfully taken Bonds.

Section 3.07 Payment of Interest; Interest Rights Preserved.

(a) Unless otherwise provided as contemplated by Section 3.01 with respect to the Bonds of any series, or any Tranche thereof, interest on any Bond which is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Person in whose name that Bond (or one or more Predecessor Bonds) is registered at the close of business on the Regular Record Date for such interest.

(b) Any interest on any Bond of any series which is payable, but is not punctually paid or duly provided for, on any Interest Payment Date (herein called "Defaulted Interest") shall forthwith cease to be payable to the Holder on the related Regular Record Date by virtue of having been such Holder, and such Defaulted Interest may be paid by the Company, at its election in each case, as provided in clause (i) or (ii) below.

(i) The Company may elect to make payment of any Defaulted Interest to the Persons in whose names the Bonds of such series (or their respective Predecessor Bonds) are registered at the close of business on a Special Record Date for the payment of such Defaulted Interest, which shall be fixed in the following manner. The Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each Bond of such series and

the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as provided in this clause (i). Thereupon the Trustee shall fix a Special Record Date for the payment of such Defaulted Interest which shall be not more than fifteen (15) days and not less than ten (10) days prior to the date of the proposed payment and not less than ten (10) days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such Special Record Date and, in the name and at the expense of the Company, shall promptly cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, first-class postage prepaid, to each Holder of Bonds of such series at the address of such Holder as it appears in the Bond Register, not less than ten (10) days prior to such Special Record Date. Notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor having been so mailed, such Defaulted Interest shall be paid to the Persons in whose names the Bonds of such series (or their respective Predecessor Bonds) are registered at the close of business on such Special Record Date and shall no longer be payable pursuant to the following clause (ii).

(ii) The Company may make payment of any Defaulted Interest on the Bonds of any series in any other lawful manner not inconsistent with the requirements of any securities exchange on which such Bonds may be listed, and upon such notice as may be required by such exchange, if, after notice is given by the Company to the Trustee of the proposed payment pursuant to this clause (ii), such manner of payment shall be deemed practicable by the Trustee.

(c) Subject to the foregoing provisions of this Section and Section 3.05, each Bond delivered under this Indenture upon registration of, transfer of, or in exchange for, or in lieu of, any other Bond shall carry the rights to interest accrued and unpaid, and to accrue, which were carried by such other Bond.

(d) Except as may otherwise be provided in this Section 3.07 or as contemplated in Section 3.01 with respect to any Bonds of a series, the Person to whom interest shall be payable on any Bond that first becomes payable on a day that is not an Interest Payment Date shall be the Holder of such Bond on the day such interest is paid.

Section 3.08 Persons Deemed Owners.

The Company, the Trustee and any agent of the Company or the Trustee may treat the Person in whose name any Bond, issued in registered form without coupons, is registered as the absolute owner of such Bond for the purpose of receiving payment of principal of and premium, if any, and (subject to Sections 3.05 and 3.07) interest, if any, on such Bond and for all other purposes whatsoever, whether or not such Bond be overdue, and neither the Company, the Trustee nor any agent of the Company or the Trustee shall be affected by notice to the contrary.

Section 3.09 Cancellation by Bond Registrar.

All Bonds surrendered for payment, redemption, registration of transfer or exchange, or upon purchase or other acquisition by or on behalf of the Company, shall, if surrendered to any Person other than the Bond Registrar, be delivered to the Bond Registrar and, if not theretofore canceled, shall be promptly canceled by the Bond Registrar. The Company may at any time deliver to the Bond Registrar for cancellation any Bonds previously authenticated and delivered hereunder which the Company may have acquired in any manner whatsoever or which the Company shall not have issue and sold, and all Bonds so delivered shall be promptly canceled by the Bond Registrar. No Bonds shall be authenticated in lieu of or in exchange for any Bonds canceled as provided in this Section, except as expressly permitted by this Indenture. All canceled Bonds held by the Bond Registrar shall be disposed of in accordance with a Company Order and the Bond Registrar shall promptly deliver a certificate of disposition to the Company unless, by a Company Order, the Company shall direct that canceled Bonds be returned to it. The Bond Registrar shall promptly deliver evidence of any cancellation of a Bond in accordance with this Section to the Trustee and the Company.

Section 3.10 Computation of Interest.

Except as otherwise specified as contemplated by Section 3.01 for Bonds of any series, or any Tranche thereof, interest (if any) on the Bonds of each series shall be computed on the basis of a 360-day year consisting of twelve 30-day months.

Section 3.11 Payment to Be in Proper Currency.

In the case of any Bonds denominated in any currency other than Dollars or in a composite currency (the “Required Currency”), except as otherwise provided therein, the obligation of the Company to make any payment of the principal thereof, or the premium, if any, or interest, if any, thereon, shall not be discharged or satisfied by any tender by the Company, or recovery by the Trustee, in any currency other than the Required Currency, except to the extent that such tender or recovery shall result in the Trustee timely holding the full amount of the Required Currency then due and payable. If any such tender or recovery is in a currency other than the Required Currency, the Trustee may take such actions as it considers appropriate to exchange such currency for the Required Currency. The costs and risks of any such exchange, including without limitation the risks of delay and exchange rate fluctuation, shall be borne by the Company, the Company shall remain fully liable for any shortfall or delinquency in the full amount of Required Currency then due and payable, and in no circumstances shall the Trustee be liable therefor except in the case of its negligence or willful misconduct. The Company hereby waives any defense of payment based upon any such tender or recovery which is not in the Required Currency, or which, when exchanged for the Required Currency by the Trustee, is less than the full amount of Required Currency then due and payable.

Section 3.12 CUSIP and ISIN Numbers.

The Company in issuing the Bonds may use CUSIP, ISIN or other similar numbers (if then generally in use), and, if so, the Trustee shall use CUSIP, ISIN or other similar numbers in notices of redemption or other notices in respect of the Bonds as a convenience to

Holders in accordance with Section 5.04(b)(viii); provided, however, that any such notice may state that no representation is made as to the correctness of such CUSIP, ISIN or other similar numbers either as printed on the Bonds or as contained in any notice and that reliance may be placed only on the other identification numbers printed on the Bonds, and any such redemption or other action or event as to which notice is given shall not be affected by any defect in or omission of such CUSIP, ISIN or other similar numbers.

ARTICLE IV

ISSUANCE OF BONDS

Section 4.01 General

.

(a) Subject to the provisions of Section 4.02, 4.03, 4.04 or 4.05, whichever may be applicable, the Trustee shall authenticate and deliver Bonds of a series, for original issue, at one time or from time to time in accordance with the Company Order referred to below, upon receipt by the Trustee of:

(i) if the terms of such series are established in an indenture supplemental hereto or in a Board Resolution, or in an Officer's Certificate pursuant to an indenture supplemental hereto or Board Resolution, such indenture supplemental hereto or Board Resolution, or such Officer's Certificate and the related indenture supplemental hereto or Board Resolution;

(ii) a Company Order requesting the authentication and delivery of such Bonds and, to the extent that the terms of such Bonds shall not have been established in an indenture supplemental hereto which established such series, in a Board Resolution or in an Officer's Certificate pursuant to an indenture supplemental hereto or Board Resolution, all as contemplated by Section 3.01, either establishing such terms or, in the case of Bonds of a series subject to a Periodic Offering, specifying procedures, acceptable to the Trustee, by which such terms are to be established (which procedures may provide for authentication and delivery pursuant to oral or electronic instructions from the Company or any agent or agents thereof, which oral instructions are to be promptly confirmed electronically or in writing);

(iii) the Bonds of such series or Tranche, executed on behalf of the Company as provided herein;

(iv) a Net Earnings Certificate showing the Adjusted Net Earnings of the Company for the period therein specified to have been not less than an amount equal to two (2) times the Annual Interest Requirements therein specified, all in accordance with the provisions of Section 1.03; provided, however, that the Trustee shall not be entitled to receive a Net Earnings Certificate hereunder if the Bonds of such series are to have no Stated Interest Rate prior to Maturity; and provided, further, that, with respect to Bonds of a series subject to a Periodic Offering, other than Bonds theretofore authenticated and delivered, (A) it shall be

assumed in the Net Earnings Certificate delivered in connection with the authentication and delivery of Bonds of such series that none of the Bonds of such series not yet authenticated and delivered shall have a Stated Interest Rate in excess of a maximum rate to be stated therein, and thereafter Bonds of such series which would have a Stated Interest Rate at the time of the initial authentication and delivery thereof in excess of such maximum rate shall not be authenticated and delivered under the authority of such Net Earnings Certificate but instead shall be authenticated and delivered only under the authority of a new Net Earnings Certificate which complies with the requirements of this clause (iv), including the proviso relating to Bonds of a series subject to a Periodic Offering, and (B) so long as the Stated Interest Rate that Bonds of a series subject to a Periodic Offering bear at the time of the initial authentication and delivery thereof does not exceed the maximum rate assumed in the most recent Net Earnings Certificate delivered with respect to the Bonds of such series, the Trustee shall not be entitled to receive a new Net Earnings Certificate at the time of any subsequent authentication and delivery of the Bonds of such series (unless such Bonds are authenticated and delivered on or after the date which is two years after the most recent Net Earnings Certificate with respect to such series was delivered pursuant to this clause (iv), in which case this subclause (B) shall not apply);

(v) an Opinion of Counsel to the effect that:

(A) the forms of such Bonds have been duly authorized by the Company and have been established in conformity with the provisions of this Indenture;

(B) the terms of such Bonds have been duly authorized by the Company and have been established in conformity with the provisions of this Indenture; and

(C) such Bonds, when authenticated and delivered by the Trustee and issued and delivered by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will have been duly issued under this Indenture and will constitute valid and legally binding obligations of the Company, entitled to the benefits provided by this Indenture, and enforceable in accordance with their terms, subject to the Customary Exceptions;

provided, however, that, with respect to Bonds of a series subject to a Periodic Offering, the Trustee shall be entitled to receive such Opinion of Counsel only once at or prior to the time of the first authentication and delivery of Bonds of such series and that the opinions described in subclauses (B) and (C) of clause (v) above may state, respectively:

(1) that, when the terms of such Bonds shall have been established pursuant to a Company Order or Orders or pursuant to such procedures as may be specified from time to time by a Company Order

or Orders, all as contemplated by and in accordance with the indenture supplemental hereto delivered pursuant to clause (i) above, such terms will have been duly authorized by the Company and will have been established in conformity with the provisions of this Indenture; and

(2) that such Bonds, when authenticated and delivered by the Trustee in accordance with this Indenture and the Company Order or Orders or the specified procedures referred to in subclause (1) above and issued and delivered by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will have been duly issued under this Indenture and will constitute valid and legally binding obligations of the Company, entitled to the benefits provided by this Indenture, and enforceable in accordance with their terms, subject to the Customary Exceptions;

(vi) an Officer's Certificate to the effect that, to the knowledge of the signer, no Event of Default, or event which with lapse of time would constitute an Event of Default, has occurred and is continuing; provided, however, that with respect to Bonds of a series subject to a Periodic Offering, either (A) such an Officer's Certificate shall be delivered at the time of the authentication and delivery of each Bond of such series, or (B) the Officer's Certificate delivered at the time of the first authentication and delivery of the Bonds of such series shall state that the statements therein shall be deemed to be made at the time of each subsequent authentication and delivery of Bonds of such series; and

(vii) such other Opinions of Counsel, certificates and other documents as may be required under Section 4.02, 4.03, 4.04 or 4.05, whichever may be applicable to the authentication and delivery of the Bonds of such series.

(b) With respect to Bonds of a series subject to a Periodic Offering, the Trustee may conclusively rely, as to the authorization by the Company of any of such Bonds, the forms and terms thereof, the legality, validity, binding effect and enforceability thereof and the compliance of the authentication and delivery thereof with the terms and conditions of this Indenture, upon the Opinion or Opinions of Counsel and the certificates and other documents delivered pursuant to this Article IV at or prior to the time of the first authentication and delivery of Bonds of such series until any of such opinions, certificates or other documents have been superseded or revoked or expire by their terms.

(c) In connection with the authentication and delivery of Bonds of a series subject to a Periodic Offering, the Trustee shall be entitled to assume that the Company's instructions to authenticate and deliver such Bonds do not violate any laws with respect to, or any rules, regulations or orders of, any governmental agency or commission having jurisdiction over the Company.

(d) Upon the receipt by the Trustee of any Board Resolution or Officer's Certificate pursuant to clause (i) of Section 4.01(a), such Board Resolution or Officer's Certificate shall be deemed to be a "supplemental indenture" for purposes of clause (i) of

Section 6.08(a) and an "indenture supplemental to this Indenture" for purposes of clause (ii) of said Section 6.08(a).

Section 4.02 Issuance of Bonds on the Basis of Pledged Bonds.

(a) Bonds of any one or more series may be authenticated and delivered upon the basis of, and in an aggregate principal amount not exceeding, the aggregate principal amount of Unbonded Class "A" Bonds issued and delivered to the Trustee for such purpose.

(b) No Bonds of any series shall be authenticated and delivered by the Trustee upon the basis of the issuance and delivery to the Trustee of Class "A" Bonds until the Trustee shall have received:

(i) Class "A" Bonds (A) maturing on such dates and in such principal amounts that, at each Stated Maturity of the Bonds of such series (or the Tranche thereof then to be authenticated and delivered), there shall mature Class "A" Bonds equal in principal amount to the Bonds of such series or Tranche then to mature, and (B) containing, in addition to any mandatory redemption provisions applicable to all Class "A" Bonds Outstanding under the related Class "A" Mortgage, mandatory redemption provisions correlative to the provisions, if any, for the mandatory redemption (pursuant to a sinking fund or otherwise) of the Bonds of such series or Tranche or for the redemption thereof at the option of the Holder; it being expressly understood that such Class "A" Bonds (1) may, but need not, bear interest, any such interest to be payable at the same times as interest on the Bonds of such series or Tranche, (2) may, but need not, contain provisions for the redemption thereof at the option of the Company, any such redemption to be made at a redemption price or prices not less than the principal amount thereof, and (3) shall be held by the Trustee in accordance with Article VII;

(ii) the documents with respect to the Bonds of such series specified in Section 4.01 provided, however, that no Net Earnings Certificate shall be required to be delivered if there shall be delivered an Officer's Certificate to the effect that such Class "A" Bonds have been authenticated and delivered under the related Class "A" Mortgage on the basis of retired Class "A" Bonds;

(iii) an Opinion of Counsel to the effect that:

(A) the forms of such Class "A" Bonds have been duly authorized by the Company and have been established in conformity with the provisions of the related Class "A" Mortgage;

(B) the terms of such Class "A" Bonds have been duly authorized by the Company and have been established in conformity with the provisions of the related Class "A" Mortgage; and

(C) such Class "A" Bonds have been duly issued under the related Class "A" Mortgage and constitute valid and legally binding

obligations of the Company, entitled to the benefits provided by such Class “A” Mortgage, and enforceable in accordance with their terms, subject to the Customary Exceptions;

provided, however, that, with respect to Bonds of a series subject to a Periodic Offering, the Trustee shall be entitled to receive such Opinion of Counsel only once at or prior to the time of the first authentication and delivery of Bonds of such series and that the opinions described in subclauses (B) and (C) of clause (iii) above may state, respectively:

(1) that, when the terms of such Class “A” Bonds shall have been established in accordance with the instrument or instruments creating the series of which such Class “A” Bonds are a part, such terms will have been duly authorized by the Company and will have been established in conformity with the provisions of the related Class “A” Mortgage; and

(2) that such Class “A” Bonds, when authenticated and delivered by the trustee under the related Class “A” Mortgage in accordance with such instrument or instruments and issued and delivered by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will have been duly issued under such Class “A” Mortgage, and will constitute valid and legally binding obligations of the Company, entitled to the benefits provided by such Class “A” Mortgage, and enforceable in accordance with their terms, subject to the Customary Exceptions; and

(iv) an Officer’s Certificate stating that no part of the principal amount of the Class “A” Bonds upon the basis of which the Bonds are to be authenticated and delivered has theretofore been Bonded.

Section 4.03 Issuance of Bonds on the Basis of Property Additions.

(a) Bonds of any one or more series may be authenticated and delivered upon the basis of Property Additions which do not constitute Bonded Property Additions in a principal amount not exceeding 75% of the balance of the Cost or of the Fair Value (whichever shall be less) of such Unbonded Property Additions to the Company after making any deductions pursuant to Section 1.04(b).

(b) No Bonds of any series shall be authenticated and delivered by the Trustee upon the basis of Property Additions until the Trustee shall have received:

(i) the documents with respect to the Bonds of such series specified in Section 4.01;

(ii) an Engineer's Certificate dated as of a date not more than ninety (90) days prior to the date of the Company Order requesting the authentication and delivery of such Bonds:

(A) stating the amount, as of a date not more than ninety (90) days prior to the date of such Company Order, of Property Additions made a basis for such application;

(B) stating that all such property constitutes Property Additions;

(C) stating that such Property Additions are desirable for use in the proper conduct of the business of the Company;

(D) stating that such amount of Property Additions is not then Bonded;

(E) stating, except as to Property Additions acquired, made or constructed wholly through the delivery of securities or other property or the incurrence of other obligations, that the amount of cash forming all or part of the Cost thereof was equal to or more than an amount to be stated therein;

(F) briefly describing, with respect to any Property Additions acquired, made or constructed in whole or in part through the delivery of securities or other property or the incurrence of other obligations, the securities or other property so delivered or other obligations so incurred and stating the date of such delivery or incurrence;

(G) stating what part, if any, of such Property Additions includes property which within six months prior to the date of acquisition thereof by the Company had been used or operated by a Person or Persons other than the Company in a business similar to that in which it has been or is to be used or operated by the Company and stating whether or not, in the judgment of the signers, the Fair Value thereof to the Company, as of the date of such certificate, is less than $25,000 and whether or not such Fair Value is less than 1% of the sum of (x) the aggregate principal amount of Bonds then Outstanding, and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds);

(H) stating, in the judgment of the signers, the Fair Value to the Company, as of the date of such certificate, of such Property Additions, except any thereof with respect to the Fair Value to the Company of which a statement is to be made in an Independent Engineer's Certificate as provided for in clause (iii) below;

(I) stating the amount required to be deducted under clause (i) of Section 1.04(b) and the amount elected to be added under subclauses (A) and (B) of clause (ii) of Section 1.04(b); and

(J) stating that the Liens, if any, of the character described (1) in clause (e) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject do not, in the judgment of the signers, materially impair the use by the Company of the Mortgaged Property considered as a whole; (2) in clause (h)(ii) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject do not, in the judgment of the signers, materially impair the use by the Company of such property for the purposes for which it is held by the Company or (3) in clause (n)(ii) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject would not, if enforced, in the judgment of the signers, adversely affect the interests of the Company in such property in any material respect;

(iii) in case any Property Additions are shown by the Engineer's Certificate provided for in clause (ii) above to include property which, within six months prior to the date of acquisition thereof by the Company, had been used or operated by a Person or Persons other than the Company in a business similar to that in which it has been or is to be used or operated by the Company and such certificate does not show the Fair Value thereof to the Company, as of the date of such certificate, to be less than $25,000 or less than 1% of the sum of (x) the aggregate principal amount of Bonds then Outstanding, and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds), an Independent Engineer's Certificate stating, in the judgment of the signer, the Fair Value to the Company, as of the date of such Independent Engineer's Certificate, of (A) such Property Additions which have been so used or operated and (at the option of the Company) as to any other Property Additions included in the Engineer's Certificate provided for in clause (ii) above, and (B) in case such Independent Engineer's Certificate is being delivered in connection with the authentication and delivery of Bonds, any property so used or operated which has been subjected to the Lien of this Indenture since the commencement of the then current calendar year which has been used as the basis for the authentication and delivery of Bonds and as to which an Independent Engineer's Certificate has not previously been furnished to the Trustee;

(iv) in case any Property Additions are shown by the Engineer's Certificate provided for in clause (ii) above to have been acquired, made or constructed in whole or in part through the delivery of securities or other property, a written appraisal of an Engineer or Appraiser stating, in the judgment of such Engineer or Appraiser, the fair market value in cash of such securities or other property at the time of delivery thereof in payment for or for the acquisition of such Property Additions;

(v) an Opinion of Counsel to the effect:

(A) that (i) (except as to paving, grading and other improvements to, under or upon highways, bridges, parks or other public property of analogous character) this Indenture is, or upon the delivery of, or the filing or recording in the proper places and manner of, the instruments of conveyance, assignment or transfer, if any, specified in said opinion, will be, a Lien on all the Property Additions to be made the basis of the authentication and delivery of such Bonds; and (ii) the Property Additions to be made the basis of the authentication and delivery of such Bonds are (x) subject to no mortgage or other consensual Lien thereon prior to the Lien of this Indenture except Permitted Liens and (y) to the knowledge of such counsel, subject to no Lien thereon prior to the Lien of this Indenture except (1) Permitted Liens, and (2) where the existence of any Liens prior to the Lien of this Indenture would not materially and adversely affect the security afforded by this Indenture, subject in all cases to the Customary Exceptions; and

(B) that the Company has corporate authority to operate the Property Additions with respect to which such application is made; and

(vi) copies of the instruments of conveyance, assignment and transfer, if any, specified in the Opinion of Counsel provided for in clause (v) above.

(c) The amount of the Cost of any Property Additions and the Fair Value thereof to the Company and the fair market value in cash of any securities or other property so delivered in payment therefor or for the acquisition thereof and the amount of any deductions and any additions made pursuant to Section 1.04 shall be determined for the purposes of this Section by the appropriate certificate provided for in this Section.

Section 4.04 Issuance of Bonds on the Basis of Retired Bonds.

(a) Subject to the provisions of subsection (c) of this Section, Bonds of any one or more series may be authenticated and delivered upon the basis of, and in an aggregate principal amount not exceeding the aggregate principal amount of, Unbonded Retired Bonds.

(b) No Bonds of any series shall be authenticated and delivered by the Trustee upon the basis of Retired Bonds until the Trustee shall have received:

(i) the documents with respect to the Bonds of such series specified in Section 4.01 provided, however, that no Net Earnings Certificate shall be required to be delivered unless:

(A) the original, final Stated Maturity of the Retired Bonds to be made the basis of the authentication and delivery of such Bonds under this Section was a date less than five years after the date of the Company Order which requested the authentication and delivery of such Retired Bonds; and

(B) the maximum Stated Interest Rate, if any, on such Retired Bonds at the time of their authentication and delivery was less than the maximum Stated Interest Rate, if any, on such Bonds to be in effect upon the initial authentication and delivery thereof; and

(ii) an Officer's Certificate stating that Retired Bonds, specified by series, in an aggregate principal amount not less than the aggregate principal amount of Bonds to be authenticated and delivered, have theretofore been authenticated and delivered and, as of the date of such Officer's Certificate, constitute Retired Bonds and are the basis for the authentication and delivery of such Bonds, and further stating that no part of such principal amount of Retired Bonds has theretofore been Bonded.

(c) No Bonds shall be authenticated or delivered hereunder on the basis of any Retired Bonds theretofore authenticated and delivered on the basis of Pledged Bonds pursuant to Section 4.02 if such Pledged Bonds can again be used as the basis for the issuance of Bonds pursuant to Section 4.02, until the Class "A" Mortgage under which such Pledged Bonds were issued has been discharged pursuant to the provisions thereof.

Section 4.05 Issuance of Bonds upon Deposit of Cash with Trustee.

(a) Bonds of any one or more series may be authenticated and delivered upon the basis of, and in an aggregate principal amount not exceeding the amount of, any deposit with the Trustee of cash for such purpose.

(b) No Bonds of any series shall be authenticated and delivered by the Trustee upon the basis of the deposit of cash until the Trustee shall have received the documents with respect to the Bonds of such series specified in Section 4.01.

(c) All cash deposited with the Trustee under the provisions of this Section, and all cash required by Section 7.02(a) to be used or applied in accordance with the provisions of this Section, shall be held by the Trustee as a part of the Mortgaged Property and may be withdrawn from time to time by the Company, upon application of the Company to the Trustee, in an amount equal to the aggregate principal amount of Bonds to the authentication and delivery of which the Company shall be entitled under any of the provisions of this Indenture by virtue of compliance with all applicable provisions of this Indenture (except as otherwise provided in subsection (d) of this Section).

(d) Upon any such application for withdrawal, the Company shall comply with all applicable provisions of this Indenture relating to the authentication and delivery of Bonds except that the Company shall not in any event be required to comply with Section 4.01.

(e) Any withdrawal of cash under subsection (c) of this Section shall operate as a waiver by the Company of its right to the authentication and delivery of the Bonds on which it is based and such Bonds may not thereafter be authenticated and delivered hereunder. Any Property Additions which have been made the basis of any such right to the authentication and delivery of Bonds so waived shall be deemed to have been made the basis of the withdrawal of such cash; any Retired Bonds which have been made the basis of any such right to the

authentication and delivery of Bonds so waived shall be deemed to have been made the basis of the withdrawal of such cash; and any Pledged Bonds which have been made the basis of any such right to the authentication and delivery of Bonds so waived shall be deemed to have been made the basis of the withdrawal of such cash.

(f) If at any time the Company shall so direct, any sums deposited with the Trustee under the provisions of this Section may be used or applied to the purchase, redemption or payment of Bonds in the manner and subject to the conditions provided in clauses (iv) and (v) of Section 8.06(a); provided, however, that, none of such cash shall be applied to the payment of more than the principal amount of any Bonds so purchased, redeemed or paid, except to the extent that the aggregate principal amount of all Bonds theretofore, and of all Bonds then to be, purchased, redeemed or paid with cash deposited under this Section is not less than the aggregate cost for principal, premium, if any, interest, if any, and brokerage commission, if any, on or with respect to all Bonds theretofore, and on or with respect to all Bonds then to be, purchased, redeemed or paid with cash so deposited.

ARTICLE V

REDEMPTION OF BONDS

Section 5.01 Applicability of Article.

Bonds of any series, or any Tranche thereof, which are redeemable before their Stated Maturity shall be redeemable in accordance with their terms and (except as otherwise specified as contemplated by Section 3.01 for Bonds of such series or Tranche) in accordance with this Article.

Section 5.02 Election to Redeem; Notice to Trustee.

The election of the Company to redeem any Bonds shall be evidenced by a Board Resolution or an Officer's Certificate. The Company shall, at least forty-five (45) days prior to the Redemption Date fixed by the Company (unless a shorter notice shall be satisfactory to the Trustee), notify the Trustee in writing of such Redemption Date and of the series and principal amount of such Bonds to be redeemed. In the case of any redemption of Bonds (a) prior to the expiration of any restriction on such redemption provided in the terms of such Bonds or elsewhere in this Indenture, or (b) pursuant to an election of the Company which is subject to a condition specified in the terms of such Bonds, the Company shall furnish the Trustee with an Officer's Certificate evidencing compliance with such restriction or condition.

Section 5.03 Selection of Bonds to Be Redeemed.

(a) If less than all the Bonds of any series, or any Tranche thereof, are to be redeemed, the particular Bonds (or portions thereof) to be redeemed shall be selected by the Bond Registrar from the Outstanding Bonds of such series or Tranche not previously called for redemption, by such method as shall be provided for any particular series, or, in the absence of any such provision, by such method as the Bond Registrar, with the approval of the Trustee, shall deem fair and appropriate and which may, in any case, provide for the selection for redemption of portions (equal to the minimum authorized denomination for Bonds of such series or Tranche

or any integral multiple thereof) of the principal amount of Bonds of such series or Tranche of a denomination equal to or larger than the minimum authorized denomination for Bonds of such series or Tranche; provided, however, that if, as indicated in an Officer's Certificate, the Company shall have offered to purchase all Bonds then Outstanding of any series, or any Tranche thereof, and less than all of such Bonds shall have been tendered to the Company for such purchase, the Bond Registrar, if so directed by Company Order, shall select for redemption only such Bonds which have not been so tendered.

(b) The Bond Registrar shall promptly notify the Company and the Trustee in writing of the Bonds selected for redemption and, in the case of any Bonds selected to be redeemed in part, the principal amount thereof to be redeemed.

(c) For all purposes of this Indenture, unless the context otherwise requires, all provisions relating to the redemption of Bonds shall relate, in the case of any Bonds redeemed or to be redeemed only in part, to the portion of the principal amount of such Bonds which has been or is to be redeemed.

Section 5.04 Notice of Redemption.

(a) Except as otherwise specified as contemplated by Section 3.01 for Bonds of any series, or Tranche thereof, notice of redemption shall be given in the manner provided in Section 1.09 to the Holders of the Bond to be redeemed not less than thirty (30) nor more than one hundred eighty (180) days prior to the Redemption Date.

(b) All notices of redemption shall state:

(i) the Redemption Date;

(ii) the Redemption Price;

(iii) if less than all the Bonds of any series or Tranche are to be redeemed, the identification of the particular Bonds to be redeemed and the portion of the principal amount of any Bond to be redeemed in part;

(iv) that on the Redemption Date the Redemption Price, together with accrued interest, if any, to the Redemption Date, will become due and payable upon each such Bond to be redeemed and, if applicable, that interest thereon will cease to accrue on and after said date;

(v) the place or places where such Bonds are to be surrendered for payment of the Redemption Price;

(vi) the name and address of the Paying Agent;

(vii) that the redemption is for a sinking or other fund, if such is the case;

(viii) subject to Section 3.12, the CUSIP, ISIN or other similar number, if any, applicable to the Bonds to be redeemed; and

(ix) such other matters as the Company shall deem desirable or appropriate.

(c) With respect to any notice of redemption of Bonds at the election of the Company, unless, upon the giving of such notice, such Bonds shall be deemed to have been paid in accordance with Section 9.01, such notice may state that such redemption shall be conditional upon the receipt by the Trustee or Paying Agent, on or prior to the date fixed for such redemption, of money sufficient to pay the principal of and premium, if any, and interest, if any, on such Bonds and that if such money shall not have been so received such notice shall be of no force or effect and the Company shall not be required to redeem such Bonds. In the event that such notice of redemption contains such a condition and such money is not so received, the redemption shall not be made and within a reasonable time thereafter notice shall be given, in the manner in which the notice of redemption was given, that such money was not so received and such redemption was not required to be made.

(d) Notice of redemption of Bonds to be redeemed at the election of the Company, and any notice of non-satisfaction of a condition for redemption as aforesaid, shall be given by the Company or, at the Company's request, by the Bond Registrar in the name and at the expense of the Company. Notice of mandatory redemption of Bonds shall be given by the Bond Registrar in the name and at the expense of the Company.

Section 5.05 Bonds Payable on Redemption Date.

Notice of redemption having been given as aforesaid, and the conditions, if any, set forth in such notice having been satisfied, the Bonds or portions thereof so to be redeemed shall, on the Redemption Date, become due and payable at the Redemption Price therein specified, and from and after such date (unless, the Company shall default in the payment of the Redemption Price and accrued interest, if any) such Bonds or portions thereof, if interest-bearing, shall cease to bear interest. Upon surrender of any such Bond for redemption in accordance with such notice, such Bond or portion thereof shall be paid by the Company at the Redemption Price, together with accrued interest, if any, to the Redemption Date; provided, however, that, except as otherwise specified as contemplated by Section 3.01 with respect to Bonds of any series, or Tranche thereof, any installment of interest on any Bond the Stated Maturity of which is on or prior to the Redemption Date shall be payable to the Holder of such Bond, or one or more Predecessor Bonds, registered as such at the close of business on the related Regular Record Date according to the terms of such Bond and subject to the provisions of Section 3.07.

Section 5.06 Bonds Redeemed in Part.

Any Bond which is to be redeemed only in part shall be surrendered at a Place of Payment therefor (with, if the Company or the Trustee so requires, due endorsement by, or a written instrument of transfer in form satisfactory to the Company and the Trustee duly executed by, the Holder thereof or his attorney duly authorized in writing), and the Company shall

execute, and the Trustee shall authenticate and deliver to the Holder of such Bond, without service charge, a new Bond or Bonds of the same series and Tranche, of any authorized denomination requested by such Holder and of like tenor and in aggregate principal amount equal to and in exchange for the unredeemed portion of the principal of the Bond so surrendered; provided, however, that the payment of any principal in accordance with the scheduled amortization payments specified for the Bonds of any series, or any Tranche thereof as contemplated by Section 3.01, shall not constitute a redemption in part subject to this Section 5.06 (except as otherwise specified as contemplated by Section 3.01 for Bonds of such series or Tranche).

ARTICLE VI

REPRESENTATIONS AND COVENANTS

Section 6.01 Payment of Bonds; Lawful Possession; Maintenance of Lier.

(a) The Company shall pay the principal of and premium, if any, and interest, if any, on the Bonds of each series in accordance with the terms of such Bonds and this Indenture.

(b) At the date of the execution and delivery of this Indenture, the Company is lawfully possessed of the Mortgaged Property and has good right and lawful authority to mortgage and pledge the Mortgaged Property, as provided in and by this Indenture.

(c) The Company shall maintain and preserve the Lien of this Indenture so long as any Bonds shall remain Outstanding, subject, however, to the provisions of Articles IX and XIII.

Section 6.02 Maintenance of Office or Agency.

(a) The Company shall maintain in each Place of Payment for the Bonds of any series, or any Tranche thereof, an office or agency where such Bonds may be presented or surrendered for payment, where such Bonds may be surrendered for registration of transfer or exchange and where notices and demands to or upon the Company in respect of such Bonds and this Indenture may be served. The Company shall give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency and prompt notice to the Holders of any such change in the manner specified in Section 1.09. If at any time the Company shall fail to maintain any such required office or agency in respect of Bonds of any series, or any Tranche thereof, or shall fail to furnish the Trustee with the address thereof, such presentations and surrenders of such Bonds may be made and notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive such respective presentations, surrenders, notices and demands.

(b) The Company may also from time to time designate one or more other offices or agencies where the Bonds of one or more series, or any Tranche thereof, may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency for such purposes in each

Place of Payment for such Bonds in accordance with the requirements set forth above. The Company shall give prompt written notice to the Trustee, and prompt notice to the Holders in the manner specified in Section 1.09, of any such designation or rescission and of any change in the location of any such other office or agency.

(c) Anything herein to the contrary notwithstanding, any office or agency required by this Section may be maintained at an office of the Company, in which event the Company shall perform all functions to be performed at such office or agency.

(d) With respect to any Global Bond, and except as otherwise may be specified for such Global Bond as contemplated by Section 3.01, the Corporate Trust Office of the Trustee shall be the Place of Payment where such Global Bond may be presented or surrendered for payment or for registration of transfer or exchange, or where successor Bonds may be delivered in exchange therefor, provided, however, that any such payment, presentation, surrender or delivery effected pursuant to the Applicable Procedures of the Depository for such Global Bond shall be deemed to have been effected at the Place of Payment for such Global Bond in accordance with the provisions of this Indenture.

Section 6.03 Money for Bond Payments to Be Held in Trus.

(a) If the Company shall at any time act as its own Paying Agent with respect to the Bonds of any series, or any Tranche thereof, it shall, on or before each due date of the principal of and premium, if any, or interest, if any, on any of such Bonds, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay the principal and premium or interest so becoming due until such sums shall be paid to such Persons or otherwise disposed of as herein provided and shall promptly notify the Trustee of its action or failure so to act.

(b) Whenever the Company shall have one or more Paying Agents for the Bonds of any series, or any Tranche thereof, it shall, on or before each due date of the principal of and premium, if any, or interest, if any, on such Bonds, deposit with such Paying Agents sums sufficient (without duplication) to pay the principal and premium or interest so becoming due, such sums to be held in trust for the benefit of the Persons entitled to such principal, premium or interest, and (unless such Paying Agent is the Trustee) the Company shall promptly notify the Trustee of its action or failure, so to act. Anything herein to the contrary notwithstanding, the Company hereby appoints the Trustee as initial Paying Agent for the Bonds of all series.

(c) The Company shall cause each Paying Agent for the Bonds of any series, or any Tranche thereof, other than the Trustee, to execute and deliver to the Trustee an instrument in which such Paying Agent shall agree with the Trustee, subject to the provisions of this Section, that such Paying Agent shall:

(i) hold all sums held by it for the payment of the principal of and premium, if any, or interest, if any, on the Bonds of such series or Tranche in trust for the benefit of the Persons entitled thereto until such sums shall be paid to such Persons or otherwise disposed of as herein provided;

(ii) give the Trustee notice of any default by the Company (or any other obligor upon the Bonds of such series) in the making of any payment of principal of and premium, if any, or interest, if any, on the Bonds of such series or Tranche; and

(iii) at any time during the continuance of any such default upon the written request of the Trustee, forthwith pay to the Trustee all sums so held in trust by such Paying Agent and furnish to the Trustee such information as it possesses regarding the names and addresses of the Persons entitled to such sums.

(d) The Company may at any time pay, or by Company Order direct any Paying Agent to pay, to the Trustee all sums held in trust by the Company or such Paying Agent, such sums to be held by the Trustee upon the same trusts as those upon which such sums were held by the Company or such Paying Agent and, if so stated in a Company Order delivered to the Trustee, in accordance with the provisions of Article IX; and, upon such payment by any Paying Agent to the Trustee, such Paying Agent shall be released from all further liability with respect to such money.

(e) Subject to applicable laws regarding abandoned property, any money deposited with the Trustee (other than money held under the provisions of Article IX) or any Paying Agent, or then held by the Company, in trust for the payment of the principal of and premium, if any, or interest, if any, on any Bond and remaining unclaimed for two years after such principal and premium, if any, or interest, if any, has become due and payable shall be paid to the Company on Company Request, or, if then held by the Company, shall be discharged from such trust; and the Holder of such Bond shall thereafter, as an unsecured general creditor, look only to the Company for payment thereof and all liability of the Trustee or such Paying Agent with respect to such trust money, and all liability of the Company as trustee thereof, shall thereupon cease; provided, however, that the Trustee or such Paying Agent, before being required to make any such payment to the Company, may at the expense of the Company cause to be mailed, on one occasion only, notice to such Holder that such money remains unclaimed and that, after a date specified therein, which shall not be less than thirty (30) days from the date of such mailing, any unclaimed balance of such money then remaining will be paid to the Company.

Section 6.04 Corporate Existence.

Subject to the rights of the Company under Article XIII, the Company shall do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence and the rights (charter and statutory) and franchises of the Company; provided, however, that the Company shall not be required to preserve any such right or franchise if, in the judgment of the Company, the preservation thereof is no longer desirable in the conduct of the business of the Company and the loss thereof would not adversely affect the interests of the Holders in any material respect.

Section 6.05 Maintenance of Properties.

(a) The Company shall cause (or, with respect to property owned in common with others, make reasonable effort to cause) the Mortgaged Property, considered as a whole, to be maintained and kept in good condition, repair and working order, reasonable wear and tear excepted, and shall cause (or, with respect to property owned in common with others, make reasonable effort to cause) to be made such repairs, renewals, replacements, betterments and improvements thereof, as, in the judgment of the Company, may be necessary in order that the operation of the Mortgaged Property, considered as a whole, may be conducted in accordance with common industry practice; provided, however, that nothing in this Section shall prevent the Company from discontinuing, or causing the discontinuance of, the operation and maintenance of any of its properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business; and provided, further, that nothing in this Section shall prevent the Company from selling, transferring or otherwise disposing of, or causing the sale, transfer or other disposition of, any portion of the Mortgaged Property.

(b) With respect to any Mortgaged Property constituting a Nuclear Facility and subject to applicable law, the Company shall take commercially reasonable efforts to (i) obtain the valid and effective issue of, (ii) maintain, (iii) seek the timely renewal or extension prior to expiration of, and (iv) in connection with any exercise of remedies by the Trustee upon the occurrence of an Event of Default and declaration of acceleration in accordance with Article X hereof, cooperate with the Trustee in obtaining the transfer to the Trustee or its successors or assigns of, such Nuclear Facility operating licenses with respect to such Mortgaged Property as, in the judgment of the Company, may be necessary in order that the operation of the Mortgaged Property, considered as a whole, may be conducted in accordance with common industry practice; provided, however, that nothing in this Section 6.05(b) shall prevent the Company from discontinuing, or causing the discontinuance of, the operation and maintenance of its properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business; and provided, further, that nothing in this Section 6.05(b) shall prevent the Company from selling, transferring or otherwise disposing of, or causing the sale, transfer or other disposition of, any portion of the Mortgaged Property.

Section 6.06 Payment of Taxes; Discharge of Liens.

The Company shall pay all taxes and assessments and other governmental charges lawfully levied or assessed upon the Mortgaged Property, or upon any part thereof, or upon the interest of the Trustee in the Mortgaged Property, before the same shall become delinquent, and will duly observe and conform in all material respects to all valid requirements of any Governmental Authority relative to any of the Mortgaged Property, and all covenants, terms and conditions upon or under which any of the Mortgaged Property is held; and, after the date of execution and delivery of this Indenture, the Company shall not suffer any Lien to be created upon the Mortgaged Property, or any part thereof, prior to the Lien hereof other than Permitted Liens and other than, in the case of property hereafter acquired, vendors' Liens, Purchase Money Liens and any other Lien thereon at the time of the acquisition thereof (including, but not limited to, the Lien of any Class "A" Mortgage); and within four months after any lawful claim or demand for labor, materials, supplies or other objects has become delinquent which if unpaid would or might by law be given precedence over the Lien of this Indenture as a Lien upon any of

the Mortgaged Property, the Company shall pay or cause to be discharged or make adequate provisions to satisfy or discharge the same provided, however, that nothing in this Section contained shall require the Company (i) to observe or conform to any requirement of a Governmental Authority or to cause to be paid or discharged, or to make provision for, any such Lien, or to pay any such tax, assessment or governmental charge so long as the validity thereof shall be contested in good faith and by appropriate legal proceedings; (ii) to pay, discharge or make provisions for any tax, assessment or other governmental charge the validity of which shall not be so contested if adequate security for the payment of such tax, assessment or other governmental charge and for any damages (including penalties and interest, if any) which may reasonably be anticipated from failure to pay the same shall be given to the Trustee; or (iii) to pay, discharge or make provisions for any Liens existing on the Mortgaged Property at the date of execution and delivery of this Indenture; and provided, further, that nothing in this Section shall prohibit the issuance or other incurrence of additional indebtedness, or the refunding of outstanding indebtedness, secured by a Lien prior to the Lien hereof which is permitted hereunder to continue to exist.

Section 6.07 Insurance; Nuclear Insurance; Decommissioning.

(a) The Company will keep or cause to be kept all the Mortgaged Property insured with reasonable deductibles and retentions against loss by fire to the extent that property of similar character is usually so insured by companies similarly situated and operating like properties, by insurance companies which the Company believes to be reputable; or the Company will, in lieu of or supplementing such insurance in whole or in part, adopt some other method or plan of protection, which may include, either alone or in conjunction with any other Person or Persons, creation of an insurance fund to protect the Mortgaged Property against loss by fire.

(b) Available proceeds of any insurance or alternative method or plan of protection of the Company against losses of the kind specified in Section 6.07(a) shall, at the request of the Company, be paid to the Company, and the Company shall be under no obligation to use such proceeds to rebuild or repair damaged or destroyed Mortgaged Property to the extent that the Fair Value of all of the Mortgaged Property after the damage or destruction of Mortgaged Property with respect to which such proceeds are payable equals or exceeds an amount equal to 20/15ths of the aggregate principal amount of Bonds Outstanding and Class “A” Bonds Outstanding (other than Pledged Bonds), as evidenced by, and within ten (10) days after receipt by the Trustee of:

(i) an Engineer’s Certificate stating that the Fair Value, in the opinion of the signers of such Engineer’s Certificate, of the Mortgaged Property remaining after such damage or destruction of Mortgaged Property is a specified amount; and

(ii) an Officer’s Certificate stating that the Fair Value of all of the Mortgaged Property, as certified in the Engineer’s Certificate provided for in clause (i) of Section 6.07(b) equals or exceeds an amount equal to 20/15ths of the aggregate principal amount of Bonds Outstanding and Class “A” Bonds Outstanding (other than Pledged Bonds).

(c) To the extent that the Fair Value of all of the Mortgaged Property after such damage or destruction of Mortgaged Property does not equal or exceed an amount equal to 20/15ths of the aggregate principal amount of Bonds Outstanding and Class "A" Bonds Outstanding (other than Pledged Bonds), as evidenced by an Engineer's Certificate and an Officer's Certificate similar to those described in clauses (i) and (ii) of Section 6.07(b), (i) the available proceeds of such insurance paid with respect to any such loss shall be paid to the Trustee, as the interest of the Trustee may appear, or to the trustee of a Class "A" Mortgage, or to the trustee or other holder of any mortgage or other Lien prior hereto upon the Mortgaged Property so destroyed or damaged, if the terms thereof require such proceeds so to be paid; and (ii) if the Company shall adopt such other method or plan, it will pay or cause to be paid to the Trustee on account of any loss sustained because of the destruction or damage of any Mortgaged Property by fire, an amount of cash equal to such loss less any amount otherwise paid with respect to such loss to the Trustee, or to the trustee of a Class "A" Mortgage, or to the trustee or other holder of any mortgage or other Lien prior hereto upon the Mortgaged Property so destroyed or damaged, if the terms thereof require payments for such loss so to be paid. Any amounts of cash so required to be paid by the Company pursuant to any such method or plan shall for the purposes of this Indenture be deemed to be proceeds of insurance.

(d) All moneys paid to the Trustee by the Company or received by the Trustee as proceeds of any insurance shall, subject to Section 6.07(b) and to the requirements of any Class "A" Mortgage or any mortgage or other Lien prior hereto upon the Mortgaged Property, be held by the Trustee and, subject to such requirements, shall, at the request of the Company, be paid by the Trustee to the Company to reimburse or fund the Company for an equal amount spent or committed to be spent for the purchase or other acquisition of property which becomes Mortgaged Property at the time of such purchase or acquisition, or in the rebuilding or renewal of the Mortgaged Property destroyed or damaged, upon receipt by the Trustee of:

(i) an Officer's Certificate requesting such reimbursement;

(ii) an Engineer's Certificate stating the amounts so expended or committed for expenditure and the nature of such rebuilding or renewal and the Fair Value to the Company of the property rebuilt or renewed or to be rebuilt or renewed and if:

(A) within six months prior to the date of acquisition thereof by the Company, such property has been used or operated, by a Person or Persons other than the Company, in a business similar to that in which it has been or is to be used or operated by the Company, and

(B) the Fair Value to the Company of such property as set forth in such Engineer's Certificate is not less than $25,000 and not less than 1% of the sum of (1) the principal amount of the Bonds at the time Outstanding, and (2) the principal amount of Class "A" Bonds Outstanding (other than Pledged Bonds) at the time,

the Engineer making such certificate shall be an Independent Engineer; and

(iii) an Opinion of Counsel stating that, in the opinion of the signer, the property so rebuilt or renewed or to be rebuilt or renewed is or will be subject to the Lien hereof to the same extent as was the property so destroyed or damaged.

(e) Any such money not so applied within eighteen (18) months after its receipt by the Trustee, or in respect of which notice in writing of intention to apply the same to the work of rebuilding or renewal then in progress and uncompleted shall not have been given to the Trustee by the Company within such eighteen (18) months, or which the Company shall at any time notify the Trustee is not to be so applied, shall thereafter be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 8.06.

(f) Whenever under the provisions of this Section the Company is required to deliver moneys to the Trustee and at the same time shall have satisfied the conditions set forth herein for reimbursement, there shall be paid to or retained by the Trustee or reimbursed to the Company, as the case may be, only the net amount.

(g) In the event that the Company adopts a method or plan of protection other than insurance as provided in Section 6.07(a), the Company shall furnish to the Trustee a certificate of a qualified Person appointed by the Company with respect to the adequacy of such method or plan.

(h) With respect to any Mortgaged Property constituting a Nuclear Facility, and as otherwise required by applicable law, the Company shall keep or cause to be kept such Mortgaged Property covered by nuclear energy hazard liability insurance and property insurance that at a minimum satisfies the financial protection requirements of Section 170 of the AEA, and 10 C.F.R. Part 140, and the requirements of 10 C.F.R. 50.54(w), respectively. To the extent that any available proceeds from insurance to be paid to the Trustee pursuant to Section 6.07(c) may be limited because applicable law or the terms of insurance require a priority for payment of costs for stabilization and decontamination of the Nuclear Facility and its site, the Company will take commercially reasonable efforts to make the required certifications so that the insurance policies may make parallel payments to the Trustee of coverage amounts available and not dedicated for stabilization and decontamination.

(i) With respect to any of the Mortgaged Property constituting a Nuclear Facility, the Company shall comply in all material respects with applicable federal and state laws providing for the decommissioning and retirement from commercial service of such Mortgaged Property, including, without limitation, with respect to the establishment, funding and maintenance of a decommissioning or similar trust fund or funds applicable to such Mortgaged Property; provided, however, that nothing in this Indenture shall be deemed to grant, bestow or create in favor of the Trustee, any Holder or any other Person any (i) right, title or interest in, (ii) claim or entitlement to, (iii) mortgage, security interest, encumbrance or lien on, or (iv) control over, in each case, any such trust fund, or the moneys and other assets at any time held therein; provided further, however, that following the occurrence of an Event of Default and declaration of acceleration in accordance with Article X hereof, the Company will take commercially reasonable efforts to assist and cooperate in transferring the trust fund, or the moneys held therein, in connection with the transfer of the Mortgaged Property and the Nuclear Facility

operating licenses with respect to the Mortgaged Property to the Trustee or its successors or assigns, as contemplated in Section 6.05(b)(iv).

Section 6.08 Recording, Filing, Etc.

(a) The Company shall cause this Indenture and all indentures and instruments supplemental hereto (or notices, memoranda or financing statements as may be recorded or filed to place third parties on notice thereof), including all financing statements and continuation statements covering security interests in personal property, and all Purchase Money Liens securing obligations delivered to the Trustee pursuant to Section 8.05, to be promptly recorded and filed and re-recorded and re-filed and will execute or cause to be executed and file such financing statements and such continuation statements, all in such manner and in such places, as may be required by law in order fully to preserve and protect the security of the Holders of the Bonds and all rights of the Trustee, and shall furnish to the Trustee:

(i) promptly after the execution and delivery of this Indenture and of each supplemental indenture and instrument supplemental hereto, an Opinion of Counsel either stating that in the opinion of such counsel this Indenture, such supplemental indenture or instrument supplemental hereto (or notice or memorandum thereof or financing statement in connection therewith) has been properly recorded and filed, so as to make effective the Lien intended to be created hereby or thereby, and reciting the details of such action, or stating that in the opinion of such counsel no such action is necessary to make such Lien effective. The Company shall be deemed to be in compliance with this clause (i) if (A) the Opinion of Counsel herein required to be delivered to the Trustee shall state that this Indenture, such supplemental indenture or instrument supplemental hereto (or financing statement or notice or memorandum thereof) has been received for recording or filing in each jurisdiction in which it is required to be recorded or filed and that, in the opinion of such counsel (if such is the case), such receipt for recording or filing makes effective the Lien intended to be created by this Indenture, such supplemental indenture or instrument supplemental hereto, and (B) such opinion is delivered to the Trustee within such time, following the date of the execution and delivery of this Indenture, such supplemental indenture or instrument supplemental hereto, as shall be practicable having due regard to the number and distance of the jurisdictions in which this Indenture, such supplemental indenture or instrument supplemental hereto is required to be recorded or filed; and

(ii) on or before June 1 of each year, beginning June 1, 2010, an Opinion of Counsel either stating that in the opinion of the signer such action has been taken, since the date of the most recent Opinion of Counsel furnished pursuant to this clause (ii) or the first Opinion of Counsel furnished pursuant to clause (i) of this subsection (a), with respect to the recording, filing, re-recording, and re-filing of this instrument and of each indenture and instrument supplemental to this Indenture (or financing statement or notice or memorandum thereof), as is necessary to maintain the Lien hereof, and reciting the details of such action, or

stating that in the opinion of such counsel no such action is necessary to maintain such Lien.

(b) The Company shall execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as may, be necessary or proper to carry out the purposes of this Indenture and to make subject to the Lien hereof any property hereafter acquired, made or constructed, intended to be subject to the Lien hereof, and to transfer to any new trustee or trustees or co-trustee or co-trustees, the estate, powers, instruments or funds held in trust hereunder.

(c) Notwithstanding the foregoing, the Company authorizes the Trustee to file one or more financing statements and such other documents as the Trustee may from time to time reasonably require to perfect or continue the perfection of the Lien of this Indenture on any Mortgaged Property. In case the Company fails to file any financing statements or other documents for the perfection or continuation of any security interest, the Company hereby appoints the Trustee as its true and lawful attorney-in-fact to file any such documents on its behalf. If any financing statement or other document is filed in the records normally pertaining to personal property, that filing shall never be construed as in any way derogating from or impairing this Indenture or the rights or obligations of the parties hereto under it in respect of any real property.

Section 6.09 Waiver of Certain Covenants.

Subject to the provisions of the Trust Indenture Act, the Company may omit in any particular instance to comply with any term, provision or condition set forth in (a) Section 6.02 or any additional covenant or restriction specified with respect to the Bonds of any series, or any Tranche thereof, as contemplated by Section 3.01 if before the time for such compliance the Holders of at least a majority in aggregate principal amount of the Outstanding Bonds of all series and Tranches with respect to which compliance with Section 6.02 or such additional covenant or restriction is to be omitted, considered as one class, shall, by Act of such Holders, either waive such compliance in such instance or generally waive compliance with such term, provision or condition, and (b) Section 6.04, 6.05, 6.06, 6.07 or 6.08 or Article XIII if before the time for such compliance the Holders of at least a majority in aggregate principal amount of Bonds Outstanding under this Indenture shall, by Act of such Holders, either waive such compliance in such instance or generally waive compliance with such term, provision or condition; but, in the case of (a) or (b), no such waiver shall extend to or affect such term, provision or condition except to the extent so expressly waived, and, until such waiver shall become effective, the obligations of the Company and the duties of the Trustee in respect of any such term, provision or condition shall remain in full force and effect. A waiver of compliance given by or on behalf of any Holder of the Bonds in connection with a purchase of, or tender or exchange offer for, such Holder's Bonds will not be rendered invalid by such purchase, tender or exchange.

Section 6.10 Statement as to Compliance.

For so long as the Trustee Indenture Act shall so require, the Company will deliver to the Trustee, on or prior to June 1 of each year, beginning with June 1, 2010, a brief

certificate from the principal executive officer, principal financial officer or principal accounting officer as to his or her knowledge of the Company's compliance with all conditions and covenants under this Indenture. For purposes of this Section 6.10, such compliance shall be determined without regard to any period of grace or requirement of notice under this Indenture.

Section 6.11 Use of Trust Moneys and Advances by Trustee.

If the Company shall fail to perform any of its covenants contained in Sections 6.04, 6.05, 6.06 and 6.07 hereof, the Trustee may, at any time and from time to time, but shall not be obligated to, use and apply any Funded Cash held by it pursuant to Section 8.06, or make advances, to effect performance of any such covenant on behalf of the Company; and all moneys so used or advanced by the Trustee shall be repaid by the Company, together with interest thereon at a rate per annum equal to the highest interest rate per annum borne by Bonds Outstanding at the time of such repayment, upon demand by the Trustee and any such advances by the Trustee shall be secured under this Indenture prior to the Bonds. For the repayment of all such advances by the Trustee the Trustee shall have the right to use and apply any Funded Cash held by it pursuant to Section 8.06, but no such use or application of Funded Cash nor any such advance shall relieve the Company from any default hereunder.

Section 6.12 Limited Issuance of Class "A" Bonds.

So long as any Bonds are Outstanding, the Company will not issue any additional Class "A" Bonds except (i) to replace mutilated, destroyed, lost or wrongfully taken Class "A" Bonds of the same series or to effect transfers and exchanges of Class "A" Bonds or (ii) such Class "A" Bonds as shall immediately after issuance be made the basis for the authentication and delivery of Bonds under Section 4.02.

ARTICLE VII

PLEDGED BONDS: ADDITIONAL CLASS "A" MORTGAGES; DISCHARGE OF CLASS "A" MORTGAGE

Section 7.01 Registration and Ownership of Pledged Bonds.

All Pledged Bonds shall be registered in the name of the Trustee or its nominee and shall be owned and held by the Trustee, subject to the provisions of this Indenture, for the benefit of the Holders of all Bonds from time to time Outstanding, and the Company shall have no interest therein. The Trustee shall be entitled to exercise all rights of bondholders under each Class "A" Mortgage either in its discretion (which it need not exercise) or as otherwise provided in this Article or in Article X.

Section 7.02 Payments on Pledged Bonds.

(a) Any payment by the Company of principal of or premium or interest on any Pledged Bonds shall be applied by the Trustee to the payment of any principal, premium or interest, as the case may be, in respect of the Bonds which is then due, and, to the extent of such application, the obligation of the Company hereunder to make such payment in respect of the Bonds shall be deemed to have been satisfied and discharged. If at the time of any such payment

of principal of Pledged Bonds, there shall be no principal then due in respect of the Bonds, the proceeds of such payment in respect of the Pledged Bonds shall be deemed to constitute Funded Cash and shall be held by the Trustee as part of the Mortgaged Property, to be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 4.05. If, at the time of any such payment of premium or interest on Pledged Bonds, there shall be no premium or interest, as the case may be, then due in respect of the Bonds, the proceeds of such payment in respect of the Pledged Bonds shall be remitted to the Company upon receipt by the Trustee of a Company Order requesting the same; provided, however, that following the occurrence and during the continuance of an Event of Default, the Trustee shall not pay such proceeds over to the Company, but shall instead hold such proceeds as part of the Mortgaged Property.

(b) Each supplemental indenture pursuant to which any Pledged Bonds are issued shall contain a provision to the effect that any payment by the Company hereunder of principal of or premium or interest on Bonds which shall have been authenticated and delivered upon the basis of the issuance and delivery to the Trustee of such Pledged Bonds (other than by the application of the proceeds of a payment in respect of such Pledged Bonds) shall, to the extent thereof, be deemed to satisfy and discharge the obligation of the Company, if any, to make a payment of principal, premium or interest, as the case may be, in respect of such Pledged Bonds which is then due.

Section 7.03 Surrender of Pledged Bonds.

At the time any Bonds of any series, or any Tranche thereof, which shall have been authenticated and delivered upon the basis of Pledged Bonds, cease to be Outstanding (other than as a result of the application of the proceeds of the payment or redemption of such Pledged Bonds), the Trustee shall upon the receipt of a Company Order surrender to or upon the order of the Company an equal principal amount of such Pledged Bonds having the same Stated Maturity and provisions, if any, for mandatory redemption as such Bonds.

Section 7.04 No Transfer of Pledged Bonds.

Subject to the provisions of Section 10.20 hereof the Trustee shall not sell, assign or otherwise transfer any Pledged Bonds except to a successor trustee under this Indenture. The Company may take such actions as it shall deem necessary, desirable or appropriate to effect compliance with such restrictions on transfer, including the placing of a legend on each Pledged Bond and the issuance of stop-transfer instructions to the trustee under the related Class “A” Mortgage or any other transfer agent thereunder.

Section 7.05 Voting of Pledged Bonds.

The Trustee shall, as the holder of Pledged Bonds Outstanding under each Class “A” Mortgage, attend such meeting or meetings of bondholders under such Class “A” Mortgage, or at its option, deliver its proxy in connection therewith, as relate to matters with respect to which it is entitled to vote or consent. So long as no Event of Default hereunder shall have occurred and be continuing, either at any such meeting or meetings, or otherwise when the consent of the holders of the Class “A” Bonds Outstanding under any Class “A” Mortgage

is sought without a meeting, the Trustee shall vote as holder of such Pledged Bonds, or shall consent with respect thereto, as follows:

(a) at any time when the Pledged Bonds Outstanding constitute less than a majority in aggregate principal amount of the Class “A” Bonds then Outstanding under such Class “A” Mortgage, the Trustee shall vote all Pledged Bonds Outstanding under such Class “A” Mortgage then held by it, or consent with respect thereto, proportionately with what the Trustee reasonably believes will be the vote or consent of the holders of all other Class “A” Bonds Outstanding under such Class “A” Mortgage the holders of which are eligible to vote or consent; provided, however, that the Trustee shall not so vote in favor of, or so consent to, any amendment or modification of a Class “A” Mortgage which, if it were an amendment or modification of this Indenture, would require the consent of Holders, without the prior consent, obtained in the manner prescribed in Section 14.02, of Holders of Bonds which would be required under said Section 14.02 for such an amendment or modification of this Indenture; and

(b) at any time when the Pledged Bonds Outstanding constitute at least a majority in aggregate principal amount of the Class “A” Bonds then Outstanding under such Class “A” Mortgage, the Trustee shall vote all Pledged Bonds Outstanding under such Class “A” Mortgage then held by it, or consent with respect thereto, in accordance with the written direction of the Company evidenced by an Officer’s Certificate or, in the absence of any such direction, proportionately with what the Trustee reasonably believes will be the vote or consent of the holders of all other Class “A” Bonds Outstanding under such Class “A” Mortgage the holders of which are eligible to vote or consent; provided, however, that the Trustee shall not so vote in favor of, or so consent to, any amendment or modification of a Class “A” Mortgage which, if it were an amendment or modification of this Indenture, would require the consent of Holders, without the prior consent, obtained in the manner prescribed in Section 14.02, of Holders of Bonds which would be required under said Section 14.02 for such an amendment or modification of this Indenture.

Section 7.06 Designation of Class “A” Mortgages.

(a) In the event that, after the date of execution and delivery of this Indenture, a corporation which was the mortgagor under a mortgage or deed of trust or similar indenture qualified under the Trust Indenture Act is merged into or consolidated with the Company, such mortgage, deed of trust or similar indenture may be designated a Class “A” Mortgage upon delivery to the Trustee of the following:

(i) a Company Order authorizing the designation of such mortgage, deed of trust or similar indenture as a Class “A” Mortgage;

(ii) an Officer’s Certificate (A) stating that no event has occurred and is continuing which entitles the trustee under such mortgage, deed of trust or similar indenture to accelerate the maturity of the obligations outstanding thereunder, (B) reciting the aggregate principal amount of obligations theretofore issued under such mortgage, deed of trust or similar indenture and the aggregate principal amount of obligations then outstanding thereunder, and (C) either (x) stating that all obligations outstanding under such mortgage, deed of trust or

similar indenture that were issued on the basis of property additions were issued in principal amounts that did not exceed 75% of the cost or Fair Value of such property additions to the issuer thereof (whichever was less), or (y) in the event that the foregoing clause (x) is not the case, stating that the Company has irrevocably waived its right to the authentication and delivery of further obligations under such mortgage, deed of trust or similar indenture in a principal amount equal to the excess of the aggregate dollar amount of property additions certified to the trustee under such mortgage, deed of trust or similar indenture as the basis for all obligations outstanding thereunder that were issued on the basis of property additions (and outstanding obligations issued on the basis of retirements of obligations issued on the basis of property additions) over 20/15ths of the aggregate principal amount of all such outstanding obligations; and

(iii) an Opinion of Counsel to the effect that (A) the corporation that was the mortgagor under such mortgage, deed of trust or similar indenture has been duly and lawfully merged into or consolidated with the Company; (B) such mortgage, deed of trust or similar indenture is qualified under the Trust Indenture Act; (C) the Company has duly assumed and agreed to perform and pay the obligations of the mortgagor under such mortgage, deed of trust or similar indenture; (D) such mortgage, deed of trust or similar indenture constitutes a Lien upon the property described therein prior to the Lien of this Indenture; (E) the Lien of this Indenture constitutes a Lien on the property described in such mortgage, deed of trust or similar indenture of the character described in Granting Clause First, and in any subsequent generic grant of unspecified property as contemplated in Granting Clause Third, acquired by the Company from such corporation by virtue of such merger or consolidation, subject to no Lien thereon prior to the Lien of this Indenture except the Lien of such mortgage, deed of trust or similar indenture, Permitted Liens and Liens of the character permitted to exist or to be hereafter created under Section 6.06; (F) the terms of such mortgage, deed of trust or similar indenture, as then in effect do not permit the further issuance of obligations thereunder except on the basis of cash, property additions of a character substantially similar to Property Additions or the retirement of outstanding obligations; (G) the terms of such mortgage, deed of trust or similar indenture, as then in effect and taking into account any waiver contemplated by clause (y) of subclause (C) of clause (ii) above, do not permit the further issuance of obligations thereunder upon the basis of property additions in a principal amount exceeding 75% of the cost or the Fair Value thereof to the issuer thereof (whichever shall be less); and (H) the indenture supplemental hereto referred to in subsection (b) of this Section complies with the requirements of clauses (i) and (ii) of said subsection (b).

(b) At such time as the Company and the Trustee have executed, and the Company has caused to be recorded:

(i) an indenture supplemental hereto (A) in which such mortgage, deed of trust or similar indenture has been designated as a Class “A” Mortgage, and (B) by which the Company has specifically imposed the Lien of this

Indenture upon properties of the character described in Granting Clause First, and in any subsequent generic grant of unspecified property as contemplated in Granting Clause Third, acquired by the Company from such corporation by virtue of the merger or consolidation (and later improvements, extensions and additions thereto and renewals and replacements thereof); and

(ii) an indenture supplemental to such mortgage, deed of trust or similar indenture by which such mortgage, deed of trust or similar indenture has been amended to provide that a Matured Event of Default thereunder shall include an Event of Default hereunder or a Matured Event of Default under any other Class "A" Mortgage; provided, however, that the waiver or cure of such Event of Default or Matured Event of Default and the rescission and annulment of the consequences thereof shall constitute a waiver of the corresponding Matured Event of Default under such mortgage, deed of trust or similar indenture and a rescission and annulment of the consequences thereof;

then such mortgage, deed of trust or similar indenture and all obligations issued and outstanding thereunder shall for all purposes hereof be treated as a Class "A" Mortgage and as Class "A" Bonds, respectively, to the full and same extent as if specifically identified in Article I.

Section 7.07 Discharge of Class "A" Mortgages.

(a) The Trustee shall surrender for cancellation to the trustee under any Class "A" Mortgage all Pledged Bonds then held by the Trustee issued under such Class "A" Mortgage upon receipt by the Trustee of

(i) a Company Order requesting such surrender for cancellation of such Pledged Bonds;

(ii) an Officer's Certificate to the effect that no Class "A" Bonds are Outstanding under such Class "A" Mortgage (other than Pledged Bonds) and that promptly upon such surrender such Class "A" Mortgage will be satisfied and discharged pursuant to the terms thereof;

(iii) an Engineer's Certificate:

(A) describing in reasonable detail all property constituting Property Additions designated by the Company, in its discretion, to be deemed, on and after the date of such surrender for cancellation and for all purposes of this Indenture, to have been made the basis of the authentication and delivery of all Bonds then Outstanding which shall have been authenticated and delivered under Section 4.02 on the basis of Pledged Bonds authenticated and delivered under such Class "A" Mortgage, such Property Additions to have, in the aggregate, a Cost (or as to Property Additions of which the Fair Value to the Company specified pursuant to subclause (H) or clause (iv) below is less than the Cost thereof,

then such Fair Value in lieu of Cost) not less than 20/15ths of the aggregate principal amount of such Bonds;

(B) stating that all such property constitutes Property Additions;

(C) stating that such Property Additions are desirable for use in the proper conduct of the business of the Company;

(D) stating that such Property Additions, to the extent of the Cost (or as to Property Additions of which the Fair Value to the Company specified pursuant to subclause (H) or clause (iv) below is less than the Cost thereof, then such Fair Value in lieu of Cost) to the Company to be deemed to have been made the basis of the authentication and delivery of such Bonds, will no longer constitute Bonded Property Additions (other than pursuant to clause (vi) of the definition of "Bonded") upon the discharge of the Class "A" Mortgage pursuant to which such Pledged Bonds were issued;

(E) stating, except as to Property Additions acquired, made or constructed wholly through the delivery of securities or other property or the incurrence of other obligations, that the amount of cash forming all or part of the Cost thereof was equal to or more than an amount to be stated therein;

(F) briefly describing, with respect to any Property Additions acquired, made or constructed in whole or in part through the delivery of securities or other property or other property or the incurrence of other obligations, the securities or other property so delivered or other obligations so incurred and stating the date of such delivery or incurrence;

(G) stating what part, if any, of such Property Additions included property which within six months prior to the date of acquisition thereof by the Company had been used or operated by a Person or Persons other than the Company in a business similar to that in which it has been or is to be used or operated by the Company and stating whether or not, in the judgment of the signers, the Fair Value thereof to the Company, as of the date of such certificate, is less than $25,000 and whether or not the fair value thereof to the Company, as of such date, is less than 1% of the sum of (x) the aggregate principal amount of Bonds then Outstanding, and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds);

(H) stating, in the judgment of the signers, the Fair Value to the Company, as of the date of such certificate, of such Property Additions, except any thereof with respect to the Fair Value to the Company of which a statement is to be made in an Independent Engineer's Certificate as

provided for in clause (iv) below; provided, however, that if any such Property Additions shall have theretofore been certified to the trustee under such Class "A" Mortgage as the basis for the authentication and delivery of Class "A" Bonds:

(x) which are Pledged Bonds as of the date of such certificate; or

(y) the retirement of which shall have theretofore been made the basis (whether directly or indirectly when considered in light of the issuance and retirement of successive issues of Class "A" Bonds) of the authentication and delivery of Pledged Bonds then held by the Trustee;

then there may be stated, in lieu of the Fair Value of such Property Additions as of the date of such certificate, the Fair Value thereof as so certified to the trustee under such Class "A" Mortgage; and

(I) stating that the Liens, if any, of the character described (1) in clause (e) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject do not, in the judgment of the signers, materially impair the use by the Company of the Mortgaged Property considered as a whole; (2) in clause (h)(ii) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject do not, in the judgment of the signers, materially impair the use by the Company of such property for the purposes for which it is held by the Company; (3) in clause (n)(ii) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject would not, if enforced, in the judgment of the signers, adversely affect the interests of the Company in such property in any material respect;

(iv) in case any Property Additions are shown by the Engineer's Certificate provided for in clause (iii) above to include property which, within six months prior to the date of acquisition thereof by the Company, had been used or operated by a Person or Persons other than the Company in a business similar to that in which it has been or is to be used or operated by the Company and such certificate does not show the Fair Value thereof to the Company, as of the date of such certificate, to be less than $25,000 or less than 1% of the sum of (x) the aggregate principal amount of Bonds then Outstanding, and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds), an Independent Engineer's Certificate stating, in the judgment of the signer, the Fair Value to the Company, as of the date of such Independent Engineer's Certificate, of (A) such Property Additions which have been so used or operated and (at the option of the Company) as to any other Property Additions included in the Engineer's Certificate provided for in clause (iii) above, and (B) any property so used or operated which has been subjected to the Lien of this

Indenture since the commencement of the then current calendar year as the basis for the authentication and delivery of Bonds and as to which an Independent Engineer's Certificate has not previously been furnished to the Trustee;

(v) in case any Property Additions are shown by the Engineer's Certificate provided for in clause (iii) above to have been acquired, made or constructed in whole or in part through the delivery of securities or other property, a written appraisal of an Engineer or Appraiser stating, in the judgment of such Engineer or Appraiser, the Fair Value in cash of such securities or other property at the time of delivery thereof in payment for or for the acquisition of such Property Additions;

(vi) an Opinion of Counsel to the effect:

(A) that (except as to paving, grading and other improvements to, under or upon highways, bridges, parks or other public property of analogous character) this Indenture is, or upon (x) the delivery of, or the filing or recording in the proper places and manner of, the instruments of conveyance, assignment or transfer, if any, specified in said opinion, or (y) the satisfaction and discharge of the Class "A" Mortgage to be satisfied and discharged pursuant to this Section, will be, a Lien on all the Property Additions to be deemed to have been made the basis of the authentication and delivery of Bonds then Outstanding which shall have been authenticated and delivered under Section 4.02 on the basis of Pledged Bonds authenticated and delivered under such Class "A" Mortgage, subject to no Lien thereon prior to the Lien of this Indenture except Permitted Liens; and

(B) that the Company has corporate authority to operate the Property Additions with respect to which such application is made;

(vii) an Opinion of Counsel to the effect that upon satisfaction and discharge of such Class "A" Mortgage the Lien of this Indenture on the property formerly subject to the lien of such Class "A" Mortgage, to the extent the same is part of the Mortgaged Property, will be subject to no Lien prior to the Lien of this Indenture except Permitted Liens and Liens of the character permitted to exist or to be hereafter created under Section 6.06; and

(viii) copies of the instruments of conveyance, assignment and transfer, if any, specified in the Opinion of Counsel provided for in clause (vi) above.

(b) The amount of the Cost of any Property Additions and the Fair Value thereof to the Company and the fair market value in cash of any securities or other property so delivered in payment therefor or for the acquisition thereof shall be determined for the purposes of this Section by the appropriate certificate provided for in this Section.

ARTICLE VIII

POSSESSION, USE AND RELEASE OF MORTGAGED PROPERTY

Section 8.01 Quiet Enjoyment.

Unless one or more Events of Default shall have occurred and be continuing, the Company shall be permitted to possess, use and enjoy the Mortgaged Property (except such cash as is expressly required to be deposited with the Trustee and except, to the extent not otherwise provided herein, such securities as are expressly required to be deposited with the Trustee).

Section 8.02 Dispositions without Release

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Unless an Event of Default shall have occurred and be continuing, the Company may at any time and from time to time, without any release or consent by, or report to, the Trustee:

(a) sell or otherwise dispose of, free from the Lien of this Indenture, or abandon or otherwise retire, any machinery, apparatus, equipment, frames, towers, poles, wire, pipe, cable, conduit, mains, tubes, drains, valves, tools, or implements, or any other fixture or personality, then subject to the Lien hereof, which shall have become inadequate, obsolete, worn out, unfit, or unserviceable or, provided that (at the time of any sale or disposal) the bonding test ratio specified in Section 8.03 is satisfied, shall have become undesirable or unnecessary for use in the Primary Purposes of the Company's Business;

(b) cancel or make changes in or alterations of or substitutions for any and all leases;

(c) alter, change the location of, add to, repair and replace any and all transmission and distribution lines, pipes, substations, machinery, fixtures and other equipment;

(d) cancel, make changes in or substitutions for or dispose of any and all rights of way (including easements and licenses);

(e) surrender or assent to the modification of any franchise (including in that term any ordinances, indeterminate permits, licenses or other operating rights, however denominated, granted by federal, state, municipal or other governmental authority) under which the Company may be operating if, in the judgment of the Company, it is advisable to do so;

(f) abandon, or permit the abandonment of, the operation of any Mortgaged Property and surrender any franchise (as defined in Section 8.02(e)) under which such Mortgaged Property is operated, if, in the judgment of the Company, the operation of such Mortgaged Property and such franchise is not, under the circumstances, necessary or important for the operation of the remaining Mortgaged Property, or whenever the Company deems such abandonment or surrender to be advisable for any reason; provided, however, that if the amount at which such Mortgaged Property and all other Mortgaged Property so abandoned or surrendered during the same calendar year was originally charged to the fixed property accounts of the Company is equal to 10% or more of the sum of (x) the aggregate principal amount of

Bonds then Outstanding and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds) immediately prior to such abandonment or surrender, there shall be furnished to the Trustee an Independent Engineer's Certificate to the effect that neither such Mortgaged Property nor such franchise is, under the circumstances, necessary or important for the operation of the remaining property of the Company or that such abandonment or surrender is advisable for some other specified reason, and in either case that such abandonment or surrender will not impair the security under this Indenture in contravention of the provisions hereof; and

(g) grant, free from the Lien of this Indenture, easements, ground leases or rights of way in, upon, over or across the property or rights of way of the Company for the purpose of roads, pipe lines, transmission lines, distribution lines, communication lines, railways, removal of coal or other minerals or timber, and other like purposes, or for the joint or common use of real property, rights of way, facilities or equipment; provided, however, that such grant shall not materially impair the use of the property or rights of way for the purposes for which such property or rights of way are held by the Company.

Section 8.03 Release of Mortgaged Property if Bonding Ratio Test Satisfied.

Unless an Event of Default shall have occurred and be continuing, upon receipt of a Company Order requesting the release of Mortgaged Property pursuant to this Section 8.03, the Trustee shall execute and deliver to the Company the documents and instruments described in Section 8.03(a), releasing from the Lien of this Indenture any Mortgaged Property if the Fair Value, after, in this case, deducting the principal amount of indebtedness secured by any Prior Liens thereon other than the Liens under any Class "A" Mortgage and other Permitted Liens (except for Permitted Liens, up to the Fair Value to the Company of the Mortgaged Property subject to the Permitted Lien, described in clause (g) of the definition thereof), of all of the Mortgaged Property (excluding the Mortgaged Property to be released but including any Property Additions to be acquired by the Company with the proceeds of, or otherwise in connection with, such release) stated on the Engineer's Certificates delivered pursuant to Section 8.03(b) and Section 8.03(c), equals or exceeds an amount equal to 20/15ths of the sum of (x) the aggregate principal amount of Bonds Outstanding and (y) the aggregate principal amount of Class "A" Bonds Outstanding (other than Pledged Bonds) at the date of such Company Order as stated on the Officer's Certificate delivered pursuant to Section 8.03(d), upon receipt by the Trustee of:

(a) documents and instruments releasing without recourse the interest of the Trustee in the Mortgaged Property to be released, and describing in reasonable detail the Mortgaged Property to be released;

(b) an Engineer's Certificate, dated the date of such Company Order, stating (i) that the signers of such Engineer's Certificate have examined the Officer's Certificate delivered pursuant to Section 8.03(d) in connection with such release, (ii) the Fair Value, after, in this case, deducting the principal amount of indebtedness secured by any Prior Liens thereon other than Permitted Liens (except for Permitted Liens, up to the Fair Value to the Company of the Mortgaged Property subject to the Permitted Lien, described in clause (g) of the definition thereof), in the opinion of the signers of such Engineer's Certificate, of (A) all of the Mortgaged

Property, and (B) the Mortgaged Property to be released, in each case, as of a date not more than ninety (90) days prior to the date of such Company Order, and (iii) that in the judgment of such signers, such release (A) will not materially adversely affect the Primary Purposes of the Company's Business, and (B) will not impair the security under this Indenture in contravention of the provisions hereof;

(c) in case any Property Additions are being acquired by the Company with the proceeds of, or otherwise in connection with, such release, an Engineer's Certificate, dated the date of such Company Order, as to the Fair Value, as of a date not more than ninety (90) days prior to the date of such Company Order, of the Property Additions being so acquired (and if within six months prior to the date of acquisition by the Company of the Property Additions being so acquired, any property included within such Property Additions had been used or operated by a Person or Persons other than the Company in a business similar to that in which it has been or is to be used or operated by the Company, and the Fair Value thereof to the Company, as set forth in such Engineer's Certificate, is not less than $25,000 and not less than 1% of the sum of (i) the aggregate principal amount of Bonds then Outstanding, and (ii) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds), such certificate shall be an Independent Engineer's Certificate); and

(d) an Officer's Certificate, dated the date of such Company Order, stating (i) the sum of (x) the aggregate principal amount of Bonds Outstanding and (y) the aggregate principal amount of Class "A" Bonds Outstanding (other than Pledged Bonds) at the date of such Company Order, and stating that the Fair Value, after, in this case, deducting the principal amount of indebtedness secured by any Prior Liens thereon other than the Liens under any Class "A" Mortgage and other Permitted Liens (except for Permitted Liens, up to the Fair Value to the Company of the Mortgaged Property subject to the Permitted Lien, described in clause (g) of the definition thereof), of all of the Mortgaged Property (excluding the Mortgaged Property to be released but including any Property Additions to be acquired by the Company with the proceeds of, or otherwise in connection with, such release) stated on the Engineer's Certificate filed pursuant to Section 8.03(b) equals or exceeds an amount equal to 20/15ths of such aggregate principal amount, and (ii) that, to the knowledge of the signer, no Event of Default has occurred and is continuing.

Section 8.04 Release of Limited Amount of Mortgaged Property.

If the Company is unable, or elects not, to obtain, in accordance with Section 8.03, the release from the Lien of this Indenture of Mortgaged Property, unless an Event of Default shall have occurred and be continuing, upon receipt of a Company Order requesting the release of Mortgaged Property pursuant to this Section 8.04, the Trustee shall execute and deliver to the Company the documents and instruments described in Section 8.04(a) releasing from the Lien of this Indenture any Mortgaged Property if the Fair Value thereof, as stated on the Engineer's Certificate delivered pursuant to Section 8.04(b), is less than 1% of the aggregate principal amount of Bonds Outstanding and Class "A" Bonds Outstanding (other than Pledged Bonds) at the date of such Company Order, provided that the aggregate Fair Value of all Mortgaged Property released pursuant to this Section 8.04, as stated on all Engineer's Certificates filed pursuant to this Section 8.04(b) in any period of 12 consecutive calendar months which includes the date of such Engineer's Certificate, shall not exceed the greater of (x)

$30,000,000 and (y) 3% of the sum of (A) the aggregate principal amount of Bonds then Outstanding and (B) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds) at the date of such Company Order as stated on the Officer's Certificate delivered pursuant to Section 8.04(c), upon receipt by the Trustee of:

(a) documents and instruments releasing without recourse the interest of the Trustee in the Mortgaged Property to be released, and describing in reasonable detail the Mortgaged Property to be released;

(b) an Engineer's Certificate, dated the date of such Company Order, stating (i) that the signer of such Engineer's Certificate has examined the Officer's Certificate delivered pursuant to Section 8.04(c) in connection with such release, (ii) the Fair Value, in the opinion of the signers of such Engineer's Certificate, of such Mortgaged Property to be released as of a date not more than ninety (90) days prior to the date of such Company Order, and (iii) that in the judgment of such signers, such release will not impair the security under this Indenture in contravention of the provisions hereof; and

(c) an Officer's Certificate, dated the date of such Company Order, stating (i) the aggregate principal amount of Bonds Outstanding and Class "A" Bonds Outstanding (other than Pledged Bonds) at the date of such Company Order, (ii) that 1% of such aggregate principal amount exceeds the Fair Value of the Mortgaged Property for which such release is applied for, (iii) that 3% of such aggregate principal amount exceeds the aggregate Fair Value of all Mortgaged Property released from the Lien of this Indenture pursuant to this Section 8.04, as shown by all Engineer's Certificates filed pursuant to Section 8.04(b) in such period of 12 consecutive calendar months, and (iv) that, to the knowledge of the signer, no Event of Default has occurred and is continuing.

Section 8.05 Release of Mortgaged Property Not Subject to a Class "A" Mortgage.

(a) If the Company is unable, or elects not, to obtain, in accordance with Section 8.03, the release from the Lien of this Indenture of Mortgaged Property which is not subject to a Class "A" Mortgage, unless an Event of Default shall have occurred and be continuing, on the basis of cash, Government Obligations, obligations securing Purchase Money Liens, Property Additions acquired by the Company with the proceeds of, or otherwise in connection with, such release, or the waiver of the right to the authentication and delivery of Bonds as described in subclause (B) of clause (iii) of this Section 8.05(a), or a combination thereof, upon receipt of a Company Order requesting the release of Mortgaged Property pursuant to this Section 8.05, the Trustee shall execute and deliver to the Company the documents and instruments described in Section 8.05(a)(i) releasing such Mortgaged Property from the Lien of this Indenture, upon receipt by the Trustee of:

(i) appropriate documents and instruments releasing without recourse the interest of the Trustee in the Mortgaged Property to be released, describing in reasonable detail the Mortgaged Property to be released and stating the amount and character of the proceeds to be received by the Company therefor;

(ii) an Engineer's Certificate, dated the date of such Company Order, stating (A) that the signers of such Engineer's Certificate have examined the Officer's Certificate, if any, delivered pursuant to clause (iii) of this Section 8.05(a) in connection with such release, (B) the Fair Value, in the opinion of the signers of such Engineer's Certificate, of the Mortgaged Property to be released as of a date not more than ninety (90) days prior to the date of such Company Order, (C) the fair market value in cash, in the opinion of such signers (which opinion may be based on an Appraiser's Certificate), of any Government Obligations and obligations securing Purchase Money Liens included in the consideration for such release, and (D) that in the judgment of such signers, such release will not impair the security under this Indenture in contravention of the provisions hereof;

(iii) (A) an aggregate amount of Government Obligations and obligations securing Purchase Money Liens having a fair market value in cash as evidenced by an Appraiser's Certificate, cash and evidence of the acquisition by the Company of Property Additions with the proceeds of, or otherwise in connection with, such release (the amount of such Property Additions shall be the Fair Value thereof to the Company as of a date not more than ninety (90) days prior to the date of such Company Order, as evidenced to the Trustee by an Engineer's Certificate dated the date of such Company Order, and if within six months prior to the date of acquisition by the Company of the Property Additions being so acquired, any property included within such Property Additions had been used or operated by a Person or Persons other than the Company in a business similar to that in which it has been or is to be used or operated by the Company, and the Fair Value thereof to the Company, as set forth in such Engineer's Certificate, is not less than $25,000 and not less than 1% of the sum of (i) the aggregate principal amount of Bonds then Outstanding and (ii) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds), such certificate shall be an Independent Engineer's Certificate), not less than the Fair Value of the Mortgaged Property to be released, or (B) an Officer's Certificate, dated the date of such Company Order, waiving the right of the Company to the authentication and delivery of an aggregate principal amount of Bonds 20/15ths of which is the amount required by subclause (A) of clause (iii) of this Section 8.05(a), on the basis of Class "A" Bonds under Section 4.02 or on the basis of Retired Bonds under Section 4.04, and stating the matters required to be stated in the Officer's Certificates provided for in clause (vi) of Section 4.01(a) and in clause (iv) of Section 4.02(b) or clause (ii) of Section 4.04(b), as the case may be, in either case appropriately modified to reflect that the action being taken is the waiver of the right to, rather than a request for, the authentication and delivery of Bonds, or (C) a combination of the items specified in subclauses (A) and (B) of clause (iii) of this Section 8.05(a);

(iv) in case any obligations secured by a Purchase Money Lien upon the Mortgaged Property to be released are included in the consideration for such release and are delivered to the Trustee in connection with such release, an Opinion of Counsel, dated the date of the Company Order, stating that, in the

opinion of the signer, such obligations are valid obligations enforceable in accordance with their terms, subject to the Customary Exceptions, and that the Purchase Money Lien securing the same is sufficient to afford a valid Purchase Money Lien upon the property to be released subject to no Lien prior thereto except Permitted Liens and such Liens, if any, as shall have existed thereon just prior to such release as Liens prior to the Lien of this Indenture; and

(v) an Officer's Certificate, dated the date of such Company Order, stating that, to the knowledge of the signer, no Event of Default has occurred and is continuing.

(b) Any obligation securing a Purchase Money Lien received or to be received by the Trustee under this Indenture in consideration for the release of any Mortgaged Property from the Lien of this Indenture by the Trustee, and the Purchase Money Lien securing such obligations, shall be released by the Trustee from the Lien of this Indenture and delivered or assigned to the Company, or as it shall request, upon payment by the Company to the Trustee of the unpaid principal of such Purchase Money Lien or of the obligations thereby secured; the principal of any such obligations securing a Purchase Money Lien not so released shall be paid to or collected by the Trustee as and when such principal shall become payable, and the Trustee may take any action which in its judgment may be desirable or necessary to preserve the security of such Purchase Money Lien.

(c) Any cash deposited with the Trustee under this Section 8.05 may thereafter be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 8.06.

Section 8.06 Withdrawal or Other Application of Funded Cash.

(a) Subject to the provisions of Section 4.05 and Section 6.07 and except as hereafter in this Section provided, unless an Event of Default shall have occurred and be continuing, any Funded Cash held by the Trustee, and any other cash which is required to be withdrawn, used or applied as provided in this Section:

(i) may be withdrawn from time to time by the Company to the extent of the Cost or the Fair Value to the Company (whichever is less) of Unbonded Property Additions, after making any deductions pursuant to Section 1.04(b), described in an Engineer's Certificate, dated not more than ninety (90) days prior to the date of the Company Order requesting such withdrawal and complying with clause (ii) of Section 4.03(b), delivered to the Trustee; provided, however, that the deductions contemplated by Section 1.04(b) shall not be required to be made if such Property Additions were acquired, made or constructed on or after the ninetieth (90th) day preceding the date of such Company Order;

(ii) may be withdrawn from time to time by the Company on the basis of Bonds the authentication and delivery of which the Company shall be entitled under the provisions of Section 4.04, by virtue of compliance with all applicable provisions of Section 4.04 (except as hereinafter in this Section otherwise

provided) (A) in the case of cash deposited with the Trustee under Section 4.05 or Section 7.02(a), in an amount equal to the aggregate principal amount of such Bonds and (B) in the case of all other Funded Cash and any other cash, in an amount equal to 20/15ths of such aggregate principal amount; provided, however, that such withdrawal of cash shall operate as a waiver by the Company of the authentication and delivery of such Bonds and, to such extent no such Bonds may thereafter be authenticated and delivered hereunder; and any such Bonds which were the basis of such right to the authentication and delivery of Bonds so waived shall be deemed to have been made the basis of such withdrawal of cash;

(iii) may be withdrawn from time to time by the Company in an amount equal to 20/15ths of the aggregate principal amount of any Outstanding Bonds delivered to the Trustee;

(iv) may, upon the request to the Company, be used by the Trustee for the purchase of Bonds in the manner, at the time or times, in the amount or amounts, at the price or prices (not exceeding 20/15ths of the principal amount thereof) and otherwise as directed or approved by the Company; or

(v) may, upon the request of the Company, be applied by the Trustee to the payment at Stated Maturity of any Bonds or to the redemption of any Bonds which are, by their terms, redeemable, in each case of such series as may be designated by the Company, any such redemption to be in the manner and as provided in Article V.

(b) Such moneys shall, from time to time, be paid or used or applied by the Trustee, as aforesaid, upon the request of the Company in a Company Order, and upon receipt by the Trustee of an Officer's Certificate stating that no Event of Default has occurred and is continuing. If and to the extent that the withdrawal of cash is based upon Unbonded Property Additions (as permitted under the provisions of clause (i) of Section 8.06(a)), the Company shall, subject to the provisions of said clause (i) and except as hereafter in this subsection provided, comply with all applicable provisions of this Indenture as if such Property Additions were made the basis for the authentication and delivery of Bonds equal in principal amount to 75% of the cash to be withdrawn. If and to extent that the withdrawal of cash is based upon the right to the authentication and delivery of Bonds (as permitted under the provisions of clause (ii) of Section 8.06(a)), the Company shall, except as hereafter in this subsection (b) provided, comply with all applicable provisions of Section 4.04 relating to such authentication and delivery. Notwithstanding the foregoing provisions of this subsection (b) and of Section 4.04, in no event shall the Company be required to comply with Section 4.01.

(c) The principal of and interest on any obligations secured by a Purchase Money Lien held by the Trustee shall be collected by the Trustee as and when the same become payable. Unless an Event of Default shall have occurred and be continuing, the interest received by the Trustee on any such obligations shall be remitted to the Company, and any payments received by the Trustee on account of the principal of any such obligations in excess of the amount of credit used by the Company in respect of such obligations upon the release of any property from the Lien hereof shall be deemed not to constitute Funded Cash and shall also be

remitted to the Company. The Trustee shall have and may exercise all the rights and powers of an owner of such obligations and of all substitutions therefor and, without limiting the generality of the foregoing, may collect and receive all insurance moneys payable to it under any of the provisions thereof and apply the same in accordance with the provisions thereof, may consent to extensions thereof at a higher or lower rate of interest, may join in any plan or plans of voluntary or involuntary reorganization or readjustment or rearrangement and may accept and hold hereunder new obligations, stocks or other securities issued in exchange therefor under any such plan. Any discretionary action which the Trustee may be entitled to take in connection with any such obligations or substitutions therefor shall be taken, so long as no Event of Default shall exist, in accordance with a Company Order, and, during the existence of an Event of Default, in its own discretion.

(d) Any Bonds received by the Trustee pursuant to the provisions of this Section shall forthwith be canceled by the Trustee.

Section 8.07 Release of Property Taken by Eminent Domain, etc.

Should any of the Mortgaged Property, or any interest therein, be taken by exercise of the power of eminent domain or be sold to an entity possessing the power of eminent domain under a threat to exercise the same, and should the Company not elect to obtain the release of such property pursuant to other provisions of this Article VIII, the Trustee shall, upon request of the Company evidenced by a Company Order, release from the Lien hereof all its right, title and interest in and to the property so taken or sold (or with respect to an interest in property, subordinate the Lien hereof to such interest), upon receiving (a) an opinion of Counsel to the effect that such property has been taken by exercise of the power of eminent domain or has been sold to an entity possessing the power of eminent domain under threat of an exercise of such power, (b) an Officer's Certificate stating the amount of net proceeds received or to be received for such property so taken or sold under threat of exercise of such power, and the amount so stated shall be deemed to be the Fair Value of such property for the purpose of any notice to the Holders of Bonds, and (c) a deposit by the Company of an amount in cash equal to the Cost of the Mortgaged Property so taken or sold (or, if the Fair Value to the Company of such property at the time the same became Mortgaged Property was less than the Cost thereof, then such Fair Value in lieu of Cost); provided, however, that no such deposit shall be required to be made hereunder if the proceeds of such taking or sale shall, as indicated in an Officer's Certificate delivered to the Trustee, have been deposited with the trustee or other holder of a Class "A" Mortgage or other Lien prior to the Lien of this Indenture. Any cash deposited with the Trustee under this Section may thereafter be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 8.06.

Section 8.08 Alternative Release Provision.

In lieu of the other provisions for the release of the Mortgaged Property provided in this Indenture, unless an Event of Default shall have occurred and be continuing, the Company may in the alternative obtain the release of any part of the Mortgaged Property which is subject to the Lien of a Class "A" Mortgage (except cash or obligations secured by a Purchase Money Lien) by delivery to the Trustee of an Officer's Certificate as to the non-existence of an Event of Default referred to above, an Engineer's Certificate as to the Fair Value of the property to be

released and a copy of a release of such part of the Mortgaged Property from the Lien of such Class "A" Mortgage executed by the trustee thereunderprovided, however, that this Section shall not apply with respect to any release of Mortgaged Property from the Lien of any Class "A" Mortgage in connection with the discharge of such Class "A" Mortgage.

Section 8.09 Disclaimer or Quitclaim.

In case the Company has sold, exchanged, dedicated or otherwise disposed of, or has agreed or intends to sell, exchange, dedicate or otherwise dispose of, or a Governmental Authority has lawfully ordered the Company to divest itself of, any property of a character excepted from the Lien hereof, or the Company desires to disclaim or quitclaim title to property to which the Company does not purport to have title, the Trustee shall, from time to time, execute such instruments of disclaimer or quitclaim as may be appropriate upon receipt by the Trustee of the following:

(a) an Officer's Certificate describing in reasonable detail the property to be disclaimed or quitclaimed; and

(b) an Opinion of Counsel stating the signer's opinion that such property is not subject to the Lien hereof or required to be subject thereto by any of the provisions hereof and that the execution of such disclaimer or quitclaim is appropriate.

Section 8.10 Miscellaneous.

(a) If the Mortgaged Property shall be in the possession of a receiver or trustee, lawfully appointed, the powers hereinbefore conferred upon the Company with respect to the release of any part of the Mortgaged Property or any interest therein or the withdrawal of cash may be exercised, with the approval of the Trustee, by such receiver or trustee, notwithstanding that an Event of Default may have occurred and be continuing, and any request, certificate, appointment or approval made or signed by such receiver or trustee for such purposes shall be as effective as if made by the Company or any of its officers or appointees in the manner herein provided; and if the Trustee shall be in possession of the Mortgaged Property under any provision of this Indenture, then such powers may be exercised by the Trustee in its discretion notwithstanding that an Event of Default may have occurred and be continuing.

(b) If the Company shall continue to own or otherwise retain any interest in any property released from the Lien of this Indenture as provided in Section 8.03, 8.04 or 8.05, this Indenture shall not become or be, or be required to become or be, a Lien upon such property or any improvement, extension or addition to such property or renewals, replacements or substitutions of or for any part or parts of such property unless the Company shall execute and deliver to the Trustee an indenture supplemental hereto, in recordable form, containing a grant, conveyance, transfer and mortgage thereof to the Trustee.

(c) Notwithstanding the occurrence and continuance of an Event of Default, the Trustee, in its discretion, may release from the Lien hereof any part of the Mortgaged Property or permit the withdrawal of cash, upon compliance with the other conditions specified in this Article in respect thereof.

(d) No purchaser or grantee in good faith of property purporting to have been released hereunder shall be bound to ascertain the authority of the Trustee to execute the release, or to inquire as to any facts required by the provisions hereof for the exercise of this authority; nor shall any purchaser or grantee of any property or rights permitted by this Article to be sold, granted, exchanged, dedicated or otherwise disposed of, be under obligation to ascertain or inquire into the authority of the Company to make any such sale, grant, exchange, dedication or other disposition.

ARTICLE IX

SATISFACTION AND DISCHARGE

Section 9.01 Satisfaction and Discharge of Bonds.

(a) Any Bond or Bonds, or any portion of the principal amount thereof, shall be deemed to have been paid for all purposes of this Indenture, and the entire indebtedness of the Company in respect thereof shall be deemed to have been satisfied and discharged, if there shall have been irrevocably deposited with the Trustee or any Paying Agent (other than the Company), in trust for the benefit of the Holders of the Bonds:

(i) money (including Funded Cash not otherwise applied pursuant to Section 8.06) in an amount which shall be sufficient, or

(ii) in the case of a deposit made prior to the Maturity of such Bonds or portions thereof, Eligible Obligations, which shall not contain provisions permitting the redemption or other prepayment thereof at the option of the issuer thereof, the principal of and the interest on which when due, without any regard to reinvestment thereof, will provide moneys which, together with the money, if any, deposited with or held by the Trustee or such Paying Agent, shall be sufficient, or

(iii) a combination of (i) and (ii) which shall be sufficient,

to pay when due the principal of and premium, if any, and interest, if any, due and to become due on such Bonds or portions thereofprovided, however, that in the case of the provision for payment or redemption of less than all the Bonds of any series or Tranche, such Bonds or portions thereof shall have been selected by the Bond Registrar as provided herein and, in the case of a redemption, the notice requisite to the validity of such redemption shall have been given or irrevocable authority shall have been given by the Company to the Trustee and the Bond Registrar to give such notice, under arrangements satisfactory to the Trustee; and provided, further, that the Company shall have delivered to the Trustee and such Paying Agent:

(x) if such deposit shall have been made prior to the Maturity of such Bonds, a Company Order stating that the money and Eligible Obligations deposited in accordance with this Section shall be held in trust, as provided in Section 9.03; and

(y) if Eligible Obligations shall have been deposited, an Opinion of Counsel that the obligations so deposited constitute Eligible

Obligations and do not contain provisions permitting the redemption or other prepayment at the option of the issuer thereof, and an opinion of an Independent Accountant of nationally recognized standing, selected by the Company, to the effect that the other requirements set forth in clause (ii) above have been satisfied.

(b) Upon the deposit of money or Eligible Obligations, or both, in accordance with this Section, together with the documents required by clauses (x) and (y) of Section 9.01(a), (i) the Holders of the Bonds or portions thereof in respect of which such deposit was made shall no longer be entitled to the benefit of the covenants of the Company under Article VI (except the covenants contained in Sections 6.01(a), 6.02 and 6.03), and (ii) the Trustee shall, upon receipt of a Company Request, acknowledge in writing that such Bonds or portions thereof are deemed to have been paid for all purposes of this Indenture and that the entire indebtedness of the Company in respect thereof is deemed to have been satisfied and discharged.

(c) If payment at Stated Maturity of less than all of the Bonds of any series, or any Tranche thereof, is to be provided for in the manner and with the effect provided in this Section, the Bond Registrar shall select such Bonds, or portions of principal amount thereof, in the manner specified by Section 5.03 for selection for redemption of less than all the Bonds of a series or Tranche, unless a different manner is specified as contemplated by Section 3.01 for Bonds of such series or Tranche.

(d) In the event that Bonds which shall be deemed to have been paid as provided in this Section do not mature and are not to be redeemed within the sixty (60) day period commencing with the date of the deposit with the Trustee or such Paying Agent of moneys or Eligible Obligations as aforesaid, the Company shall, as promptly as practicable, give a notice, in the same manner as a notice of redemption with respect to such Bonds, to the Holders of such Bonds to the effect that such deposit has been made and the effect thereof.

(e) Notwithstanding the satisfaction and discharge of any Bonds as aforesaid, the obligations of the Company and the Trustee in respect of such Bonds under Sections 3.04, 3.05, 3.06, 5.04, 6.02, 6.03, 11.07 and 11.15, Article VII and this Article IX shall survive.

(f) The Company shall pay, and shall indemnify the Trustee and each Holder of Bonds which are deemed to have been paid as provided in this Section against, any tax, fee or other charge imposed on or assessed against the Eligible Obligations deposited with the Trustee or the principal or interest received by the Trustee in respect of such Eligible Obligations.

(g) Anything herein to the contrary notwithstanding, if at any time after a Bond would be deemed to have been satisfied or discharged pursuant to this Section (without regard to the provisions of this subsection (g)), the Trustee shall be required to return the money or Eligible Obligations, or combination thereof, deposited with it as aforesaid to the Company or its representative under any applicable federal or state bankruptcy, insolvency or other similar law, the indebtedness of the Company in respect of such Bond shall thereupon be deemed retroactively not to have been satisfied and discharged, as aforesaid, and to remain Outstanding.

Section 9.02 Satisfaction and Discharge of Indenture.

(a) This Indenture shall upon Company Request cease to be of further effect (except as hereinafter expressly provided), and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging satisfaction and discharge of this Indenture, when

(i) either:

(A) all Bonds theretofore authenticated and delivered (other than (1) Bonds which have been destroyed, lost or wrongfully taken and which have been replaced or paid as provided in Section 3.06, and (2) Bonds deemed to have been paid in accordance with Section 9.01) have been delivered to the Trustee for cancellation; or

(B) all Bonds not theretofore delivered to the Trustee for cancellation (other than Bonds described in clause (1) of subclause (A) above) shall be deemed to have been paid in accordance with Section 9.01;

(ii) the Company has paid or caused to be paid all other sums payable hereunder by the Company; and

(iii) the Company has delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to the satisfaction and discharge of this Indenture have been complied with.

(b) Notwithstanding the satisfaction and discharge of this Indenture as aforesaid, the obligations of the Company and the Trustee under Sections 11.07 and 11.15 and this Article IX shall survive.

(c) Upon satisfaction and discharge of this Indenture as provided in this Section, the Trustee shall assign, transfer, reconvey and otherwise turn over to the Company the Mortgaged Property (other than money and Eligible Obligations held by the Trustee pursuant to Section 9.03) and shall execute and deliver to the Company such deeds and other instruments as, in the judgment of the Company, shall be necessary, desirable or appropriate to effect or evidence such assignment, transfer, reconveyance and turning over and the release and discharge of the Lien of this Indenture.

Section 9.03 Application of Trust Money.

Neither the Eligible Obligations nor the money deposited with the Trustee pursuant to Section 9.01, nor the principal or interest payments on any such Eligible Obligations, shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment of the principal of and premium, if any, and interest, if any, on the Bonds or portions of principal amount thereof in respect of which such deposit was made, all subject, however, to the provisions of Section 6.03; provided, however, that, unless an Event of Default shall have occurred and be continuing, any cash received from such principal or interest payments on such

Eligible Obligations deposited with the Trustee, if not then needed for such purpose, shall, to the extent practicable, be invested in Eligible Obligations of the type described in clause (ii) of Section 9.01(a), and, subject to the rights of the Trustee under Section 11.07, interest earned from such reinvestment shall be paid over to the Company as received by the Trustee, free and clear of the Lien of this Indenture; and provided, however, that unless an Event of Default shall have occurred and be continuing, any moneys held by the Trustee in accordance with this Section on the Maturity of all such Bonds in excess of the amount required to pay the principal of and premium, if any, and interest, if any, then due on such Bonds, subject to the rights of the Trustee under Section 11.07, shall be paid over to the Company free and clear of the Lien of this Indenture.

ARTICLE X

EVENTS OF DEFAULT; REMEDIES

Section 10.01 Events of Default

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An "Event of Default", wherever used herein with respect to the Bonds, means any one the following events:

(a) failure to pay interest, if any, on any Bond within sixty (60) days after same becomes due and payable; or

(b) failure to pay the principal of or premium, if any, on any Bond within three (3) Business Days after its Maturity; or

(c) failure to perform or breach of any covenant or warranty of the Company in this Indenture (other than a covenant or warranty a default in the performance of which or breach of which is elsewhere in this Section specifically dealt with) for a period of ninety (90) days after there has been given, by registered or certified mail, to the Company by the Trustee, or to the Company and the Trustee by the Holders of at least 33% in aggregate principal amount of the Bonds then Outstanding, a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a "Notice of Default" hereunder, unless the Trustee, or the Trustee and the Holders of an aggregate principal amount of Bonds not less than the aggregate principal amount of Bonds the Holders of which gave such notice, as the case may be, shall agree in writing to an extension of such period prior to its expiration, provided, however, that the Trustee, or the Trustee and the Holders of such aggregate principal amount of Bonds, as the case may be, shall be deemed to have agreed to an extension of such period if corrective action is initiated by the Company within such period and is being diligently pursued; or

(d) the entry by a court having jurisdiction in the premises of (i) a decree or order for relief in respect of the Company in an involuntary case or proceeding under any applicable federal or state bankruptcy, insolvency, reorganization or other similar law, or (ii) a decree or order adjudging the Company a bankrupt or insolvent, or approving as properly filed a petition by one or more Persons other than the Company seeking reorganization, arrangement, adjustment or composition of or in respect of the Company under applicable federal or state law,

or appointing a custodian, receiver, liquidator, assignee, trustee, sequestrator or other similar official for the Company or for any substantial part of its property, or ordering the winding up or liquidation of its affairs, and any such decree or order for relief or any such other decree or order shall have remained unstayed and in effect for a period of ninety (90) consecutive days; or

(e) the commencement by the Company of a voluntary case or proceeding under any applicable federal or state bankruptcy, insolvency, reorganization or other similar law or of any other case or proceeding to be adjudicated a bankrupt or insolvent, or the consent by it to the entry of a decree or order for relief in respect of the Company in a case or proceeding under any applicable federal or state bankruptcy, insolvency, reorganization or other similar law or to the commencement of any bankruptcy or insolvency case or proceeding against it, or the filing by it of a petition or answer or consent seeking reorganization or relief under any applicable federal or state law, or the consent by it to the filing of such petition or to the appointment of or taking possession by a custodian, receiver, liquidator, assignee, trustee, sequestrator or similar official of the Company or of any substantial part of its property, or the making by it of an assignment for the benefit of creditors, or the admission by it in writing of its inability to pay its debts generally as they become due, or the authorization of such action by the Board of Directors; or

(f) the occurrence of a Matured Event of Default under any Class "A" Mortgage;provided, however, that, anything in this Indenture to the contrary notwithstanding, the waiver or cure of such event of default under such Class "A" Mortgage and the rescission and annulment of the consequences thereof shall constitute a waiver of the corresponding Event of Default hereunder and a rescission and annulment of the consequences thereof.

Section 10.02 Acceleration of Maturity; Rescission and Annulmen.

(a) If an Event of Default shall have occurred and be continuing, then in every such case the Trustee or the Holders of not less than 33% in aggregate principal amount of the Bonds then Outstanding may declare the principal amount of all of the Bonds (or, in the case of any Bond of any series the terms of which specify an amount to be due and payable thereon upon acceleration of the Maturity thereof as contemplated by Section 3.01, such amount as may be specified by the terms thereof) to be due and payable immediately, by a notice in writing to the Company (and to the Trustee if given by Holders), and upon receipt by the Company of notice of such declaration such principal amount (or specified amount), together with premium, if any, and accrued interest, if any, thereon, shall become immediately due and payable.

(b) At any time after such a declaration of acceleration of the maturity of the Bonds then Outstanding shall have been made, but before any sale of any of the Mortgaged Property has been made and before a judgment or decree for payment of the money due shall have been obtained by the Trustee as provided in this Article, the Event or Events of Default giving rise to such declaration of acceleration shall, without further act, be deemed to have been waived, and such declaration and its consequences shall, without further act, be deemed to have been rescinded and annulled, if:

(i) the Company shall have paid or deposited with the Trustee a sum sufficient to pay

(A) all overdue interest, if any, on all Bonds then Outstanding;

(B) the principal of and premium, if any, on any Bonds then Outstanding which have become due otherwise than by such declaration of acceleration and interest thereon at the rate or rates prescribed therefor in such Bonds; and

(C) all amounts due to the Trustee under Section 11.07; and

(ii) any other Event or Events of Default, other than the non-payment of the principal of Bonds which shall have become due solely by such declaration of acceleration, shall have been cured or waived as provided in Section 10.17.

No such rescission shall affect any subsequent Event of Default or impair any right consequent thereon.

Section 10.03 Entry Upon Mortgaged Property.

If an Event of Default shall have occurred and be continuing, the Company, upon demand of the Trustee and if and to the extent permitted by law, shall forthwith surrender to the Trustee the actual possession of, and the Trustee, by such officers or agents as it may appoint, may enter upon, and take possession of, the Mortgaged Property; and the Trustee may hold, operate and manage the Mortgaged Property, and in that connection shall have access to the relevant books and accounts of the Company, and may make all needful repairs and such renewals, replacements, betterments and improvements as to the Trustee shall seem prudent; and the Trustee, subject to the rights, if any, of others to receive collections from former, present or future customers, may receive the rents, issues, profits, revenues and other income of the Mortgaged Property; and, after deducting the costs and expenses of entering, taking possession, holding, operating and managing the Mortgaged Property, as well as payments for insurance and taxes and other proper charges upon the Mortgaged Property prior to the Lien of this Indenture and reasonable compensation to itself, its agents and counsel, the Trustee may apply the same as provided in Section 10.07. Whenever all that is then due in respect of the principal of and premium, if any, and interest, if any, on the Bonds and under any of the terms of this Indenture shall have been paid and all defaults hereunder shall have been cured, the Trustee shall surrender possession of the Mortgaged Property to the Company.

Section 10.04 Power of Sale; Suits for Enforcement.

If an Event of Default shall have occurred and be continuing, the Trustee, by such officers or agents as it shall appoint, with or without entry, in its discretion may, subject to the provisions of Section 10.16 and if and to the extent permitted by law:

(a) sell, subject to any mandatory requirements of applicable law, the Mortgaged Property as an entirety, or in such parcels as the Holders of a majority in aggregate principal amount of the Bonds then Outstanding shall in writing request, or in the absence of such request, as the Trustee may determine, to the highest bidder at public auction at such place and at such time (which sale may be adjourned by the Trustee from time to time in its discretion by announcement at the time and place fixed for such sale, without further notice) and upon such

terms as the Trustee may fix and briefly specify in a notice of sale to be published once in each week for four successive weeks prior to such sale in an Authorized Publication in each Place of Payment for the Bonds of each series; or

(b) proceed to protect and enforce its rights and the rights of the Holders of Bonds under this Indenture by sale pursuant to judicial proceedings or by a suit, action or proceeding in equity or at law or otherwise, whether for the specific performance of any covenant or agreement contained in this Indenture or in aid of the execution of any power granted in this Indenture or for the foreclosure of this Indenture or for the enforcement of any other legal, equitable or other remedy, as the Trustee, being advised by counsel, shall deem most effectual to protect and enforce any of the rights of the Trustee or the Holders of Bonds.

Section 10.05 Incidents of Sale.

Upon any sale of any of the Mortgaged Property, whether made under the power of sale hereby given or pursuant to judicial proceedings, to the extent permitted by law:

(a) the principal amount (or, if any of the Bonds are Discount Bonds, such portion of the principal amount of such Bonds as may be specified in the terms thereof as contemplated by Section 3.01) of all Outstanding Bonds, if not previously due, shall at once become and be immediately due and payable together with premium, if any, and accrued interest, if any, thereon;

(b) any Holder or Holders of Bonds or the Trustee may bid for and purchase the property offered for sale, and upon compliance with the terms of sale may hold, retain and possess and dispose of such property, without further accountability, and may, in paying the purchase money therefor, deliver any Outstanding Bonds or claims for interest thereon in lieu of cash to the amount which shall, upon distribution of the net proceeds of such sale, be payable thereon, and such Bonds, in case the amounts so payable thereon shall be less than the amount due thereon, shall be returned to the Holders thereof after being appropriately stamped to show partial payment;

(c) the Trustee may make and deliver to the purchaser or purchasers a good and sufficient deed, bill of sale and instrument of assignment and transfer of the property sold;

(d) the Trustee is hereby irrevocably appointed the true and lawful attorney of the Company, in its name and stead, to make all necessary deeds, bills of sale and instruments of assignment and transfer of the property so sold; and for that purpose it may execute all necessary deeds, bills of sale and instruments of assignment and transfer, and may substitute one or more persons, firms or corporations with like power, the Company hereby ratifying and confirming all that its said attorney or such substitute or substitutes shall lawfully do by virtue hereof; but, if so requested by the Trustee or by any purchaser, the Company shall ratify and confirm any such sale or transfer by executing and delivering to the Trustee or to such purchaser or purchasers all proper deeds, bills of sale, instruments of assignment and transfer and releases as may be designated in any such request;

(e) all right, title, interest, claim and demand whatsoever, either at law or in equity or otherwise, of the Company of, in and to the property so sold shall be divested and such

sale shall be a perpetual bar both at law and in equity against the Company, its successors and assigns, and against any and all persons claiming or who may claim the property sold or any part thereof from, through or under the Company, subject, however, to the rights, if any, held by others to receive collections from former, present or future customers; and

(f) the receipt of the Trustee or of the officer making such sale shall be a sufficient discharge to the purchaser or purchasers at such sale for his or her or their purchase money and such purchaser or purchasers and his or her or their assigns or personal representatives shall not, after paying such purchase money and receiving such receipt, be obliged to see to the application of such purchase money, or be in anywise answerable for any loss, misapplication or non-application thereof.

Section 10.06 Collection of Indebtedness and Suits for Enforcement by Trustee.

(a) If an Event of Default described in Section 10.01(a) or 10.01(b) shall have occurred and be continuing, the Company shall, upon demand of the Trustee, pay to it, for the benefit of the Holders of the Bonds with respect to which such Event of Default shall have occurred, the whole amount then due and payable on such Bonds for principal and premium, if any, and interest, if any, and, in addition thereto, such further amount as shall be sufficient to cover any amounts due to the Trustee under Section 11.07.

(b) If the Company shall fail to pay such amounts forthwith upon such demand, the Trustee, in its own name and as trustee of an express trust, may institute a judicial proceeding for the collection of the sums so due and unpaid, may prosecute such proceeding to judgment or final decree and may enforce the same against the Company or any other obligor upon such Bonds and collect the moneys adjudged or decreed to be payable in the manner provided by law out of the property of the Company or any other obligor upon such Bonds, wherever situated.

(c) The Trustee shall, to the extent permitted by law, be entitled to sue and recover judgment as aforesaid either before, during or after the pendency of any proceedings for the enforcement of the Lien of this Indenture, and in case of a sale of the Mortgaged Property or any part thereof and the application of the proceeds of sale as aforesaid, the Trustee, in its own name and as trustee of an express trust, shall be entitled to enforce payment of and to receive, all amounts then remaining due and unpaid upon the Bonds then Outstanding for principal, premium, if any, and interest, if any, for the benefit of the Holders thereof, and shall be entitled to recover judgment for any portion of the same remaining unpaid, with interest as aforesaid. No recovery of any such judgment by the Trustee and no levy of any execution upon any such judgment upon any of the Mortgaged Property or any other property of the Company shall affect or impair the Lien of this Indenture upon the Mortgaged Property or any part thereof or any rights, powers or remedies of the Trustee hereunder, or any rights, powers or remedies of the Holders of the Bonds.

Section 10.07 Application of Money Collected.

Any money collected by the Trustee pursuant to this Article, including any rents, issues, profits, revenues and other income collected pursuant to Section 10.03 (subject to the

rights, if any, of others to receive collections therein referred to and after the deductions therein provided) and any proceeds of any sale (after deducting the costs and expenses of such sale, including a reasonable compensation to the Trustee, its agents and counsel, and any taxes, assessments or liens prior to the Lien of this Indenture, except any thereof subject to which such sale shall have been made), whether made under any power of sale herein granted or pursuant to judicial proceedings, and any other money collected by the Trustee under the provisions of this Indenture (unless otherwise herein specifically provided for), together with, in the case of an entry or sale or as otherwise provided herein, any other sums then held by the Trustee as part of the Mortgaged Property, shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such money on account of principal or premium, if any, or interest, if any, upon presentation of the Bonds and the notation thereon of the payment if only partially paid and upon surrender thereof if fully paid:

FIRST: To the payment of all amounts due the Trustee under Section 11.07;

SECOND: To the payment of the whole amount then due and unpaid upon the Outstanding Bonds for principal and premium, if any, and interest, if any, in respect of which or for the benefit of which such money has been collected; and in case such proceeds shall be insufficient to pay in full the whole amount so due and unpaid upon such Bonds, then to the payment of such principal and interest, if any, without any preference or priority, ratably according to the aggregate amount so due and unpaid, with any balance then remaining to the payment of premium, if any, ratably as aforesaid; provided, however, that any money specifically collected by the Trustee in respect of interest or pursuant to Section 10.03 shall first be applied to the payment of interest so due; and

THIRD: To the payment of the remainder, if any, to the Company or to whomsoever may be lawfully entitled to receive the same or as a court of competent jurisdiction may order.

Section 10.08 Receiver.

If an Event of Default shall have occurred and, during the continuance thereof, the Trustee shall have commenced judicial proceedings to enforce any right under this Indenture, the Trustee shall, to the extent permitted by law, be entitled, as against the Company, without notice or demand and without regard to the adequacy of the security for the Bonds or the solvency of the Company, to the appointment of a receiver of the Mortgaged Property, and, subject to the rights, if any, of others to receive collections from former, present or future customers, of the rents, issues, profits, revenues and other income thereof but, notwithstanding the appointment of any receiver, the Trustee shall be entitled to retain possession and control of, and to collect and receive the income from, cash, securities and other personal property held by, or required to be deposited or pledged with, the Trustee hereunder.

Section 10.09 Trustee May File Proofs of Claim.

(a) In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding relative to the Company or any other obligor upon the Bonds or the property of the Company or

of such other obligor or their creditors, the Trustee (irrespective of whether the principal of the Bonds shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand on the Company for the payment of overdue principal or interest) shall be entitled and empowered, by intervention in such proceeding or otherwise:

(i) to file and prove a claim for the whole amount of principal, premium, if any, and interest, if any, owing and unpaid in respect of the Bonds and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for amounts due to the Trustee under Section 11.07) and of the Holders allowed in such judicial proceeding; and

(ii) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same;

and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the Trustee any amounts due it under Section 11.07.

(b) Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Bonds or the rights of any Holder thereof or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding; provided, however, that the Trustee may, on behalf of the Holders, vote for the election of a trustee in bankruptcy or similar official and be a member of a creditors or other similar committee.

Section 10.10 Trustee May Enforce Claims Without Possession of Bonds.

All rights of action and claims under this Indenture or on the Bonds may be prosecuted and enforced by the Trustee without the possession of any of the Bonds or the production thereof in any proceeding relating thereto, and any such proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the Holders in respect of which such judgment has been recovered.

Section 10.11 Limitation on Suits.

No Holder shall have any right to institute any proceeding, judicial or otherwise, with respect to this Indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless:

(a) such Holder shall have previously given written notice to the Trustee of a continuing Event of Default;

(b) the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;

(c) such Holder or Holders shall have offered to the Trustee reasonable indemnity against the costs, expenses and liabilities to be incurred in compliance with such request;

(d) the Trustee for sixty (60) days after its receipt of such notice, request and offer of indemnity shall have failed to institute any such proceeding; and

(e) no direction inconsistent with such written request shall have been given to the Trustee during such 60-day period by the Holders of a majority in aggregate principal amount of the Bonds then Outstanding;

it being understood and intended that no one or more of such Holders shall have any right in any manner whatever by virtue of, or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of any other of such Holders or to obtain or to seek to obtain priority or preference over any other of such Holders or to enforce any right under this Indenture, except in the manner herein provided and for the equal and ratable benefit of all of such Holders.

Section 10.12 Unconditional Right of Holders to Receive Principal, Premium and Interes.

Notwithstanding any other provision in this Indenture, the Holder of any Bond shall have the right, which is absolute and unconditional, to receive payment of the principal of and premium if any, and (subject to Section 3.07) interest, if any, on such Bond on the Stated Maturity or Maturities expressed in such Bond (or, in the case of redemption, on the Redemption Date) and to institute suit for the enforcement of any such payment, and such rights shall not be impaired without the consent of such Holder.

Section 10.13 Restoration of Rights and Remedies.

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, and Trustee and such Holder shall be restored severally and respectively to their former positions hereunder and thereafter all rights and remedies of the Trustee and such Holder shall continue as though no such proceeding had been instituted.

Section 10.14 Rights and Remedies Cumulative.

Except as otherwise provided in Section 3.06(f), no right or remedy herein conferred upon or reserved to the Trustee or to the Holders is intended to be exclusive of any other right or remedy, and, subject to Section 10.11, every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of

any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

Section 10.15 Delay or Omission Not Waiver.

No delay or omission of the Trustee or of any Holder to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article or by law to the Trustee or to the Holders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee or by the Holders, as the case may be.

Section 10.16 Control by Majority Holders of Bonds.

If an Event of Default shall have occurred and be continuing, the Holders of a majority in aggregate principal amount of the Bonds then Outstanding shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee herein, provided, however, that

(a) such direction shall not be in conflict with any rule of law or with this Indenture, and could not involve the Trustee in personal liability in circumstances where indemnity would not, in the Trustee's sole discretion, be adequate;

(b) such direction shall not be unduly prejudicial to the rights of the nonassenting Holders; and

(c) the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction.

Section 10.17 Waiver of Past Defaults.

(a) Before any sale of any of the Mortgaged Property, and before a judgment or decree for payment of the money due shall have been obtained by the Trustee, as in this Article provided, the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding may, by an Act of such Holders delivered to the Trustee and the Company, on behalf of the Holders of all the Bonds then Outstanding waive any past default hereunder and its consequences, except a default:

(i) in the payment of the principal of or premium, if any, or interest, if any, on any Bond Outstanding, or

(ii) in respect of a covenant or provision hereof which under Section 14.02(a) cannot be modified or amended without the consent of the Holder of each Outstanding Bond of any series or Tranche affected.

(b) Upon any such waiver, such default shall cease to exist, and any and all Events of Default arising therefrom shall be deemed to have been cured, for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other default or impair any right consequent thereon. A waiver of any past default and its consequences given by or on

behalf of any Holder of the Bonds in connection with a purchase of, or tender or exchange offer for, such Holder's Bonds will not be rendered invalid by such purchase, tender or exchange.

Section 10.18 Undertaking for Costs.

The Company and the Trustee agree, and each Holder of Bonds by its acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this Section shall not apply to any suit instituted by the Company, to any suit instituted by the Trustee, to any suit instituted by any Holder, or group of Holders, holding in the aggregate more than 10% in aggregate principal amount of the Bonds then Outstanding, or to any suit instituted by any Holder for the enforcement of the payment of the principal of or premium, if any, or interest, if any, on any Bond on or after the Stated Maturity or Maturities expressed in such Bond (or, in the case of redemption, on or after the Redemption Date).

Section 10.19 Waiver of Appraisement and Other Laws.

To the full extent that it may lawfully so agree, the Company shall not at any time set up, claim or otherwise seek to take the benefit or advantage of any appraisement, valuation, stay, extension or redemption law now or hereafter in effect, in order to prevent or hinder the enforcement of this Indenture or the absolute sale of the Mortgaged Property, or any part thereof, or the possession thereof, or any part thereof, by any purchaser at any sale under this Article; and the Company, for itself and all who may claim under it, so far as it or they now or hereafter may lawfully do so, hereby waives the benefit of all such laws. The Company, for itself and all who may claim under it, waives, to the extent that it may lawfully do so, all right to have the Mortgaged Property marshalled upon any foreclosure of the Lien hereof, and agrees that any court having jurisdiction to foreclose the Lien of this Indenture may order the sale of the Mortgaged Property as an entirety.

Section 10.20 Defaults under Class "A" Mortgages.

In addition to every other right and remedy provided herein, the Trustee may exercise any right or remedy available to the Trustee in its capacity as owner and holder of Pledged Bonds which arises as a result of a default or Matured Event of Default under any Class "A" Mortgage, whether or not an Event of Default shall then have occurred and be continuing.

Section 10.21 Limitation on Remedies.

Notwithstanding any provision of this Indenture, including but not limited to the provisions of Sections 10.03, 10.04, 10.05, 10.08 and 10.19 hereof, unless otherwise permitted by the AEA as in effect from time to time, the Trustee may not take possession of any portion of the Mortgaged Property constituting a Nuclear Facility or exercise control over any Nuclear

Facility or licensed activity, whether for the purpose of effecting the sale of any such Mortgaged Property or otherwise, without first having obtained either (a) the issuance of appropriate licenses from the Nuclear Regulatory Commission (the "NRC") authorizing such possession or (b) NRC approval of the direct or indirect transfer of control of existing licenses applicable to such Mortgaged Property. Further, the Trustee may exercise its rights under this Indenture only in compliance with and subject to (x) the same requirements as would apply to the then-current NRC licensees for such Mortgaged Property and (y) the AEA and the applicable orders, decrees and regulations issued by the NRC thereunder.

ARTICLE XI

THE TRUSTEE

Section 11.01 Certain Duties and Responsibilities.

(a) The Trustee shall have and be subject to all the duties and responsibilities and all of the protections, exculpations and limitations on liability specified with respect to an indenture trustee in the Trust Indenture Act, including those deemed by the Trust Indenture Act to be included herein, and no implied covenants or obligations shall be read into this Indenture against the Trustee. For purposes of Sections 315(a) and 315(c) of the Trust Indenture Act, the term "default" is hereby defined as an Event of Default which has occurred and is continuing.

(b) No provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

(c) Whether or not therein expressly so provided, every provision of this Indenture relating to the conduct or affecting the liability of or affording protection to the Trustee shall be subject to the provisions of this Section.

Section 11.02 Notice of Defaults.

(a) The Trustee shall give the Holders notice of any default hereunder known to the Trustee in the manner and to the extent required to do so by the Trust Indenture Act, unless such default shall have been cured or waived, provided, however, that in the case of any default of the character specified in Section 10.01(c), no such notice to Holders shall be given until at least forty-five (45) days after the occurrence thereof. For the purpose of this Section, the term "default" means any event which is, or after notice or lapse of time, or both, would become, an Event of Default.

(b) The Trustee shall give to the trustee under each Class "A" Mortgage a copy of each notice of default given to the Holders pursuant to this Section. In addition, the Trustee shall give to the Holders copies of each notice of default under any Class "A" Mortgage given to the Trustee in its capacity as owner and holder of Pledged Bonds issued and outstanding thereunder.

Section 11.03 Certain Rights of Trustee.

Subject to the provisions of Section 11.01:

(a) the Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(b) any request or direction of the Company mentioned herein shall be sufficiently evidenced by a Company Request or Company Order, or as otherwise expressly provided herein, and any resolution of the Board of Directors may be sufficiently evidenced by a Board Resolution;

(c) whenever in the administration of this Indenture the Trustee shall deem it desirable that a matter be proved or established prior to taking, suffering or omitting any action hereunder, the Trustee (unless other evidence is specifically prescribed herein) may, in the absence of bad faith on its part, rely upon an Officer's Certificate;

(d) the Trustee may consult with counsel and the written advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon;

(e) the Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any Holder pursuant to this Indenture, unless such Holder shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction;

(f) the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall (subject to applicable legal requirements) be entitled to examine, during normal business hours, the relevant books, records and premises of the Company, personally or by agent or attorney;

(g) the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed with due care by it hereunder;

(h) except as otherwise provided in Section 10.01(c), the Trustee shall not be charged with knowledge of any Event of Default unless either (i) a Responsible Officer of the Trustee assigned to the Corporate Trust Administration Division of the Trustee (or any successor

division or department of the Trustee) shall have actual knowledge of the Event of Default, or (ii) written notice of such Event of Default shall have been given to the Trustee by the Company, any other obligor on the Bonds or by any Holder of such Bonds or, in the case of an Event of Default described in Section 10.01(f), by the trustee under the related Class "A" Mortgage; and

(i) the Trustee shall not be personally liable, in the case of entry by it upon the Mortgaged Property, for debts contracted or damages incurred in the management or operation of the Mortgaged Property.

Section 11.04 Not Responsible for Recitals or Issuance of Bonds.

The recitals contained herein and in the Bonds (except the Trustee's certificates of authentication) shall be taken as the statements of the Company and neither the Trustee nor any Authenticating Agent assumes any responsibility for their correctness. The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Bonds, as to the value or condition of the Mortgaged Property or any part thereof or as to the title of the Company thereto or as to the security afforded thereby or hereby, or as to the validity of any Class "A" Bonds or other securities at any time pledged or deposited with the Trustee hereunder. Neither the Trustee nor any Authenticating Agent shall be accountable for the use or application by the Company of Bonds or the proceeds thereof or of any moneys paid to the Company or upon Company Order under any provision hereof.

Section 11.05 May Hold Bonds.

Each of the Trustee, any Authenticating Agent, any Paying Agent, any Bond Registrar or any other agent of the Company, in its individual or any other capacity, may become the owner or pledgee of Bonds and, subject to Sections 11.08 and 11.13, may otherwise deal with the Company with the same rights it would have if it were not such Trustee, Authenticating Agent, Paying Agent, Bond Registrar or other agent.

Section 11.06 Money Held in Trust.

Money held by the Trustee in trust hereunder need not be segregated from other funds, except to the extent required by law. The Trustee shall be under no liability for interest on any money received by it hereunder except as otherwise agreed with the Company.

Section 11.07 Compensation and Reimbursement.

(a) The Company shall:

(i) pay to the Trustee from time to time reasonable compensation for all services rendered by it hereunder (which compensation shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust);

(ii) except as otherwise expressly provided herein, reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances reasonably incurred or made by the Trustee in accordance with any provision of

this Indenture (including the reasonable compensation and the expenses and disbursements of its agents and counsel), except any such expense, disbursement or advance as may be attributable to its negligence or bad faith; and

(iii) indemnify the Trustee and hold it harmless from and against any loss, liability or expense incurred without negligence or bad faith on its part, arising out of or in connection with the acceptance or administration of the trust or trusts hereunder, including the reasonable costs and expenses of defending itself against any claim or liability in connection with the exercise or performance of any of its powers or duties hereunder.

(b) As security for the performance of the obligations of the Company under this Section, the Trustee shall have a Lien prior to the Bonds upon the Mortgaged Property and any money collected by the Trustee as proceeds of the Mortgaged Property, other than property and funds held in trust under Section 9.03 (except as otherwise provided in Section 9.03).

(c) In addition to the rights provided to the Trustee in Section 11.07(b), whenever the Trustee incurs any loss, liability or expense without negligence or bad faith on its part, including the costs and expenses of defending itself against any claim or liability in connection with the exercise or performance of any of its powers or duties hereunder, or renders services, after an Event of Default specified in Section 10.01(d) or (e) occurs, any such loss, liability, expense (including the reasonable charges and expenses of its counsel) or compensation for services is intended to constitute expenses of administration under any applicable federal or state bankruptcy, insolvency or other similar law.

(d) "Trustee" for purposes of this Section 11.07 shall include any predecessor Trustee;provided, however, that the negligence or bad faith of any Trustee hereunder shall not affect the rights of any other Trustee hereunder.

(e) The provisions of Section 11.07(a) and (c) shall survive the termination of this Indenture.

Section 11.08 Disqualification; Conflicting Interests.

If the Trustee shall have or acquire any conflicting interest within the meaning of the Trust Indenture Act, it shall either eliminate such conflicting interest or resign to the extent, in the manner and with the effect, and subject to the conditions, provided in the Trust Indenture Act and this Indenture.

Section 11.09 Corporate Trustee Required; Eligibility.

There shall at all times be a Trustee hereunder which shall be:

(a) a corporation organized and doing business under the laws of the United States of America, any state or territory thereof or the District of Columbia, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least $50,000,000 and subject to supervision or examination by federal or state authority, or

(b) if and to the extent permitted by the Commission by rule, regulation or order upon application, a corporation or other Person and doing business under the laws of a foreign government, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least $50,000,000 or the Dollar equivalent of the applicable foreign currency and subject to supervision or examination by authority of such foreign government or a political subdivision thereof substantially equivalent to supervision or examination applicable to United States institutional trustees,

and, in either case, qualified and eligible under this Article and not otherwise disqualified under Section 310(a)(5) of the Trust Indenture Act. If such corporation publishes reports of condition at least annually, pursuant to law or to the requirements of such supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section, it shall resign immediately in the manner and with the effect hereinafter specified in this Article.

Section 11.10 Resignation and Removal; Appointment of Successor.

(a) No resignation or removal of the Trustee and no appointment of a successor Trustee pursuant to this Article shall become effective until the acceptance of appointment by the successor Trustee in accordance with the applicable requirements of Section 11.11.

(b) The Trustee may resign at any time by giving written notice thereof to the Company. If the instrument of acceptance by a successor Trustee required by Section 11.11 shall not have been delivered to the Trustee within thirty (30) days after the giving of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor Trustee.

(c) The Trustee may be removed at any time by Act of the Holders of a majority in principal amount of the Bonds then Outstanding delivered to the Trustee and to the Company.

(d) If at any time:

(i) the Trustee shall fail to comply with Section 11.08 after written request therefor by the Company or by any Holder who has been a bona fide Holder for at least six months, or

(ii) the Trustee shall cease to be eligible under Section 11.09 and shall fail to resign after written request therefor by the Company or by any such Holder, or

(iii) the Trustee shall become incapable of acting or shall be adjudged a bankrupt or insolvent or a receiver of the Trustee or of its property shall be appointed or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation,

then, in any such case, (x) the Company by a Board Resolution may remove the Trustee, or (y) subject to Section 10.18, any Holder who has been a bona fide Holder for at least six months may, on behalf of itself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee or Trustees.

(e) If the Trustee shall resign, be removed or become incapable of acting, or if a vacancy shall occur in the office of Trustee for any cause (other than as contemplated in sub- clause (y) of subsection (d) of this Section), the Company, by a Board Resolution, shall take prompt steps to appoint a successor Trustee or Trustees and shall comply with the applicable requirements of Section 11.11. In case all or substantially all of the Mortgaged Property shall be in the possession of a receiver or trustee lawfully appointed, such receiver or trustee, by written instrument, may similarly appoint a successor to fill such vacancy until a new Trustee shall be so appointed by the Holders. If, within one year after such resignation, removal or incapability, or the occurrence of such vacancy, a successor Trustee shall be appointed by Act of the Holders of a majority in principal amount of the Bonds then Outstanding delivered to the Company and the retiring Trustee, the successor Trustee so appointed shall, forthwith upon its acceptance of such appointment in accordance with the applicable requirements of Section 11.11, become the successor Trustee and to that extent supersede the successor Trustee appointed by the Company or by such receiver or trustee. If no successor Trustee shall have been so appointed by the Company or the Holders and accepted appointment in the manner required by Section 11.11, any Holder who has been a bona fide Holder of a Bond for at least six months may, on behalf of itself and all others similarly situated, petition any court of competent jurisdiction for the appointment of a successor Trustee.

(f) So long as no event which is, or after notice or lapse of time, or both, would become, an Event of Default shall have occurred and be continuing, if the Company shall have delivered to the Trustee (i) a Board Resolution appointing a successor Trustee, effective as of a date specified therein, and (ii) an instrument of acceptance of such appointment, effective as of such date, by such successor Trustee in accordance with Section 11.11, the Trustee shall be deemed to have resigned as contemplated in subsection (b) of this Section, the successor Trustee shall be deemed to have been appointed pursuant to subsection (d) of this Section and such appointment shall be deemed to have been accepted as contemplated in Section 11.11, all as of such date, and all other provisions of this Section and Section 11.11 shall be applicable to such resignation, appointment and acceptance except to the extent inconsistent with this subsection (f).

(g) The Company shall give notice of each resignation and each removal of the Trustee and each appointment of a successor Trustee by mailing written notice of such event by first class mail, postage prepaid, to all Holders as their names and addresses appear in the Bond Register. Each notice shall include the name of the successor Trustee and the address of its corporate trust office.

Section 11.11 Acceptance of Appointment by Successor.

(a) In case of the appointment hereunder of a successor Trustee, every such successor Trustee so appointed shall execute, acknowledge and deliver to the Company and to

the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor Trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor Trustee, such retiring Trustee shall, upon payment of all sums owed to it, execute and deliver an instrument transferring to such successor Trustee, upon the trusts herein expressed, all the estates, properties, rights, powers and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor Trustee all property and money held by such retiring Trustee hereunder subject, nevertheless, to the provisions of Section 11.07(b).

(b) Upon request of any such successor Trustee, the Company shall execute any instruments which fully vest in and confirm to such successor Trustee all such estates, properties, rights, powers and trusts referred to in subsection (a) of this Section.

(c) No successor Trustee shall accept its appointment unless at the time of such acceptance such successor Trustee shall be qualified and eligible under this Article.

Section 11.12 Merger, Conversion, Consolidation or Succession to Business.

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder, provided such corporation shall be otherwise qualified and eligible under this Article, without the execution or filing of any paper or any further act on the part of any of the parties hereto. In case any Bonds shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Bonds so authenticated with the same effect as if such successor Trustee had itself authenticated such Bonds.

Section 11.13 Preferential Collection of Claims Against Company.

If the Trustee shall be or become a creditor of the Company (or any other obligor upon the Bonds), the Trustee shall be subject to any and all applicable provisions of the Trust Indenture Act regarding the collection of claims against the Company (or such other obligor).

Section 11.14 Co-trustees and Separate Trustees.

(a) At any time or times, for the purpose of meeting the legal requirements of any jurisdiction in which any of the Mortgaged Property may at the time be located, the Company and the Trustee shall have power to appoint, and, upon the written request of the Trustee or of the Holders of at least a majority in aggregate principal amount of the Bonds then Outstanding, the Company shall for such purpose join with the Trustee in the execution and delivery of all instruments and agreements necessary or proper to appoint, one or more Persons approved by the Trustee either to act as co-trustee, jointly with the Trustee, of all or any part of the Mortgaged Property, or to act as separate trustee of any such property, in either case with such powers as maybe provided in the instrument of appointment, and to vest in such Person, in the capacity aforesaid, any property, title, right or power deemed necessary or desirable, subject

to the other provisions of this Section. If the Company does not join in such appointment within fifteen (15) days after receipt by it of a request to do so, or in case an Event of Default has occurred and is continuing, the Trustee alone shall have the power to make such appointment.

(b) Should any written instrument or instruments from the Company be required by any co-trustee or separate trustee so appointed to more fully confirm to such co-trustee or separate trustee such property, title, right or power, any and all such instruments shall, on request, be executed, acknowledged and delivered by the Company.

(c) Every co-trustee or separate trustee shall, to the extent permitted by law, but to such extent only, be appointed subject to the following conditions:

(i) the Bonds shall be authenticated and delivered, and all rights, powers, duties and obligations hereunder in respect of the custody of securities, cash and other personal property held by, or required to be deposited or pledged with, the Trustee hereunder, shall be exercised solely, by the Trustee;

(ii) the rights, powers, duties and obligations hereby conferred or imposed upon the Trustee in respect of any property covered by such appointment shall be conferred or imposed upon and exercised or performed either by the Trustee or by the Trustee and such co-trustee or separate trustee jointly, as shall be provided in the instrument appointing such co-trustee or separate trustee, except to the extent that under any law of any jurisdiction in which any particular act is to be performed, the Trustee shall be incompetent or unqualified to perform such act, in which event such rights, powers, duties and obligations shall be exercised and performed by such co-trustee or separate trustee;

(iii) the Trustee at any time, by an instrument in writing executed by it, with the concurrence of the Company, may accept the resignation of or remove any co-trustee or separate trustee appointed under this Section, and, if an Event of Default shall have occurred and be continuing, the Trustee shall have power to accept the resignation of, or remove, any such co-trustee or separate trustee without the concurrence of the Company. Upon the written request of the Trustee, the Company shall join with the Trustee in the execution and delivery of all instruments and agreements necessary or proper to effectuate such resignation or removal. A successor to any co-trustee or separate trustee so resigned or removed may be appointed in the manner provided in this Section;

(iv) no co-trustee or separate trustee hereunder shall be personally liable by reason of any act or omission of the Trustee, or any other such trustee hereunder; and

(v) any Act of Holders delivered to the Trustee shall be deemed to have been delivered to each such co-trustee and separate trustee.

Section 11.15 Appointment of Authenticating Agent.

(a) The Trustee may appoint an Authenticating Agent or Agents with respect to the Bonds of one or more series, or any Tranche thereof, which shall be authorized to act on behalf of the Trustee to authenticate Bonds of such series or Tranche issued upon original issuance, exchange, registration of transfer or partial redemption thereof or pursuant to Section 3.06, and Bonds so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. Wherever reference is made in this Indenture to the authentication and delivery of Bonds by the Trustee or the Trustee's certificate of authentication, such reference shall be deemed to include authentication and delivery on behalf of the Trustee by an Authenticating Agent and a certificate of authentication executed on behalf of the Trustee by an Authenticating Agent. Each Authenticating Agent shall be acceptable to the Company and shall at all times be a corporation organized and doing business under the laws of the United States of America, any state or territory thereof or the District of Columbia or the Commonwealth of Puerto Rico, authorized under such laws to act as Authenticating Agent, having a combined capital and surplus of not less than $50,000,000 and subject to supervision or examination by federal or state authority. If such Authenticating Agent publishes reports of condition at least annually, pursuant to law or to the requirements of said supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such Authenticating Agent shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time an Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, such Authenticating Agent shall resign immediately in the manner and with the effect specified in this Section.

(b) Any corporation into which an Authenticating Agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which such Authenticating Agent shall be a party, or any corporation succeeding to the corporate agency or corporate trust business of an Authenticating Agent, shall continue to be an Authenticating Agent, provided that such corporation shall be otherwise eligible under this Section, without the execution or filing of any paper or any further act on the part of the Trustee or the Authenticating Agent.

(c) An Authenticating Agent may resign at any time by giving written notice thereof to the Trustee and to the Company. The Trustee may at any time terminate the agency of an Authenticating Agent by giving written notice thereof to such Authenticating Agent and to the Company. Upon receiving such a notice of resignation or upon such a termination, or in case at any time such Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, the Trustee may appoint a successor Authenticating Agent which shall be acceptable to the Company. Any successor Authenticating Agent upon acceptance of its appointment hereunder shall become vested with all the rights, powers and duties of its predecessor hereunder, with like effect originally named as an Authenticating Agent. No successor Authenticating Agent shall be appointed unless eligible under the provisions of this Section.

(d) The Company agrees to pay to each Authenticating Agent from time to time reasonable compensation for its services under this Section, and the Trustee shall have no

liability for such payments. The Trustee shall not be responsible for any misconduct, bad faith or negligence on the part of any Authenticating Agent appointed with due care by the Trustee hereunder.

(e) The provisions of Sections 3.08, 11.04 and 11.05 shall be applicable to each Authenticating Agent.

(f) If an appointment with respect to the Bonds of one or more series, or any Tranche thereof, shall be made pursuant to this Section, the Bonds of such series or Tranche may have endorsed thereon, in addition to or in lieu of the Trustee's certificate of authentication substantially in the following form:

This is one of the Bonds of the series designated therein referred to in the within mentioned Indenture.

THE BANK OF NEW YORK MELLON TRUST
COMPANY, N.A.,
as Trustee

By: _____
As Authenticating Agent

By: _____
Authorized Officer

(g) If all of the Bonds of a series, or any Tranche thereof, may not be originally issued at one time, and if the Trustee does not have an office capable of authenticating Bonds upon original issuance located in a Place of Payment where the Company wishes to have Bonds of such series or such Tranche authenticated upon original issuance, the Trustee, if so requested by the Company in writing (which writing need not comply with Section 1.05 and need not be accompanied by an Opinion of Counsel), shall appoint, in accordance with this Section and in accordance with such procedures as shall be acceptable to the Trustee, an Authenticating Agent having an office in a Place of Payment designated by the Company with respect to such series of Bonds or such Tranche.

ARTICLE XII

LISTS OF HOLDERS; REPORTS BY TRUSTEE AND COMPANY

Section 12.01 Lists of Holders; Preservation of Information

.

Semiannually, not later than June 1 and December 1, beginning on December 1, 2009, in each year, and at such other times as the Trustee may request in writing, the Company shall furnish or cause to be furnished to the Trustee information as to the names and addresses of

the Holders, and the Trustee shall preserve such information and similar information received by it in any other capacity and afford to the Holders access to information so preserved by it, all to such extent, if any, and in such manner as shall be required by the Trust Indenture Act. Every Holder of Bonds, by receiving and holding the same, agrees with the Company and the Trustee that neither the Company nor the Trustee nor any agent of either of them shall be held accountable by reason of the disclosure of any such information as to the names and addresses of the Holders of Bonds in accordance with Section 312 of the Trust Indenture Act, or any successor section of such Act, regardless of the source from which such information was derived, and that the Trustee shall not be held accountable by reason of mailing any material pursuant to a request made under Section 312(b) of the Trust Indenture Act, or any successor section of such Act.

Section 12.02 Reports by Trustee and Company.

Annually, not later than sixty (60) days after June 1 in each year commencing with the first June 1 following the first issuance of Bonds pursuant to Section 4.01, if required by Section 313(a) of the Trust Indenture Act, or any successor section of such Act, the Trustee shall transmit to the Holders and the Commission a report with respect to any events described in Section 313(a) of the Trust Indenture Act, or any successor section of such Act, in such manner and to the extent required by the Trust Indenture Act. The Trustee shall transmit to the Holders and the Commission, and the Company shall file with the Trustee and transmit to the Holders, such other information, reports and other documents, if any, at such times and in such manner, as shall be required by the Trust Indenture Act. A copy of each report required to be transmitted to the Holders pursuant to Section 313 of the Trust Indenture Act shall, at the time of such transmission to the Holders, be furnished to the Company and be filed by the Trustee with each stock exchange, if any, upon which the Bonds of any series, or any Tranche thereof are listed and also with the Commission. The Company agrees to notify the Trustee when and as the Bonds of such series, or any such Tranche, become admitted to trading on any national securities exchange.

ARTICLE XIII

CONSOLIDATION, MERGER, CONVEYANCE, TRANSFER OR LEASE

Section 13.01 Company May Consolidate, etc., Only on Certain Terms.

The Company shall not consolidate with or merge into any other corporation or convey, or otherwise transfer or lease, the Mortgaged Property as or substantially as an entirety to any Person, unless:

(a) such consolidation, merger, conveyance, other transfer or lease shall be on such terms as shall fully preserve in all material respects the Lien and security of this Indenture and the rights and powers of the Trustee and the Holders of the Bonds hereunder;

(b) the corporation formed by such consolidation or into which the Company is merged or the Person which acquires by conveyance or other transfer, or which leases, the Mortgaged Property as or substantially as an entirety shall be a corporation organized and existing under the laws of the United States of America, any state or territory thereof or the District of Columbia (such corporation being hereinafter sometimes called the "Successor Corporation") and shall execute and deliver to the Trustee an indenture supplemental hereto, in form recordable and satisfactory to the Trustee, which:

(i) in the case of a consolidation, merger, conveyance or other transfer, or in the case of a lease if the term thereof extends beyond the last Stated Maturity of the Bonds then Outstanding, contains an assumption by the Successor Corporation of the due and punctual payment of the principal of and premium, if any, and interest, if any, on all the Bonds then Outstanding and the performance and observance of every covenant and condition of this Indenture to be performed or observed by the Company, and

(ii) in the case of a consolidation, merger, conveyance or other transfer, contains a grant, conveyance, transfer and mortgage by the Successor Corporation, of the same tenor of the Granting Clauses herein:

(A) confirming the Lien of this Indenture on the Mortgaged Property (as constituted immediately prior to the time such transaction became effective) and subjecting to the Lien of this Indenture all property real, personal and mixed, thereafter acquired by the Successor Corporation which shall constitute an improvement, extension or addition to the Mortgaged Property (as so constituted) or a renewal, replacement or substitution of or for any part thereof, and

(B) at the election of the Successor Corporation, subjecting to the Lien of this Indenture such property, real, personal or mixed, in addition to the property described in subclause (A) above, then owned or thereafter acquired by the Successor Corporation as the Successor Corporation shall, in its sole discretion, specify or describe therein,

and the Lien confirmed or created by such grant, conveyance, transfer and mortgage shall have force, effect and standing similar to those which the Lien of this Indenture would have had if the Company had not been a party to such consolidation, merger, conveyance or other transfer and had itself, after the time such transaction became effective, purchased, constructed or otherwise acquired the property subject to such grant, conveyance, transfer and mortgage;

(c) in the case of a lease, such lease shall be made expressly subject to termination by the Company or by the Trustee at any time during the continuance of an Event of Default, and also by the purchaser of the property so leased at any sale thereof hereunder, whether such sale be made under the power of sale hereby conferred or pursuant to judicial proceedings; and

(d) the Company shall have delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each of which shall state that such consolidation, merger, conveyance or other transfer or lease, and such supplemental indenture, comply with this Article and that all conditions precedent herein provided for relating to such transaction have been complied with.

Section 13.02 Successor Corporation Substituted.

Upon any consolidation or merger or any conveyance or other transfer, subject to the Lien of this Indenture, of the Mortgaged Property as or substantially as an entirety in accordance with Section 13.01, the Successor Corporation shall succeed to, and be substituted for, and may exercise every power and right of, the Company under this Indenture with the same effect as if such Successor Corporation had been named as the "Company" herein. Without limiting the generality of the foregoing:

(a) all property of the Successor Corporation then subject to the Lien of this Indenture, of the character described in Section 1.04(a), shall constitute Property Additions;

(b) the Successor Corporation may execute and deliver to the Trustee, and thereupon the Trustee shall, subject to the provisions of Article IV, authenticate and deliver, Bonds upon the basis of Property Additions or upon any other basis provided in Article IV; and

(c) the Successor Corporation may, subject to the applicable provisions of this Indenture, cause Property Additions to be applied to any other Authorized Purpose.

All Bonds so executed by the Successor Corporation, and authenticated and delivered by the Trustee, shall in all respects be entitled to the same benefit of the Lien and security of this Indenture as all Bonds executed, authenticated and delivered prior to the time such consolidation, merger, conveyance or other transfer became effective.

Section 13.03 Extent of Lien Hereof on Property of Successor Corporation.

Unless, in the case of a consolidation, merger, conveyance or other transfer permitted by Section 13.01, the indenture supplemental hereto provided for in clause (ii) of Section 13.01(b), or any other indenture, contains a grant, conveyance, transfer and mortgage by the Successor Corporation as described in subclause (B) thereof, neither this Indenture nor such supplemental indenture shall become or be required to become or be a Lien upon any of the properties then owned or thereafter acquired by the Successor Corporation except properties acquired from the Company in or as a result of such transaction and improvements, extensions and additions to such properties and renewals, replacements and substitutions of or for any part or parts of such properties.

Section 13.04 Release of Company upon Conveyance or Other Transfer.

In the case of a conveyance or other transfer permitted by Section 13.01, upon the satisfaction of all the conditions specified in Section 13.01, the Company (such term being used in this Section without giving effect to such transaction) shall be released and discharged from all obligations and covenants under this Indenture and on and under all Bonds then Outstanding

unless the Company shall have delivered to the Trustee an instrument in which it shall waive such release and discharge.

Section 13.05 Merger into Company; Extent of Lien Hereof.

(a) Nothing in this Indenture shall be deemed to prevent or restrict any consolidation or merger after the consummation of which the Company would be the surviving or resulting corporation, or any conveyance or other transfer or lease, subject to the Lien of this Indenture, of any part of the Mortgaged Property which does not constitute the entirety, or substantially the entirety, thereof.

(b) Unless, in the case of a consolidation or merger described in subsection (a) of this Section, an indenture supplemental hereto shall otherwise provide, this Indenture shall not become or be, or be required to become or be, a Lien upon any of the properties acquired by the Company in or as a result of such transaction or any improvements, extensions or additions to such properties or any renewals, replacements or substitutions of or for any part or parts of such properties.

ARTICLE XIV

SUPPLEMENTAL INDENTURES

Section 14.01 Supplemental Indentures Without Consent of Holders.

(a) Without the consent of any Holders, the Company and the Trustee, at any time and from time to time, may enter into one or more indentures supplemental hereto, in form satisfactory to the Trustee, for any of the following purposes:

(i) to evidence the succession of another Person to the Company and the assumption by any such successor of the covenants of the Company herein and in the Bonds, all as provided in Article XIII; or

(ii) to add one or more covenants of the Company or other provisions for the benefit of all Holders or for the benefit of the Holders of, or to remain in effect only so long as there shall be Outstanding Bonds of one or more specified series, or one or more specified Tranches thereof, or to surrender any right or power herein conferred upon the Company; or

(iii) to correct or amplify the description of any property at any time subject to the Lien of this Indenture, or better to assure, convey and confirm unto the Trustee any property subject or required to be subjected to the Lien of this Indenture, or to subject to the Lien of this Indenture additional property; or

(iv) to convey, transfer and assign to the Trustee, and to subject to the Lien of this Indenture with the same force and effect as if included in the Granting Clauses herein, property of subsidiaries of the Company used or to be used for one or more purposes which if owned by the Company would constitute property used or to be used for one or more of the Primary Purposes of the Company's

Business, which property shall for all purposes of this Indenture be deemed to be property of the Company, together with such other provisions as may be appropriate to express the respective rights of the Trustee and the Company in regard thereto; or

(v) to change or eliminate any provision of this Indenture or to add any new provision to this Indenture provided, however, that if such change, elimination or addition shall adversely affect the interests of the Holders of Bonds of any series or Tranche in any material respect, such change, elimination or addition shall become effective with respect to such series or Tranche only when no Bond of such series or Tranche remains Outstanding; or

(vi) to establish the form or terms of Bonds of any series or Tranche as contemplated by Sections 2.01 and 3.01; or

(vii) to evidence and provide for the acceptance of appointment hereunder by a successor Trustee or by a co-trustee or separate trustee; or

(viii) to provide, for the procedures required to permit the Company to utilize, at its option, a non-certificated system of registration for all, or any series or Tranche of, the Bonds; or

(ix) to change any place or places where (A) the principal of and premium, if any, and interest, if any, on all or any series of Bonds, or any Tranche thereof, shall be payable, (B) all or any series of Bonds, or any Tranche thereof, may be surrendered for registration of transfer, (C) all or any series of Bonds, or any Tranche thereof, may be surrendered for exchange, and (D) notices and demands to or upon the Company in respect of all or any series of Bonds, or any Tranche thereof, and this Indenture may be served; or

(x) to cure any ambiguity or to correct or supplement any provision herein which may be defective or inconsistent with any other provision herein, or to make any other changes to the provisions hereof or to add other provisions with respect to matters or questions arising under this Indenture, provided that such other changes or additions shall not adversely affect the interests of the Holders of Bonds of any series or Tranche in any material respect; or

(xi) to reflect changes in Generally Accepted Accounting Principles; or

(xii) to provide the terms and conditions of the exchange or conversion, at the option of the Holders of Bonds of any series or otherwise, of the Bonds of such series for or into Bonds of other series or stock or other securities of the Company or any other corporation; or

(xiii) to comply with the rules or regulations of any national securities exchange on which any of the Bonds may be listed; or

(xiv) to modify, eliminate or add to the provisions of this Indenture to such extent as shall be necessary to effect the qualification of this Indenture under the Trust Indenture Act, or under any similar federal statute hereafter enacted, and to add to this Indenture such other provisions as may be expressly permitted by the Trust Indenture Act, excluding, however the provisions referred to in Section 316(a)(2) of the Trust Indenture Act as in effect at the date of the execution and delivery of this Indenture or any corresponding provision in any similar federal statute hereafter enacted.

(b) Without limiting the generality of the foregoing, if the Trust Indenture Act as in effect at the date of the execution and delivery of this Indenture or at any time thereafter shall be amended and:

(i) if any such amendment shall require one or more changes to any provisions hereof or the inclusion herein of any additional provisions, or shall by operation of law be deemed to effect such changes or incorporate such provisions by reference or otherwise, this Indenture shall be deemed to have been amended so as to conform to such amendment to the Trust Indenture Act, and the Company and the Trustee may, without the consent of any Holders, enter into an indenture supplemental hereto to evidence such amendment hereof; or

(ii) if any such amendment shall permit one or more changes to, or the elimination of any provisions hereof which, at the date of the execution and delivery hereof or at any time thereafter, are required by the Trust Indenture Act to be contained herein or are contained herein to reflect any provisions of the Trust Indenture Act as in effect at such date, the Company and the Trustee may, without the consent of any Holders, enter into an indenture supplemental hereto to effect such changes or elimination.

Section 14.02 Supplemental Indentures With Consent of Holders.

(a) With the consent of the Holders of not less than a majority in aggregate principal amount of the Bonds of all series then Outstanding under this Indenture, considered as one class, by Act of said Holders delivered to the Company and the Trustee, the Company, when authorized by a Board Resolution, and the Trustee may enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to, or changing in any manner or eliminating any of the provisions of, this Indenture; provided, however, that if there shall be Bonds of more than one series Outstanding hereunder and if a proposed supplemental indenture shall directly affect the rights of the Holders of Bonds of one or more, but less than all, of such series, then the consent only of the Holders of a majority in aggregate principal amount of the Outstanding Bonds of all series so directly affected, considered as one class, shall be required; and provided, further, that if the Bonds of any series shall have been issued in more than one Tranche and if the proposed supplemental indenture shall directly affect the rights of the Holders of Bonds of one or more, but less than all, of such Tranches, then the consent only of the Holders of a majority in aggregate principal amount of the Outstanding Bonds of all Tranches so directly affected, considered as one class, shall be required; and provided, further, that no such

supplemental indenture shall, without the consent of the Holder of each Outstanding Bond of each series or Tranche so directly affected:

(i) change the Stated Maturity of the principal of, or any installment of principal of or interest on, any Bond, or reduce the principal amount thereof or the rate of interest thereon (or the amount of any installment of interest thereon) or change the method of calculating such rate or reduce any premium payable upon the redemption thereof or reduce the amount of the principal of a Discount Bond that would be due and payable upon a declaration of acceleration of the Maturity thereof pursuant to Section 10.02(a), or change the coin or currency (or other property) in which any Bond or any premium or the interest thereon is payable, or impair the right to institute suit for the enforcement of any such payment on or after the Stated Maturity thereof (or, in the case of redemption, on or after the Redemption Date); or

(ii) permit the creation of any Lien ranking prior to the Lien of this Indenture with respect to all or substantially all of the Mortgaged Property or terminate the Lien of this Indenture on all or substantially all of the Mortgaged Property, or deprive such Holder of the benefit of the security of the Lien of this Indenture; or

(iii) reduce the percentage in principal amount of the Outstanding Bonds of such series or Tranche, the consent of whose Holders is required for any such supplemental indenture, or the consent of whose Holders is required for any waiver of compliance with any provision of this Indenture or of any default hereunder and its consequences, or reduce the requirements of Section 15.04(a) for quorum or voting; or

(iv) modify any of the provisions of this Section, Section 6.09 or Section 10.17, except to increase the percentages in principal amount referred to in this Section or such other Sections or to provide that other provisions of this Indenture cannot be modified or waived without the consent of the Holder of each Outstanding Bond affected thereby; provided, however, that this clause shall not be deemed to require the consent of any Holder with respect to changes in the references to “the Trustee” and concomitant changes in this Section and Section 10.17, or the deletion of this proviso, pursuant to Section 11.11 and clause (vii) of Section 14.01(a).

(b) A supplemental indenture which (i) changes or eliminates any covenant or other provision of this Indenture which has expressly been included solely for the benefit of the Holders of, or which is to remain in effect only so long as there shall be Outstanding, Bonds of one or more specified series, or one or more Tranches thereof, or (ii) modifies the rights of the Holders of Bonds of such series or Tranches with respect to such covenant or other provision, shall be deemed not to affect the rights under this Indenture of the Holders of Bonds of any other series or Tranche.

(c) It shall not be necessary for any Act of Holders under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such Act shall approve the substance thereof. A consent to any supplemental indenture by or on behalf of any Holder of the Bonds given in connection with a purchase of, or tender or exchange offer for, such Holder's Bonds will not be rendered invalid by such purchase, tender or exchange.

Section 14.03 Execution of Supplemental Indentures.

In executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article or the modifications thereby of the trusts created by this Indenture, the Trustee shall be entitled to receive, and (subject to Section 11.01) shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of such supplemental indenture is authorized or permitted by this Indenture. The Trustee may, but shall not be obligated to, enter into any such supplemental indenture which affects the Trustee's own rights, duties, immunities or liabilities under this Indenture or otherwise.

Section 14.04 Effect of Supplemental Indentures.

Upon the execution of any supplemental indenture under this Article this Indenture shall be modified in accordance therewith, and such supplemental indenture shall form a part of this Indenture for all purposes; and every Holder of Bonds theretofore or thereafter authenticated and delivered hereunder shall be bound thereby. Any supplemental indenture permitted by this Article may restate this Indenture in its entirety, and, upon the execution and delivery thereof; any such restatement shall supersede this Indenture as theretofore in effect for all purposes.

Section 14.05 Conformity With Trust Indenture Act.

Every supplemental indenture executed pursuant to this Article shall conform to the requirements of the Trust Indenture Act as then in effect.

Section 14.06 Reference in Bonds to Supplemental Indentures.

Bonds of any series, or any Tranche thereof, authenticated and delivered after the execution of any supplemental indenture pursuant to this Article may, and shall if required by the Trustee, bear a notation in form approved by the Trustee as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Bonds of any series, or any Tranche thereof, so modified as to conform, in the opinion of the Trustee and the Company, to any such supplemental indenture may be prepared and executed by the Company and authenticated and delivered in exchange for Outstanding Bonds of such series or Tranche.

ARTICLE XV

MEETINGS OF HOLDERS; ACTION WITHOUT MEETING

Section 15.01 Purposes for Which Meetings May be Called.

A meeting of Holders of Bonds of one or more, or all, series, or any Tranche or Tranches thereof, may be called at any time and from time to time pursuant to this Article to make, give or take any request, demand, authorization, direction, notice, consent, waiver or other action provided by this Indenture to be made, given or taken by Holders of Bonds of such series or Tranches.

Section 15.02 Call, Notice and Place of Meetings.

(a) The Trustee may at any time call a meeting of Holders of Bonds of one or more, or all, series, or any Tranche or Tranches thereof, for any purpose specified in Section 15.01, to be held at such time and (except as provided in subsection (b) of this Section) at such place in the County of Cuyahoga, The City of Cleveland, Ohio or the Borough of Manhattan, The City of New York, as the Trustee shall determine, or, with the approval of the Company, at any other place. Notice of every such meeting, setting forth the time and the place of such meeting and in general terms the action proposed to be taken at such meeting, shall be given, in the manner provided in Section 1.09, not less than 21 nor more than one hundred eighty (180) days prior to the date fixed for the meeting.

(b) The Trustee may be asked to call a meeting of the Holders of Outstanding Bonds of one or more, or all, series, or any Tranche or Tranches thereof; by the Company or by the Holders of 25% in aggregate principal amount of all of such series and Tranches, considered as one class, for any purpose specified in Section 15.01, by written request setting forth in reasonable detail the action proposed to be taken at the meeting. If the Trustee shall have been asked by the Company to call such a meeting, the Company shall determine the time and place for such meeting by giving notice thereof in the manner provided in subsection (a) of this Section, or shall direct the Trustee, in the name and at the expense of the Company, to give such notice. If the Trustee shall have been asked to call such a meeting by Holders in accordance with this subsection (b), and the Trustee shall not have given the notice of such meeting within twenty-one (21) days after receipt of such request or shall not thereafter proceed to cause the meeting to be held as provided herein, then the Holders of Bonds of such series and Tranches in the amount above specified may determine the time and the place in the County of Cuyahoga, The City of Cleveland, Ohio or the Borough of Manhattan, The City of New York, or in such other place as shall be determined or approved by the Company, for such meeting and may call such meeting for such purposes by giving notice thereof as provided in subsection (a) of this Section.

(c) Any meeting of Holders of Bonds of one or more, or all, series, or any Tranche or Tranches thereof, shall be valid without notice if the Holders of all Outstanding Bonds of such series or Tranches are present in person or by proxy and if representatives of the Company and the Trustee are present, or if notice is waived in writing before or after the meeting by the Holders of all Outstanding Bonds of such series, or any Tranche or Tranches thereof,

or by such of them as are not present at the meeting in person or by proxy, and by the Company and the Trustee.

Section 15.03 Persons Entitled to Vote at Meetings; Record Date.

To be entitled to vote at any meeting of Holders of Bonds of one or more, or all, series, or any Tranche or Tranches thereof, a Person shall be (a) a Holder of one or more Outstanding Bonds of such series or Tranches on the record date fixed as provided below, or (b) a Person appointed by an instrument in writing by a Holder or Holders of one or more Outstanding Bonds of such series or Tranches on the record date fixed as provided below as proxy for such Holder or Holders. The only Persons who shall be entitled to attend any meeting of Holders of Bonds of any series or Tranche shall be the Persons entitled to vote at such meeting and their counsel, any representatives of the Trustee and its counsel and any representatives of the Company and its counsel. The Company may fix in advance a record date for the determination of Holders who are entitled to vote at a meeting called pursuant to Section 15.02 and, if the Company does not so fix a record date, the Trustee may do so.

Section 15.04 Quorum; Action.

(a) The Persons entitled to vote a majority in aggregate principal amount of the Outstanding Bonds of the series and Tranches with respect to which a meeting shall have been called as hereinbefore provided, considered as one class, shall constitute a quorum for a meeting of Holders of Bonds of such series and Tranches; provided, however, that if any action is to be taken at such meeting which this Indenture expressly provides may be taken by the Holders of a specified percentage, which is less than a majority, in principal amount of the Outstanding Bonds of such series and Tranches, considered as one class, the Persons entitled to vote such specified percentage in principal amount of the Outstanding Bonds of such series and Tranches, considered as one class, shall constitute a quorum. In the absence of a quorum within one hour of the time appointed for any such meeting, the meeting shall, if convened at the request of Holders of Bonds of such series and Tranches, be dissolved. In any other case the meeting may be adjourned for such period as may be determined by the chairman of the meeting prior to the adjournment of such meeting. In the absence of a quorum at any such adjourned meeting, such adjourned meeting may be further adjourned for such period as may be determined by the chairman of the meeting prior to the adjournment of such adjourned meeting. Except as provided by Section 15.05(e), notice of the reconvening of any meeting adjourned for more than thirty (30) days shall be given as provided in Section 1.09 not less than ten (10) days prior to the date on which the meeting is scheduled to be reconvened. Notice of the reconvening of an adjourned meeting shall state expressly the percentage, as provided above, of the principal amount of the Outstanding Bonds of such series and Tranches which shall constitute a quorum.

(b) Except as limited by Section 14.02, any resolution presented to a meeting or adjourned meeting duly reconvened at which a quorum is present as aforesaid may be adopted only by the affirmative vote of the Holders of a majority in aggregate principal amount of the Outstanding Bonds of the series and Tranches with respect to which such meeting shall have been called, considered as one class; provided, however, that, except as so limited, any resolution with respect to any action which this Indenture expressly provides may be taken by the Holders of a specified percentage, which is less than a majority, in principal amount of the Outstanding

Bonds of such series and Tranches, considered as one class, may be adopted at a meeting or an adjourned meeting duly reconvened and at which a quorum is present as aforesaid by the affirmative vote of the Holders of such specified percentage in principal amount of the Outstanding Bonds of such series and Tranches, considered as one class.

(c) Any resolution passed or decision taken at any meeting of Holders of Bonds duly held in accordance with this Section shall be binding on all the Holders of Bonds of the series and Tranches with respect to which such meeting shall have been held, whether or not present or represented at the meeting.

Section 15.05 Attendance at Meetings; Determination of Voting Rights; Conduct and Adjournment of Meetings.

(a) Attendance at meetings of Holders of Bonds may be in person or by proxy; and, to the extent permitted by law, any such proxy shall remain in effect and be binding upon any future Holder of the Bonds with respect to which it was given unless and until specifically revoked by the Holder or future Holder of such Bonds before being voted.

(b) Notwithstanding any other provisions of this Indenture, the Trustee may make such reasonable regulations as it may deem advisable for any meeting of Holders of Bonds in regard to proof of the holding of such Bonds and of the appointment of proxies and in regard to the appointment and duties of inspectors of votes, the submission and examination of proxies, certificates and other evidence of the right to vote, and such other matters concerning the conduct of the meeting as it shall deem appropriate. Except as otherwise permitted or required by any such regulations, the holding of Bonds shall be proved in the manner specified in Section 1.07 and the appointment of any proxy shall be proved in the manner specified in Section 1.07. Such regulations may provide that written instruments appointing proxies, regular on their face, may be presumed valid and genuine without the proof specified in Section 1.07 or other proof.

(c) The Trustee shall, by an instrument in writing, appoint a temporary chairman of the meeting, unless the meeting shall have been called by the Company or by Holders as provided in Section 15.02(b), in which case the Company or the Holders of Bonds of the series and Tranches calling the meeting, as the case may be, shall in like manner appoint a temporary chairman. A permanent chairman and a permanent secretary of the meeting shall be elected by vote of the Persons entitled to vote a majority in aggregate principal amount of the Outstanding Bonds of all series and Tranches represented at the meeting, considered as one class.

(d) At any meeting each Holder or proxy shall be entitled to one vote for each $1,000 principal amount of Outstanding Bonds held or represented by him and if there shall have been established in respect of the Bonds of any series, or any Tranche thereof, that such Bonds may be issuable other than in denominations of $1,000 and any integral multiple thereof, a fractional vote equal to (x) the difference (expressed as a positive number) between (u) the aggregate principal amount of Outstanding Bonds held or represented by him and (v) the next lowest integral multiple of $1,000 (or if there is no next lowest integral multiple thereof, zero), divided by (y) 1,000; provided, however, that no vote shall be cast or counted at any meeting in respect of any Bond challenged as not Outstanding and ruled by the chairman of the meeting to

be not Outstanding. The chairman of the meeting shall have no right to vote, except as a Holder of a Bond or proxy.

(e) Any meeting duly called pursuant to Section 15.02 at which a quorum is present may be adjourned from time to time by Persons entitled to vote a majority in aggregate principal amount of the Outstanding Bonds of all series and Tranches represented in person or by proxy at the meeting, considered as one class; and the meeting may be held as so adjourned without further notice.

Section 15.06 Counting Votes and Recording Action of Meetings.

The vote upon any resolution submitted to any meeting of Holders shall be by written ballots on which shall be subscribed the signatures of the Holders or of their representatives by proxy and the principal amounts and serial numbers of the Outstanding Bonds, of the series and Tranches with respect to which the meeting shall have been called, held or represented by them. The permanent chairman of the meeting shall appoint two inspectors of votes who shall count all votes cast at the meeting for or against any resolution and who shall make and file with the secretary of the meeting their verified written reports of all votes cast at the meeting. A record of the proceedings of each meeting of Holders shall be prepared by the secretary of the meeting and there shall be attached to said record the original reports of the inspectors of votes on any vote by ballot taken thereat and affidavits by one or more persons having knowledge of the facts setting forth a copy of the notice of the meeting and showing that said notice was given as provided in Section 15.02 and, if applicable, Section 15.04. Each copy shall be signed and verified by the affidavits of the permanent chairman and secretary of the meeting and one such copy shall be delivered to the Company, and another to the Trustee to be preserved by the Trustee, the latter to have attached thereto the ballots voted at the meeting. Any record so signed and verified shall be conclusive evidence of the matters therein stated.

Section 15.07 Action Without Meeting.

In lieu of a vote of Holders at a meeting as hereinbefore contemplated in this Article, any request, demand, authorization, direction, notice, consent, waiver or other action may be made, given or taken by Holders by written instruments as provided in Section 1.07.

ARTICLE XVI

IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS, AND DIRECTORS

Section 16.01 Liability Solely Corporate.

No recourse shall be had for the payment of the principal of or premium if any, or interest, if any, on any Bonds, or any part thereof, or for any claim based thereon or otherwise in respect thereof, or of the indebtedness represented thereby, or upon any obligation, covenant or agreement under this Indenture, against any past, present or future incorporator, stockholder, employee, officer or director, as such, past, present or future of the Company or of any

predecessor or successor corporation (either directly or through the Company or a predecessor or successor corporation), whether by virtue of any constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly agreed and understood that this Indenture and all the Bonds are solely corporate obligations, and that no personal liability whatsoever shall attach to, or be incurred by, any incorporator, stockholder, employee, officer or director, past, present or future, of the Company or of any predecessor or successor corporation, either directly or indirectly through the Company or any predecessor or successor corporation, because of the indebtedness hereby authorized or under or by reason of any of the obligations, covenants or agreements contained in this Indenture or in any of the Bonds or to be implied herefrom or therefrom, and that any such personal liability is hereby expressly waived and released as a condition of, and as part of the consideration for, the execution of this Indenture and the issuance of the Bonds.

This instrument may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument. Any such counterpart, as recorded or filed in any jurisdiction, may omit such portions of Exhibits A and B hereto as shall not describe or refer to properties located in such jurisdiction.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, FIRSTENERGY NUCLEAR GENERATION CORP., party of the first part hereto, and THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., party of the second part hereto, have caused these presents to be executed in their respective names as of the day and year first above written.

FIRSTENERGY NUCLEAR
GENERATION CORP.

By: /s/ James F. Pearson

James F. Pearson

Vice President and Treasurer

THE BANK OF NEW YORK MELLON
TRUST COMPANY, N.A., as Trustee

By: /s/ Biagio S. Impala

Biagio S. Impala

Vice President

STATE OF OHIO)
)ss.:
COUNTY OF SUMMIT)

On the 10th day of June, 2009, personally appeared before me, a Notary Public in and for the said County and State aforesaid, James F. Pearson, to me known and known to me to be the Vice President and Treasurer of FIRSTENERGY NUCLEAR GENERATION CORP., the corporation which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President and Treasurer of FIRSTENERGY NUCLEAR GENERATION CORP., the same is his free act and deed and the free and corporate act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 1th day of June, 2009.

/s/ Michele A. Buchtel

_____, Notary Public

Commission Expires Aug 28, 2011

[Seal]

STATE OF OHIO)
)ss.:
COUNTY OF CUYAHOGA)

On the 11th day of June, 2009, personally appeared before me, a Notary Public in and for the said County and State aforesaid, Biagio S. Impala, to me known and known to me to be a Vice President of THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A., the corporation which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President for and on behalf of said corporation and that the same is his free act and deed and the free and corporate act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 11th day of June, 2009.

/s/ Susan Demaske
_____, Notary Public
Commission Expires _____

[Seal]

The Bank of New York Mellon Trust Company, N.A. hereby certifies that its precise name and address as Trustee is:

The Bank of New York Mellon Trust Company, N.A.
Global Corporate Trust
1660 West 2nd Street, Suite 830
Cleveland, Ohio 44113

THE BANK OF NEW YORK MELLON TRUST COMPANY, N.A.

By: /s/ Biagio S. Impala

Biagio S. Impala

Vice President

THIS INSTRUMENT PREPARED BY:

Lucas F. Torres
AKIN GUMP STRAUSS HAUER & FELD LLP
One Bryant Park
New York, NY 10036

EXHIBIT 4.21

OPEN-END MORTGAGE,
GENERAL MORTGAGE INDENTURE
AND
DEED OF TRUST

FIRSTENERGY GENERATION CORP.

TO

THE BANK OF NEW YORK TRUST COMPANY, N.A.,
as Trustee

Dated As Of
June 19, 2008

This Instrument Contains After-Acquired Property Provisions

This Indenture constitutes a financing statement filed as a fixture filing under Article 9 of the Uniform Commercial Code (as in effect in the relevant jurisdiction) consisting of "goods" (as defined in such Uniform Commercial Code) which now are or later may become fixtures relating to the real property described in Exhibit A of this Indenture.

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OPEN-END MORTGAGE, GENERAL MORTGAGE INDENTURE AND DEED OF TRUST, dated as of June 19, 2008, between FIRSTENERGY GENERATION CORP., a corporation organized and existing under the laws of the State of Ohio, the post office address of which is 76 South Main Street, Akron, Ohio 44308, and THE BANK OF NEW YORK TRUST COMPANY, N.A., a national banking association organized and existing under the laws of the United States of America, the post office address of which is 1660 West 2nd Street, Suite 830, Cleveland, Ohio 44113, as Trustee.

WITNESSETH:

WHEREAS, all capitalized terms used in this Indenture have the respective meanings set forth in Article I; and

WHEREAS, the Company deems it necessary to borrow and, pursuant to this Indenture, to issue Bonds for its corporate purposes from time to time, and to mortgage and pledge the property hereinafter described to secure payment of the Bonds; and

WHEREAS, all acts and things have been done and performed which are necessary to make this Indenture, when duly executed and delivered, a valid and binding mortgage and deed of trust for the security of all Bonds duly issued hereunder and Outstanding from time to time; and the execution and delivery of this Indenture have been in all respects duly authorized.

NOW, THEREFORE, to secure the payment of the principal of, premium, if any, and interest, if any, on all Bonds issued and Outstanding under this Indenture when payable in accordance with the provisions thereof and hereof, and to secure the performance by the Company of, and its compliance with, the covenants and conditions of this Indenture, and in consideration of the premises and of One Dollar paid to the Company by the Trustee, the Company hereby grants, bargains, sells, releases, conveys, assigns, transfers, mortgages, pledges, sets over and confirms to The Bank of New York Trust Company, N.A., as Trustee, and grants to the Trustee a security interest in, the following:

GRANTING CLAUSE FIRST

All right, title and interest of the Company, as of the date of the execution and delivery of this Indenture, in and to all property, real, personal and mixed located in the State of Ohio or the Commonwealth of Pennsylvania (other than Excepted Property), in any case used or to be used in or in connection with the Primary Purposes of the Company's Business (whether or not such use is the sole use of such property), including without limitation all right, title and interest of the Company in and to the following property so located (other than Excepted Property): (a) all real property owned in fee, easements and other interests in real property which are specifically described or referred to in Exhibit A attached hereto and incorporated herein by this reference; (b) all licenses, permits to use the real property of others, franchises to use public roads, streets and other public properties, rights of way and other rights or interests relating to the occupancy or use of real property, including without limitation all of the same which are specifically described or referred to in Exhibit B attached hereto and incorporated herein by this reference; (c) all facilities, machinery, equipment and fixtures for the generation or

production of electric energy including, but not limited to, all plants, powerhouses, dams, diversion works, generators, turbines, engines, boilers, fuel handling and transportation facilities, air and water pollution control and sewage and solid waste disposal facilities, switchyards, towers, substations, transformers, poles, lines, cables, conduits, ducts, conductors, meters, regulators and all other property used or to be used for any or all of such purposes; (d) all buildings, offices, warehouses, structures or improvements in addition to those referred to or otherwise included in clauses (a) and (c) above; (e) all computers, data processing, data storage, data transmission or telecommunications facilities, equipment and apparatus necessary for the operation or maintenance of any facilities, machinery, equipment or fixtures described or referred to in clauses (c) above; and (f) all of the foregoing property in the process of construction;

GRANTING CLAUSE SECOND

Subject to the applicable exceptions permitted by Section 8.10, Section 13.03 and Section 13.05, all right, title and interest of the Company in and to all property located in the State of Ohio or the Commonwealth of Pennsylvania (other than Excepted Property) of the kind and nature described in Granting Clause First which may be hereafter acquired by the Company, it being the intention of the Company that all such property acquired by the Company after the date of the execution and delivery of this Indenture shall be as fully embraced within and subjected to the Lien hereof as if such property were owned by the Company as of the date of the execution and delivery of this Indenture;

GRANTING CLAUSE THIRD

All right, title and interest of the Company in and to any Excepted Property, and any other property, real, personal or mixed, not described in Granting Clause First or Granting Clause Second, which may, from time to time after the date of the execution and delivery of this Indenture, by delivery or by one or more indentures supplemental hereto, be subjected to the Lien hereof by the Company or by anyone in its behalf, the Trustee being hereby authorized to receive the same at any time as additional security hereunder; it being understood that any such subjection to the Lien hereof of any Excepted Property or other property as additional security may be made subject to such reservations, limitations or conditions respecting the use and disposition of such property or the proceeds thereof as shall be set forth in such instrument; and

GRANTING CLAUSE FOURTH

All right, title and interest of the Company in and to all other property of whatever kind and nature subjected or intended to be subjected to the Lien of this Indenture by any of the terms and provisions hereof;

EXCEPTED PROPERTY

Expressly excepting and excluding, however, from the Lien and operation of this Indenture all right, title and interest of the Company in and to the following property, whether now owned or hereafter acquired (the "Excepted Property"):

(a) all cash on hand, in banks or in other financial institutions, deposit accounts, shares of stock, interests in general or limited partnerships, bonds, notes, other

evidences of indebtedness and other securities, securities entitlements and investment properties, of whatsoever kind and nature, not hereafter paid or delivered to, deposited with, or held by, the Trustee hereunder or required so to be (including without limitation all right, title and interest to any such cash or property held, in trust or otherwise, for current or projected decommissioning expenditures of the Company in respect of any of its facilities);

(b) all contracts, leases, operating agreements and other agreements of whatsoever kind and nature (including pole attachment agreements and joint pole agreements) (except to the extent that any of the same are specifically described in clause (a) or (b) of Granting Clause First of this Indenture, in which case they are included within the Lien of this Indenture); collections from former, present or future customers that are permitted by applicable law to be applied to, or pledged as security for, the repayment of securities issued by or on behalf of the Company, contract rights, bills, notes, chattel paper and other instruments (except to the extent that any of the same constitute securities, in which case they may be separately excepted from the Lien of this Indenture under clause (a) above); all revenues, income and earnings; all accounts, accounts receivable and unbilled revenues, and all rents, tolls, issues, product and profits, claims, credits, demands and judgments; all governmental and other licenses, permits, franchises, consents and allowances, including but not limited to permits licenses and rights (however characterized) granted by any governmental entity with respect to air, water or other types of pollution or pollution credits (except to the extent that any of the same are specifically described in clause (b) of Granting Clause First of this Indenture, in which case they are included within the Lien of this Indenture); and all patents, patent licenses and other patent rights, patent applications, trade names, trademarks, copyrights, domain names, claims, credits, choses in action and other intangible property and general intangibles including, but not limited to, computer software;

(c) all motor vehicles, automobiles, buses, trucks, truck cranes, tractors, trailers and similar vehicles and movable equipment; all rolling stock, rail cars, containers and other railroad equipment; all vessels, boats, barges and other marine equipment, all airplanes, helicopters, aircraft engines and other flight equipment, and all components, parts, accessories, supplies and fuel used or to be used in connection with any of the foregoing and all personal property of such character that the perfection of a security interest therein or other Lien thereon is not governed by the Uniform Commercial Code as in effect in the jurisdiction in which such property is located;

(d) all goods, stock in trade, wares, merchandise and inventory acquired or otherwise held for the purpose of sale or lease in the ordinary course of business; all spare parts and tools held for use or consumption in, or in the operation of, any properties of the Company; all equipment and other property held in advance of use thereof for maintenance, replacement or fixed capital purposes; all materials, supplies and inventory and other personal property which are consumable (otherwise than by ordinary wear and tear) in their use in or in connection with the operation of the Mortgaged Property; all fuel, including nuclear fuel, whether or not in a form consumable in the operation of the Mortgaged Property, including separate assemblies and components thereof in the forms in which such assemblies and components exist at any time before, during or after the

period of the use thereof as fuel (that is, in the case of nuclear fuel, the process, whether physical or chemical, by which the component parts of nuclear fuel are processed, enriched, designed or fabricated into assemblies, which, when loaded into a nuclear reactor, are intended to produce heat through the fission or any other process and thereafter are utilized, disengaged, cooled, stored or reprocessed);

(e) all satellites and other equipment and materials used or to be used in outer space; all business machines; all communications equipment (including telephone equipment); all computer equipment; all hand and other portable tools and equipment; all furniture and furnishings; and computers and data processing, data storage, data transmission, telecommunications, record production, storage and retrieval equipment and other facilities, equipment and apparatus, which, in any case, are used primarily for administrative or clerical purposes or are otherwise not necessary for the operation or maintenance of the facilities, machinery, equipment or fixtures described or referred to in clause (c) or (d) of Granting Clause First of this Indenture; and all components, spare parts, accessories, programs (other than computer software) and supplies used or to be used in connection with any of the foregoing;

(f) all sand, gravel, rocks, earth, natural gas, coal, lignite, ore, uranium, gas, oil and other minerals and all crops and timber, and all rights and interests in any of the foregoing (including without limitation rights to explore therefor), whether or not such minerals or crops and timber shall have been mined, extracted or harvested or otherwise separated from the land; all mineral rights, leases and royalties and income therefrom; all gas or oil wells or any lease or real estate acquired for the purpose of obtaining gas or oil rights; and all electric energy, gas (natural or artificial), steam, water, ice and other products generated, produced, manufactured, purchased or otherwise acquired by the Company;

(g) all real property, leaseholds, gas rights, wells, gathering, tap or other pipe lines, or facilities, equipment or apparatus, in any case used or to be used primarily for the production or gathering of natural gas;

(h) all property which is the subject of a lease agreement designating the Company as lessee and all right, title and interest of the Company in and to such property and in, to and under such lease agreement, including without limitation in and to leasehold improvements, whether or not such lease agreement is intended as security (except to the extent that any of the same are specifically described in clause (a) or (b) of Granting Clause First of this Indenture, in which case they are included within the Lien of this Indenture);

(i) all facilities, machinery, equipment and fixtures for the appropriation, storage, transmission and distribution of water including, but not limited to, water works, reservoirs, diversion works, stations and substations, transmission pipelines, canals, raceways, flumes, waterways, aqueducts, storage facilities, tanks, purifiers, valves, regulators, pumps, mains, pipes, service pipes, conduits, fittings and connections, services, meters and any and all other property used or to be used for any or all of such purposes;

(j) all permits, licenses, franchises and rights not specifically subjected or required to be subjected to the Lien hereof by the express provisions of this Indenture, whether now owned or hereafter acquired by the Company, which by their terms or by reason of applicable law would become void or voidable if mortgaged or pledged hereunder by the Company or which cannot be granted, conveyed, mortgaged, transferred or assigned by this Indenture without the consent of other parties whose consent is not secured, or without subjecting the Trustee to a liability not otherwise contemplated by the provisions of this Indenture, or which otherwise may not be, or are not, hereby lawfully and effectively granted, conveyed, mortgaged, transferred and assigned by the Company;

(k) all property, real, personal and mixed, which subsequent to the date of the execution and delivery of this Indenture, has been released from the Lien of this Indenture, and any improvements, extensions and additions to such properties and renewals, replacements and substitutions of or for any parts thereof;

(l) all property, real, personal and mixed, which meets all the following conditions:

(i) not specifically described in the Granting Clauses of this Indenture,

(ii) not specifically subjected or required to be subjected to the Lien hereof by the express provisions of this Indenture, and

(iii) not part of or used or for use in connection with any property specifically subjected or required to be subjected to the Lien hereof by the express provisions of this Indenture;

(m) the Company's franchise to be a corporation;

(n) all books and records; and

(o) all of the real and personal property and interests therein constituting Bruce Mansfield Sale Leaseback Property as described on Exhibit C attached hereto and incorporated herein by reference.

provided, however, that, subject to the provisions of Section 13.03 (x) if, at any time after the occurrence of an Event of Default, the Trustee, or any separate trustee or co-trustee appointed under Section 11.14 or any receiver appointed pursuant to Section 10.08 or otherwise, shall have entered into possession of all or substantially all of the Mortgaged Property, all the Excepted Property described or referred to in clauses (b), (c), and (d) then owned or held or thereafter acquired by the Company, to the extent that the same is used in connection with, or otherwise relates or is attributable to, the Mortgaged Property, shall immediately, and, in the case of any Excepted Property described or referred to in clause (h), to the extent that the same is used in connection with, or otherwise relates or is attributable to, the Mortgaged Property, upon demand of the Trustee or such other trustee or receiver, become subject to the Lien of this Indenture to the extent not prohibited by law or by the terms of any other Lien at that time existing on such Excepted Property, and if not so prohibited, junior and subordinate to any such other Lien at that time existing on such Excepted Property, and the Trustee or such other trustee or receiver may, to

the extent not prohibited by law or by the terms of any such other Lien (and subject to the rights of the holders of all such other Liens), at the same time likewise take possession thereof, and (y) whenever all Events of Default shall have been cured and the possession of all or substantially all of the Mortgaged Property shall have been restored to the Company, such Excepted Property shall again be excepted and excluded from the Lien hereof to the extent set forth above; it being understood, however, that (i) the Company may pursuant to Granting Clause Third, subject to the Lien of this Indenture any Excepted Property, whereupon the same shall cease to be Excepted Property and (ii) any property which was Excepted Property and becomes Mortgaged Property, for whatever reason, shall become Mortgaged Property subject to any Liens thereon which exist at the time such property becomes Mortgaged Property.

TO HAVE AND TO HOLD all such property, real, personal and mixed, unto the Trustee and its successors and assigns forever.

SUBJECT, HOWEVER, to (a) Permitted Liens, (b) Liens which have been granted by the Company to other Persons prior to the date of the execution and delivery of this Indenture, and (c) as to any property acquired by the Company after the date of execution and delivery of this Indenture, Liens existing or placed thereon at the time of the acquisition thereof (including, but not limited to, Purchase Money Liens and the Lien of any Class “A” Mortgage), it being understood that with respect to any of such property which is now or hereafter becomes subject to the Lien of any Class “A” Mortgage, the Lien of this Indenture shall at all times be junior and subordinate to the Lien of such Class “A” Mortgage;

BUT IN TRUST, NEVERTHELESS, for the equal and ratable benefit and security of all present and future Holders of the Bonds, and to secure the payment of the principal of, premium, if any, and interest, if any, on the Bonds issued and Outstanding under this Indenture when payable in accordance with the provisions thereof and hereof, and to secure the performance by the Company, of, and its compliance with, the covenants and conditions of this Indenture without any preference, priority or distinction of any one Bond over any other Bond by reason of priority in the time of issue or negotiation thereof or otherwise;

UPON THE CONDITION that, until the happening of an Event of Default (as defined in Section 1.01) and subject to the provisions of Article VIII, the Company shall be permitted to possess and use the Mortgaged Property, except cash, securities and other personal property deposited and pledged, or required to be deposited and pledged, with the Trustee and to receive and use the rents, issues, profits, revenues and other income of the Mortgaged Property;

PROVIDED, HOWEVER, that the right, title and interest of the Trustee in and to the Mortgaged Property shall cease, terminate and become void in accordance with, and subject to the conditions set forth in, Article IX hereof, and if, thereafter, the principal of and premium, if any, and interest, if any, on the Bonds shall have been paid to the Holders thereof, or shall have been paid to the Company pursuant to Section 6.03(e) hereof, then and in that case this Indenture shall terminate, and, upon request of the Company, the Trustee shall execute and deliver to the Company such instruments as the Company shall require to evidence such termination; otherwise this Indenture, and the estate and rights hereby granted, shall be and remain in full force and effect; and

IT IS HEREBY COVENANTED AND AGREED, by and between the Company and the Trustee, that all Bonds are to be authenticated and delivered and that all Mortgaged Property is to be held, subject to the further covenants, conditions, and trusts hereinafter set forth, and the Company, for itself and its successors and assigns, does hereby covenant and agree to and with the Trustee and its successors in trust, for the equal and ratable benefit of all Holders of the Bonds, as follows:

ARTICLE I

DEFINITIONS AND OTHER PROVISIONS OF GENERAL APPLICATION

Section 1.01 General Definitions

.

For all purposes of this Indenture, except as otherwise expressly provided or unless the context otherwise requires:

(a) the terms defined in this Article have the meanings assigned to them in this Article and include the plural as well as the singular;

(b) all terms used herein (and which are not specifically defined herein) which are defined in the Trust Indenture Act or by Commission rule under the Trust Indenture Act, either directly or by reference therein, have the meanings assigned to them therein;

(c) all terms used herein (and which are not specifically defined herein) which are defined in the Uniform Commercial Code (as in effect in the relevant jurisdiction) have the meanings assigned to them therein;

(d) the word “or” is not exclusive;

(e) all accounting terms not otherwise defined herein have the meanings assigned to them in accordance with Generally Accepted Accounting Principles;

(f) the words “herein”, “hereof’ and “hereunder” and other words of similar import refer to this Indenture as a whole and not to any particular Article, Section or other subdivision; and

(g) all references in this instrument to designated Articles, Sections and other subdivisions are to the designated Articles, Sections and other subdivisions of this Indenture.

“Accountant” means a Person engaged in the accounting profession or otherwise qualified to pass on accounting matters (including, but not limited to, a Person certified or licensed as a public accountant, whether or not then engaged in the public accounting profession), which Person, unless required to be Independent, may be employed by or Affiliated with the Company.

“Act” , when used with respect to any Holder, has the meaning specified in Section 1.07(a).

"Adjusted Net Earnings" , means the amount calculated in accordance with Section 1.03(a);provided, however, that if any of the property of the Company owned by it at the time of the making of any Net Earnings Certificate (a) shall have been acquired during or after any period for which Adjusted Net Earnings of the Company are to be computed, (b) shall not have been acquired in exchange or substitution for property the net earnings of which have been included in the Adjusted Net Earnings of the Company, and (c) had been operated as a separate unit and items of revenue and expense attributable thereto are readily ascertainable, then the net earnings of such property (computed in the manner provided for the computation of the Adjusted Net Earnings of the Company) during such period or such part of such period as shall have preceded the acquisition thereof, to the extent that the same have not otherwise been included in the Adjusted Net Earnings of the Company, shall be so included.

"Affiliate" of any specified Person means any other Person directly or indirectly controlling or controlled by or under direct or indirect common control with such specified Person; "Affiliated' has a meaning correlative to the foregoing. For the purposes of this definition, control' when used with respect to any specified Person means the power to direct generally the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative to the foregoing.

"Annual Interest Requirements" means the amount calculated in accordance with Section 1.03(b).

"Applicable Procedures" of a Depository means, with respect to any matter at any time, the policies and procedures of such Depository, if any, that are applicable to such matter at such time.

"Appraiser" means a Person engaged in the business of appraising property or competent to determine the Fair Value or fair market value of the particular property in question, and who or which, unless required to be Independent, may be employed by or Affiliated with the Company.

"Appraiser's Certificate" means a certificate signed by an Appraiser; any Appraiser's Certificate which is relied upon by an Independent Engineer, for purposes of an Independent Engineer's Certificate, shall be signed by an Independent Appraiser.

"Authenticating Agent" means any Person (other than the Company or an Affiliate of the Company) authorized by the Trustee to act on behalf of the Trustee to authenticate one or more series of Bonds, or any Tranche thereof.

"Authorized Executive Officer" means the Chairman of the Board, the Chief Executive Officer, the President, any Vice President (whether or not his or her title includes a modifier such as "Executive", "Senior" or the like), the Treasurer, any Assistant Treasurer, the Corporate Secretary, any Assistant Corporate Secretary or any other officer of the Company designated in an Officer's Certificate delivered to the Trustee to be an Authorized Executive Officer.

"Authorized Publication" means a newspaper or financial journal of general circulation, printed in the English language and customarily published on each Business Day, whether or not published on Saturdays, Sundays or holidays; or, in the alternative, shall mean such form of communication as may have come into general use for the dissemination of information of similar import. In the event that successive weekly publications in an Authorized Publication are required hereunder they may be made (unless otherwise expressly provided herein) on the same or different days of the week and in the same or in different Authorized Publications. In case, by reason of the suspension of publication of any Authorized Publication, or by reason of any other cause, it shall be impractical without extraordinary expense to make publication of any notice in an Authorized Publication as required by this Indenture, then such method of publication or notification as shall be made with the approval of the Trustee shall be deemed the equivalent of the required publication of such notice in an Authorized Publication.

"Authorized Purposes" means the authentication and delivery of Bonds, the release of property or the withdrawal of cash under any of the provisions of this Indenture.

"Board of Directors" duly means any of (a) the board of directors of the Company, (b) any authorized committee of that board or (c) any officer of the Company duly authorized by the Board of Directors to take a specified action.

"Board Resolution" means a copy of a resolution certified by the Corporate Secretary or an Assistant Corporate Secretary of the Company to have been duly adopted by the Board of Directors and to be in full force and effect on the date of such certification, and delivered to the Trustee. Where any provision of this Indenture refers to action to be taken pursuant to a Board Resolution, such action may be taken by the Board of Directors, any duly authorized committee of that board or any officer of the Company duly authorized by the Board of Directors to take such action.

"Bonded" has the meaning specified in Section 1.02(a).

"Bond Register" and "Bond Registrar" have the respective meanings specified in Section 3.05(a).

"Bonds" means any bonds authenticated and delivered under this Indenture.

"Business Day" when used with respect to a Place of Payment or any other particular location specified in the Bonds or this Indenture, means any day, other than a Saturday or Sunday, which is not a day on which banking institutions or trust companies in such Place of Payment or other location are generally authorized or required by law, regulation or executive order to remain closed, except as may be otherwise specified as contemplated by Section 3.01.

"Class "A" Bonds" means bonds or other obligations now or hereafter issued and Outstanding under any Class "A" Mortgage.

"Class "A" Mortgage" means, collectively, each mortgage or deed of trust or similar indenture, as amended and supplemented from time to time, to which any corporation that is subsequently merged into or consolidated with the Company was a party at the time of such merger or consolidation and which is hereafter designated an additional Class "A"

Mortgage in an indenture supplemental hereto executed and delivered in accordance with Section 7.06.

"Commission" means the Securities and Exchange Commission, as from time to time constituted, created under the Securities Exchange Act of 1934, or, if at any time after the execution of this instrument such Commission is not existing and performing the duties now assigned to it under the Trust Indenture Act, then the body (if any) performing such duties at such time.

"Company" means FirstEnergy Generation Corp., a corporation of the State of Ohio, until a successor Person shall have become such pursuant to the applicable provisions of this Indenture, and thereafter "Company" shall mean such successor Person.

"Company Order" or "Company Request" means a written order or request signed in the name of the Company by an Authorized Executive Officer and delivered to the Trustee.

"Corporate Trust Office" means the office of the Trustee at which at any particular time its corporate trust business shall be principally administered, which office at the date of execution of this Indenture is located at 1660 West 2nd Street, Cleveland, Ohio 44113 Attention: Global Corporate Trust.

"corporation" means a corporation, association, company (including limited liability company), joint-stock company, business trust or other similar entity.

"Cost" with respect to Property Additions has the meaning specified in Section 1.04(c).

"Customary Exceptions" means, with respect to any Opinion of Counsel required to be delivered hereunder, such exceptions to opinions as are customarily expressed in opinions of counsel rendered in connection with similar transactions at the time such Opinion of Counsel is to be delivered and, in any event, shall include exceptions based upon limitations imposed by (a) bankruptcy, insolvency, fraudulent transfer and conveyance, reorganization, moratorium or other laws relating to or affecting mortgagees' and other creditors' rights and remedies generally, (b) general principles of equity, including principles of commercial reasonableness, good faith and fair dealing (regardless of whether such enforceability is considered in a proceeding at law or in equity) and (c) laws affecting creation, attachment, perfection or priority of, or remedies for the enforcement of, security interests.

"date of execution and delivery of this Indenture" means June 19, 2008.

"Defaulted Interest" has the meaning specified in Section 3.07(b).

"Depository" means, with respect to any Bonds of any series issuable or issued in whole or in part in the form of one or more Global Bonds, the clearing agency registered under the Exchange Act and any other applicable statute or regulation specified for that purpose with respect to such Bonds as contemplated by Section 3.01.

"Discount Bond" means any Bond which provides for an amount less than the principal amount thereof to be due and payable upon a declaration of acceleration of the Maturity thereof pursuant to Section 10.02(a).

"Dollar" or "$" means a dollar or other equivalent unit in such coin or currency of the United States as at the time shall be legal tender for the payment of public and private debts.

"Eligible Obligations" means:

(a) with respect to Bonds denominated in Dollars, Government Obligations; or

(b) with respect to Bonds denominated in a currency other than Dollars or in a composite currency, such other obligations or instruments as shall be specified with respect to such Bonds, as contemplated by Section 3.01.

"Engineer" means a Person engaged in the engineering profession or otherwise qualified to pass on engineering matters (including, without limitation, a Person licensed as a professional engineer, whether or not then engaged in the engineering profession) or a Person engaged in the business of appraising property or otherwise competent to determine the Fair Value or fair market value of the particular property in question, who, in each case, unless required to be Independent, may be employed by or Affiliated with the Company.

"Engineer's Certificate" means a certificate signed by an Authorized Executive Officer and by an Engineer; provided, however, that, in connection with the release of any property from the Lien of this Indenture, the Engineer's Certificate as to the Fair Value of such property, and as to the nonimpairment by reason of such release of the security of this Indenture in contravention of the provisions hereof, shall be made by an Independent Engineer if the Fair Value of such property and of all other property released since the commencement of the then current calendar year, as set forth in the certificates required by this Indenture, is 10% or more of the sum of (a) the aggregate principal amount of the Bonds at the time Outstanding, and (b) the aggregate principal amount of the Class "A" Bonds at the time Outstanding (other than Pledged Bonds); but such a certificate of an Independent Engineer shall not be required in the case of any release of property, if the Fair Value thereof as set forth in the certificates required by this Indenture is less than $25,000 or less than 1% of the sum of (i) the principal amount of the Bonds at the time Outstanding, and (ii) the principal amount of the Class "A" Bonds at the time Outstanding (other than Pledged Bonds).

"Event of Default" has the meaning specified in Section 10.01.

"Excepted Property" has the meaning specified in the "Excepted Property" clause set forth above.

"Expiration Date" has the meaning specified in Section 1.07(g).

"Fair Value" , with respect to property, means the fair value of such property as may be determined by reference to (a) the amount which would be likely to be obtained in an arm's-length transaction with respect to such property between an informed and willing buyer

and an informed and willing seller, under no compulsion, respectively, to buy or sell, (b) the amount of investment with respect to such property which, together with a reasonable return thereon, would be likely to be recovered through ordinary business operations or otherwise, (c) the Cost, accumulated depreciation and replacement cost with respect to such property and/or (d) any other relevant factors; provided, however, that the Fair Value of property (x) shall be determined without deduction for any Prior Liens (except as otherwise provided in Section 8.03) and (y) shall not reflect any reduction relating to the fact that such property may be of less value to a Person which is not the owner or operator of the Mortgaged Property or any portion thereof than to a Person which is such owner or operator. Fair Value may be determined, without physical inspection, by the use of accounting and engineering records and other data maintained by the Company or otherwise available to the Engineer or Appraiser certifying the same.

"Funded Cash" has the meaning specified in Section 1.02(b).

"Generally Accepted Accounting Principles" means, with respect to any computation required or permitted under this Indenture, such accounting principles as are generally accepted in the United States at the date of such computation or, at the option of the Company from time to time, at the date of the execution and delivery of this Indenture or any Class "A" Mortgage which then remains in effect; provided, however, that in determining generally accepted accounting principles applicable to the Company for purposes of making any computation required or permitted hereunder, the Company may, but shall not be required to, reflect any accounting pronouncement, order, rule or regulation of any administrative agency, regulatory authority or other governmental body having jurisdiction over the Company.

"Global Bond" means a Bond that evidences all or part of the Bonds of any series and bears the legend required by Section 2.03 (or such legend as may be specified as contemplated by Section 3.01 for such Bonds) and has been issued to the Depository or its nominee and registered in the name of such Depository or nominee.

"Governmental Authority" means the government of the United States or any state or territory thereof or of the District of Columbia or of any county, municipality or other political subdivision of any thereof, or any department, agency, authority or other instrumentality of any of the foregoing.

"Government Obligations" means:

(a) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, the United States of America, and which are entitled to the benefit of the full faith and credit thereof, and

(b) certificates, depositary receipts or other instruments which evidence a direct ownership interest in obligations described in clause (a) above or in any specific interest or principal payments due in respect thereof, provided, however, that the custodian of such obligations or specific interest or principal payments shall be a bank or trust company subject to federal or state supervision or examination with a combined capital and surplus of at least $50,000,000; and provided, further, that except as may be otherwise required by law, such custodian shall be obligated to pay to the holders of such certificates, depositary receipts or other

instruments the full amount received by such custodian in respect of such obligations or specific payments and shall not be permitted to make any deduction therefrom.

"Holder" means a Person in whose name a Bond is registered in the Bond Register.

"Indenture" means this instrument as originally executed, and as it may from time to time be supplemented or amended by one or more indentures supplemental hereto entered into pursuant to the applicable provisions hereof, including the terms of particular series of Bonds established as contemplated by Section 3.01, including, for all purposes of this instrument and any such supplemental indenture, the provisions of the Trust Indenture Act, that are deemed to be a part of and govern this instrument and any such supplemental indenture, respectively.

"Independent" when applied to any Person, means such a Person who (a) is in fact independent, (b) does not have any direct material financial interest in the Company or in any other obligor upon the Bonds or in any Affiliate of the Company or of such other obligor, (c) is not connected with the Company or such other obligor as an officer, employee, promoter, underwriter, trustee, partner, director or any Person performing similar functions, (d) is selected by an Authorized Officer of the Company and (e) is approved by the Trustee. The acceptance by the Trustee of a certificate or opinion of an Engineer, Accountant or Appraiser shall be sufficient evidence that the signer or signers have been approved by the Trustee.

"Independent Engineer's Certificate" means an Engineer's Certificate signed by an Independent Engineer.

"Interest Payment Date" when used with respect to any Bond, means the Stated Maturity of an installment of interest on such Bond.

"Investment Securities" means any of the following obligations or securities on which neither the Company nor an Affiliate thereof is the obligor: (a) Government Obligations; (b) interest bearing deposit accounts (which may be represented by certificates of deposit) in national or state banks (which may include the Trustee, an Affiliate of the Trustee or any Paying Agent) having a combined capital and surplus of not less than $10,000,000, or savings and loan associations having total assets of not less than $40,000,000; (c) bankers' acceptances drawn on and accepted by commercial banks (which may include the Trustee, an Affiliate of the Trustee or any Paying Agent) having a combined capital and surplus of not less than $10,000,000; (d) direct obligations of, or obligations the principal of and interest on which are unconditionally guaranteed by, any state or territory of the United States of America or the District of Columbia, or any political subdivision of any of the foregoing, which are rated in any of the three highest rating categories (without regard to modifiers) by a nationally recognized statistical rating organization; (e) bonds or other obligations of any agency or instrumentality of the United States of America; (f) commercial or finance company paper which is rated in any of the two highest rating categories (without regard to modifiers) by a nationally recognized statistical rating organization; (g) corporate debt securities rated in any of the three highest rating categories (without regard to modifiers) by a nationally recognized statistical rating organization; (h) repurchase agreements with banking or financial institutions having a combined capital and surplus of not less than $10,000,000 (which may include the Trustee, an Affiliate of the Trustee

or any Paying Agent) with respect to any of the foregoing obligations or securities; (i) securities issued by any regulated investment company (including any investment company for which the Trustee is the advisor), as defined in Section 851 of the Internal Revenue Code of 1986, as amended, or any successor section of such Code or successor federal statute, provided that the portfolio of such investment company is limited to obligations that are bonds, notes, certificates of indebtedness, treasury bills or other securities now or hereafter issued, which are guaranteed as to principal and interest by the full faith and credit of the United States of America, which portfolio may include repurchase agreements which are fully collateralized by any of the foregoing obligations; and (j) any other obligations or securities which may lawfully and prudently be purchased by the Trustee.

"Lien" means any mortgage, pledge, security interest, encumbrance, easement, lease, reservation, restriction, servitude, charge or similar right or lien of any kind, including, without limitation, any conditional sale or other title retention agreement, any lease in the nature thereof, any filing of, or agreement to give, any financing statement under the Uniform Commercial Code of any jurisdiction, and any uninsured defect or irregularity in record title.

"Matured Event of Default" , when used with respect to any Class "A" Mortgage, means the occurrence of any default or any other event under such Class "A" Mortgage, and the expiration of the applicable grace period, if any, specified in such Class "A" Mortgage, if the effect of such default or other event is to accelerate, or to permit the acceleration of, only the maturity of any amount due under such Class "A" Mortgage.

"Maturity" , when used with respect to any Bond, means the date on which the principal of such Bond or an installment of principal becomes due and payable as provided in such Bond or in this Indenture, whether at the Stated Maturity, by declaration of acceleration, upon call for redemption or otherwise.

"Mortgaged Property" means as of any particular time all property which at said time is subject, or is intended by the terms of this Indenture to be subject, to the Lien of this Indenture.

"Net Earnings Certificate" has the meaning specified in Section 1.03.

"Notice of Default" means a written notice of the kind specified in Section 10.01(c).

"Officer's Certificate" means a certificate signed by an Authorized Executive Officer.

"Opinion of Counsel" means a written opinion of counsel, who may be employed by or Affiliated with the Company or be counsel to the Company.

"Outstanding" , when used:

(a) with respect to Bonds, means, as of the date of determination, all Bonds theretofore authenticated and delivered under this Indenture, except:

(i) Bonds theretofore paid, retired, redeemed, discharged or canceled, or delivered to the Bond Registrar or Trustee for cancellation;

(ii) Bonds deemed to have been paid in accordance with Section 9.01;

(iii) Bonds deposited with or held in pledge by the Trustee under any of the provisions of this Indenture, including any so held under any sinking, improvement, maintenance, replacement or analogous fund; and

(iv) Bonds in exchange for or in lieu of which other Bonds have been authenticated and delivered pursuant to this Indenture, other than any such Bonds in respect of which there shall have been presented to the Trustee proof satisfactory to it and the Company that such Bonds are held by a protected purchaser (within the meaning of Section 8-303 of the Uniform Commercial Code) in whose hands such Bonds are valid obligations of the Company;

provided, however, that in determining whether or not the Holders of the requisite principal amount of the Bonds Outstanding under this Indenture, or the Outstanding Bonds of any series or Tranche, have given any request, demand, authorization, direction, notice, consent or waiver hereunder or whether or not a quorum is present at a meeting of Holders of Bonds:

(w) Bonds owned by the Company or any other obligor upon the Bonds or any Affiliate of the Company or of such other obligor (unless the Company, such Affiliate or such obligor owns all Bonds Outstanding under this Indenture, or all Outstanding Bonds of each such series and each such Tranche, as the case may be, determined without regard to this clause (x)) shall be disregarded and deemed not to be Outstanding, except that, in determining whether the Trustee shall be protected in relying upon any such request, demand, authorization, direction, notice, consent or waiver or upon any such determination as to the presence of a quorum, only Bonds which the Trustee knows to be so owned shall be so disregarded; provided, however, that Bonds so owned which have been pledged in good faith may be regarded as Outstanding if it is established to the reasonable satisfaction of the Trustee that the pledgee, and not the Company or any such other obligor or Affiliate of either thereof, has the right so to act with respect to such Bonds and that the pledgee is not the Company or any other obligor upon the Bonds or any Affiliate of the Company or of such other obligor;

(x) the principal amount of a Discount Bond that shall be deemed to be Outstanding for such purposes shall be the amount of the principal thereof that would be due and payable as of the date of such determination upon a declaration of acceleration of the Maturity thereof pursuant to Section 10.02(a);

(y) if, as of such date, the principal amount payable at the Stated Maturity of a Bond is not determinable, the principal amount of such Bond which shall be deemed to be Outstanding shall be the amount as specified or determined as contemplated by Section 3.01; and

(z) the principal amount of a Bond denominated in one or more foreign currencies, composite currencies or currency units which shall be deemed to be

Outstanding shall be the Dollar equivalent, determined as of such date in the manner provided as contemplated by Section 3.01, of the principal amount of such Bond (or, in the case of a Bond described in clause (x) or (y) above, of the amount determined as provided in such clause); and

(b) with respect to Class "A" Bonds, has the meaning specified in the related Class "A" Mortgageprovided, however, that in determining whether the Pledged Bonds constitute a majority in aggregate principal amount of the Class "A" Bonds Outstanding under a Class "A" Mortgage for purposes of Section 7.05(b), Class "A" Bonds issued after the date of execution and delivery of this Indenture (other than Pledged Bonds or Class "A" Bonds issued to replace any mutilated, lost, destroyed or wrongfully taken Class "A" Bonds issued prior to the date of execution and delivery of this Indenture or to effect exchanges and transfers of Class "A" Bonds issued prior to the date of execution and delivery of this Indenture) shall be disregarded and deemed not to be Outstanding.

"Paying Agent" means any Person, including the Company or an Affiliate of the Company, authorized by the Company to pay the principal of and premium, if any, or interest, if any, on any Bonds on behalf of the Company.

"Periodic Offering" means an offering of Bonds of a series from time to time any or all of the specific terms of which Bonds, including without limitation the rate or rates of interest, if any, thereon, the Stated Maturity or Maturities thereof and the redemption provisions, if any, with respect thereto, are to be determined by the Company or its agents at or about the time of the issuance of such Bonds.

"Permitted Liens" means, at any time, any of the following:

(a) the Lien of this Indenture and all Liens and encumbrances junior thereto;

(b) Liens for taxes, assessments and other governmental charges or requirements not delinquent or which are currently being contested in good faith by appropriate proceedings;

(c) mechanics', workmen's, repairmen's, materialmen's, warehousemen's and carriers' Liens, Liens or privileges of any employees of the Company for salary or wages earned, but not yet payable, and other Liens, including without limitation Liens for worker's compensation awards, arising in the ordinary course of business for charges or requirements which are not delinquent or which are being contested in good faith and by appropriate proceedings;

(d) any attachment, judgment and other similar Lien arising in connection with court proceedings (i) in an amount not in excess of the greater of $5,000,000 or 3% of the principal amount at the time such attachment, judgment or Lien arises of the sum of (x) the aggregate principal amount of Bonds Outstanding, and (y) the principal amount of the Class "A" Bonds Outstanding (other than Pledged Bonds), or (ii) with respect to which the Company shall (A) in good faith be prosecuting an appeal or other proceeding for review and with respect to which the Company shall have secured a stay of execution pending such appeal or other proceeding, or (B) have the right to prosecute an appeal or other proceeding for review;

(e) easements, leases, reservations or other rights of others in, on or over, and laws, regulations and restrictions affecting, and defects and irregularities in record title to, the Mortgaged Property or any part thereof; provided, however, that such easements, leases, reservations, rights, laws, regulations, restrictions, defects and irregularities do not in the aggregate materially impair the use by the Company of the Mortgaged Property considered as a whole for the purposes for which it is held by the Company;

(f) any defects or irregularities in title to any rights-of-way or to any real estate used or to be used primarily for right-of-way purposes or held under lease, easement, license or similar right; provided, however, that (i) the Company shall have obtained from the apparent owner of the lands or estates therein covered by any such right-of-way a sufficient right, by the terms of the instrument granting such right-of-way, lease, easement, license or similar right, to the use thereof for the purpose for which the Company acquired the same, (ii) the Company has power under eminent domain, or similar statutes, to remove such defects or irregularities, or (iii) such defects or irregularities may be otherwise remedied without undue effort or expense;

(g) Liens securing indebtedness neither created, assumed nor guaranteed by the Company, nor on account of which it customarily pays interest, upon property hereafter acquired by the Company, at the time of the acquisition thereof by the Company;

(h) leases existing at the date of execution and delivery of this Indenture affecting property owned by the Company at said date and renewals and extensions thereof; and leases affecting such properties entered into after such date or affecting properties acquired by the Company after such date which, in either case (i) have respective terms (or periods at the end of which the Company may terminate the lease) of not more than ten (10) years (including extensions or renewals at the option of the tenant), or (ii) do not materially impair the use by the Company of such properties for the respective purposes for which they are held by the Company;

(i) any Lien vested in any lessor, licensor or permitted for rent to become due or for other obligations or acts to be performed, the payment of which rent or the performance of which other obligations or acts is required under leases, subleases, licenses or permits, so long as the payment of such rent or the performance of such other obligations or acts is not delinquent or is being contested in good faith and by appropriate proceedings;

(j) any controls, restrictions, obligations, duties or other burdens imposed by any federal, state, municipal or other law, or by any rule, regulation or order of any Governmental Authority, upon any property of the Company or the operation or use thereof or upon the Company with respect to any of its property or the operation or use thereof or with respect to any franchise, grant, license, permit or public purpose requirement, or any rights reserved to or otherwise vested in any Governmental Authority to impose any such controls, restrictions, obligations, duties or other burdens;

(k) Liens granted on air or water pollution control, sewage or solid waste disposal, or other similar facilities of the Company in connection with the issuance of pollution control revenue bonds, in connection with financing the cost of, or the construction, acquisition, improvement, repair or maintenance of, such facilities;

(l) any right which any Governmental Authority may have by virtue of any franchise, license, contract or statute to purchase, or designate a purchaser of or order the sale of, any property of the Company upon payment of cash or reasonable compensation therefor or to terminate any franchise, license or other rights or to regulate the property and business of the Company;

(m) any Liens which have been bonded for the full amount in dispute or for the payment of which other adequate security arrangements have been made;

(n) (i) rights and interests of Persons other than the Company arising out of contracts, agreements and other instruments to which the Company is a party and which relate to the common ownership or joint use of property; and (ii) all Liens on the interests of Persons other than the Company in property owned in common by such Persons and the Company if and to the extent that the enforcement of such Liens would not adversely affect the interests of the Company in such property in any material respect;

(o) Liens securing indebtedness incurred by a Person, other than the Company, which indebtedness has been neither assumed nor guaranteed by the Company nor on which it customarily pays interest, existing on property which the Company owns jointly or in common with such Person or such Person and others, if there is a bar against partition of such property, which would preclude the sale of such property by such other Person or the holder of such Lien without the consent of the Company;

(p) Liens in favor of a government or governmental entity securing (i) payments pursuant to a statute (other than taxes and assessments), or (ii) indebtedness incurred to finance all or part of the purchase price or cost of construction of the property subject to such Lien;

(q) any other Liens or encumbrances of whatever nature or kind which do not, individually or in the aggregate, materially impair the Lien of this Indenture or the security afforded thereby for the benefit of the Bondholders, as evidenced by an Opinion of Counsel to such effect;

(r) any trustee's Lien hereunder; and

(s) Prepaid Liens.

"Person" means any individual, corporation, association, partnership, joint venture, trust or unincorporated organization or any Governmental Authority.

"Place of Payment" when used with respect to the Bonds of any series, or any Tranche when used with respect to the Bonds of any series, or any Tranche thereof, means the place or places, specified as contemplated by Section 3.01, at which, subject to Section 6.02, principal of and premium, if any, and interest, if any, on the Bonds of such series or Tranche are payable upon presentation.

"Pledged Bonds" means Class "A" Bonds issued and delivered to, and held by, the Trustee hereunder.

"Predecessor Bond" of any particular Bond means every previous Bond evidencing all or a portion of the same debt as that evidenced by such particular Bond; and, for the purposes of this definition, any Bond authenticated and delivered under Section 3.06 in exchange for or in lieu of a mutilated, destroyed, lost or wrongfully taken Bond shall be deemed to evidence the same debt as the mutilated, destroyed, lost or wrongfully taken Bond.

"Prepaid Lien" means any Lien securing indebtedness for the payment of which money in the necessary amount (taking into consideration the amount of income reasonably projected to be earned on such amount) shall have been irrevocably deposited in trust with the trustee or other holder of such Lien; provided however, that if such indebtedness is to be redeemed or otherwise prepaid prior to the stated maturity thereof, any notice requisite to such redemption or prepayment shall have been given in accordance with the mortgage or other instrument creating such lien or irrevocable instructions to give such notice shall have been given to such trustee or other holder.

"Primary Purposes of the Company's Business" means the generation and production of electric energy.

"Prior Lien" means each Class "A" Mortgage and any other mortgage, lien, charge, encumbrance, security interest on or in, or pledge of, any Mortgaged Property existing both at and immediately prior to the time of the acquisition by the Company of such Mortgaged Property, or created as a Purchase Money Lien on such Mortgaged Property at the time of, or in connection with, its acquisition by the Company, in each case ranking prior to or on a parity with the Lien of this Indenture.

"Property Additions" has the meaning specified in Section 1.04(a).

"Purchase Money Lien" means, with respect to any property being acquired or disposed of by the Company or being released from the Lien of this Indenture, a Lien on such property which

(a) is taken or retained by the transferor of such property to secure all or part of the purchase price thereof;

(b) is granted to one or more Persons other than the transferor which, by making advances or incurring an obligation, give value to enable the grantor of such Lien to acquire rights in or the use of such property;

(c) is granted to any other Person in connection with the release of such property from the Lien of this Indenture on the basis of the deposit with the Trustee or the trustee or other holder of a Lien prior to the Lien of this Indenture of obligations secured by such Lien on such property (as well as any other property subject thereto);

(d) is held by a trustee or agent for the benefit of one or more Persons described in clause (a), (b) or (c) above,provided that such Lien may be held, in addition, for the benefit of one or more other Persons which shall have theretofore given, or may thereafter give, value to or for the benefit or account of the grantor of such Lien for one or more other purposes; or

(e) otherwise constitutes a purchase money mortgage or a purchase money security interest under applicable law;

and, without limiting the generality of the foregoing, for purposes of this Indenture, the term Purchase Money Lien shall be deemed to include any Lien described above whether or not such Lien (x) shall permit the issuance or other incurrence of additional indebtedness secured by such Lien on such property, (y) shall permit the subjection to such Lien of additional property and the issuance or other incurrence of additional indebtedness on the basis thereof or (z) shall have been granted prior to the acquisition, disposition or release of such property, shall attach to or otherwise cover property other than the property being acquired, disposed of or released or shall secure obligations issued prior or subsequent to the issuance of the obligations delivered in connection with such acquisition, disposition or release.

"Redemption Date" when used with respect to any Bond to be redeemed, means the date fixed for such redemption by or pursuant to this Indenture.

"Redemption Price" when used with respect to any Bond to be redeemed, means the price at which it is to be redeemed pursuant to this Indenture.

"Regular Record Date" for the interest payable on any Interest Payment Date on the Bonds of any series means the date specified for that purpose as contemplated by Section 3.01.

"Required Currency" has the meaning specified in Section 3.11.

"Responsible Officer" when used with respect to the Trustee, means any officer of the Trustee assigned by the Trustee to administer its corporate trust matters.

"Retired Bonds" means any Bonds authenticated and delivered under this Indenture which (a) no longer remain Outstanding by reason of the applicability of subclause (i), (ii) or (iii) of clause (a) in the definition of "Outstanding", (b) have not been made the basis under any of the provisions of this Indenture of one or more Authorized Purposes, and (c) have not been, and are not to be, paid, redeemed, purchased or otherwise retired by the application thereto of Funded Cash.

"Special Record Date" for the payment of any Defaulted Interest on the Bonds of any series means a date fixed by the Trustee pursuant to Section 3.07.

"Stated Interest Rate" means a rate more than zero at which an obligation by its terms is stated to bear simple interest, which rate may be a variable rate. Any calculation or other determination to be made under this Indenture by reference to the Stated Interest Rate on a Bond shall be made without regard to the effective interest cost to the Company of such Bond and without regard to the Stated Interest Rate on, or the effective cost to the Company of, any other obligation for which such Bond is pledged or otherwise delivered as security.

"Stated Maturity" when used with respect to any obligation or any installment of principal thereof or interest thereon, means the date on which the principal of such obligation or such installment of principal (whether as a result of scheduled amortization or otherwise) or

interest is due and payable (without regard to any provisions for redemption, prepayment, acceleration, purchase or extension).

"Successor Corporation" has the meaning set forth in Section 13.01(b).

"Tranche" means those Bonds of a series which, as among themselves, have identical terms and the same original date of issuance but which, as to other Bonds of the same series, differ as to one or more terms or have a different original date of issuance.

"Trust Indenture Act" means, as of any time, the Trust Indenture Act of 1939, or any successor statute, as in force at such time.

"Trustee" means The Bank of New York Trust Company, N.A., a national banking association organized and existing under the laws of the United States of America, until a successor Trustee shall have become such with respect to one or more series of Bonds pursuant to the applicable provisions of this Indenture, and thereafter "Trustee" shall mean or include each Person who is then a Trustee hereunder, and if at any time there is more than one such Person, "Trustee" as used with respect to the Bonds of any series shall mean the Trustee with respect to Bonds of that series.

"Unbonded" as applied to Bonds (including Retired Bonds), Class "A" Bonds or Property Additions means that such Bonds, Class "A" Bonds or Property Additions are not Bonded.

"United States" means the United States of America, its territories, its possessions and other areas subject to its political jurisdiction.

Section 1.02 Bonded; Funded Cash

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(a) "Bonded" as applied to Bonds (including Retired Bonds), Class "A" Bonds or Property Additions means that such Bonds, Class "A" Bonds or Property Additions are within one or more of the following classes:

(i) the aggregate amount of Property Additions which have been used as a basis for the authentication and delivery of Bonds pursuant to Section 4.03 or the withdrawal of cash pursuant to Section 4.05(c) or Section 8.06(a)(i);

(ii) Bonds which have been used as a basis for the authentication and delivery of Bonds pursuant to Section 4.04 or the withdrawal of cash pursuant to Section 4.05(c) or Section 8.06(a)(ii), and Bonds paid, purchased or redeemed with money used or applied by the Trustee pursuant to Section 8.06(a)(iv) or (v);

(iii) Bonds, Class "A" Bonds and the aggregate amount of Property Additions which have been used as the basis of the release of property from the Lien of this Indenture;

(iv) Bonds, Class "A" Bonds and the aggregate amount of Property Additions which have been allocated or used as a basis for any credit against the

requirements of any sinking, improvement, maintenance, replacement or analogous fund for any series or Tranche of Bonds; provided, however, that any such Bonds, Class "A" Bonds or amount of Property Additions so allocated or used shall be reinstated as Unbonded when all of the Bonds of the series or Tranche of Bonds in connection with such fund was established are retired;

(v) Class "A" Bonds which (x) have been used as a basis for the authentication and delivery of Bonds pursuant to Section 4.02 or (y) cannot, at the time of determination, be used as a basis for the issuance of Class "A" Bonds under a Class "A" Mortgage;

(vi) the aggregate amount of Property Additions designated in an Engineer's Certificate delivered to the Trustee pursuant to clause (iii) of Section 7.07(a) to be deemed to have been made the basis of the authentication and delivery of Bonds then Outstanding in connection with discharge of a Class "A" Mortgage.

(b) "Funded Cash" means:

(i) cash held by the Trustee hereunder, to the extent that it represents the proceeds of insurance on, or cash deposited in connection with the release of, property, or the proceeds of the release of obligations secured by a Purchase Money Lien which obligations have been delivered to the Trustee pursuant to Article VIII and used as a credit in any application for the release of property hereunder, or the proceeds of payment to the Trustee on account of the principal of obligations secured by a Purchase Money Lien which obligations have been delivered to it pursuant to Article VIII and used as a credit in any application for the release of property hereunder, all subject, however, to the provisions of Section 8.06(c);

(ii) any cash deposited with the Trustee under Section 4.05; and

(iii) any cash received by the Trustee from the payment of the principal of Pledged Bonds.

Section 1.03 Net Earnings Certificate; Adjusted Net Earnings; Annual Interest Requirements

.

A "Net Earnings Certificate" means a certificate signed by an Authorized Executive Officer and an Accountant (who may be employed by or Affiliated with the Company), stating:

(a) the "Adjusted Net Earnings" of the Company for a period of twelve (12) consecutive calendar months within the eighteen (18) calendar months immediately preceding the first day of the month in which the Company Order requesting the authentication and delivery under this Indenture of Bonds is delivered to the Trustee, specifying:

(i) its operating revenues (which may include revenues of the Company subject when collected or accrued to possible refund at a future date);

(ii) its operating expenses, excluding (A) expenses for taxes on income or profits and other taxes measured by, or dependent on, net income, (B) provisions for reserves for renewals, replacements, depreciation, depletion or retirement of property (or any expenditures therefor), or provisions for amortization of property, (C) expenses or provisions for interest on any indebtedness of the Company, for the amortization of debt discount, premium, expense or loss on reacquired debt, for any maintenance and replacement, improvement or sinking fund or other device for the retirement of any indebtedness, or for other amortization, (D) expenses or provisions for any non-recurring charge to income or to retained earnings of whatever kind or nature (including without limitation the recognition of expense or impairment due to the non-recoverability of assets or expense), whether or not recorded as a non-recurring charge in the Company's books of account, and (E) provisions for any refund of revenues previously collected or accrued by the Company subject to possible refund;

(iii) the amount remaining after deducting the amount required to be stated in such certificate by clause (ii) above from the amount required to be stated therein by clause (i) above;

(iv) its other income, net of related expenses (excluding expenses or provisions for any non-recurring charge to the income or retained earnings of the entity which is the source of such other income of whatever kind or nature (including without limitation the recognition of expense or impairment due to the nonrecoverability of assets or expense), whether or not recorded and a non-recurring charge in such entity's books of account), which other income may include any portion of capitalized interest and other deferred costs (or any analogous amounts) which is not included in "other income" (or any analogous item) in the Company's books of account; and

(v) the Adjusted Net Earnings of the Company for such period of twelve (12) consecutive calendar months (being the sum of the amounts required to be stated in such certificate by clauses (iii) and (iv) above); and

(b) the "Annual Interest Requirements", being the interest requirements for one year, at the respective Stated Interest Rates, if any, borne prior to Maturity, upon:

(i) all Bonds Outstanding hereunder at the date of such certificate, except any for the payment or redemption of which the Bonds applied for are to be issued; provided, however, that, if Outstanding Bonds of any series bear interest at a variable rate or rates, then the interest requirement on the Bonds of such series shall be determined by reference to the rate or rates in effect on the day immediately preceding the date of such certificate;

(ii) all Bonds then applied for in pending applications for the original issuance of Bonds, including the application in connection with which such certificate is made; provided, however, that if Bonds of any series are to bear interest at a variable rate or rates, then the interest requirement on the Bonds of such series shall be determined by reference to the rate or rates to be in effect at the time of the initial authentication and delivery of such Bonds; and provided, further, that the determination of the interest requirement on Bonds of a series subject to a Periodic Offering shall be further subject to the provisions of clause (iv) of Section 4.01(a);

(iii) all Class "A" Bonds Outstanding under Class "A" Mortgages at the date of such certificate, except any Pledged Bonds and except any for the payment or redemption of which the Bonds applied for are to be issued; provided, however, that, if the Outstanding Class "A" Bonds of any series bear interest at a variable rate or rates, then the interest requirement on the Class "A" Bonds of such series shall be determined by reference to the rate or rates in effect on the day immediately preceding the date of such certificate; and

(iv) the principal amount of all other indebtedness (except (A) Pledged Bonds, (B) indebtedness of the Company the repayment of which supports or is supported by other indebtedness included in Annual Interest Requirements pursuant to one of the other clauses of this definition, (C) indebtedness for the payment of which the Bonds applied for are to be issued, and (D) indebtedness secured by a Prepaid Lien prior to the Lien of this Indenture upon property subject to the Lien of this Indenture), outstanding on the date of such certificate and secured by a Lien on a parity with or prior to the Lien of this Indenture upon property subject to the Lien of this Indenture, if such indebtedness has been issued, assumed or guaranteed by the Company or if the Company customarily pays the interest upon the principal thereof or collections from the Company's customers are applied to, or pledged as security for the payment of such interest; provided, however, that if any such indebtedness bears interest at a variable rate or rates, then the interest requirement on such indebtedness shall be determined by reference to the rate or rates in effect on the day immediately preceding the date of such certificate; and provided, further, that any amounts collected by others to be applied to debt service on indebtedness of the Company, and not otherwise treated on the Company's books as revenue, shall be added to the Company's operating revenues when determining Adjusted Net Earnings.

In any case where a Net Earnings Certificate is required as a condition precedent to the authentication and delivery of Bonds, such certificate shall be accompanied by a certificate signed by an Independent Accountant if the aggregate principal amount of Bonds then applied for plus the aggregate principal amount of Bonds authenticated and delivered hereunder since the commencement of the then current calendar year (other than those with respect to which a Net Earnings Certificate is not required, or with respect to which a Net Earnings Certificate accompanied by a certificate signed by an Independent Accountant has previously been furnished to the Trustee) is 10% or more of the sum of (a) the aggregate principal amount of the Bonds at the time Outstanding, and (b) the aggregate principal amount of the Class "A" Bonds at the time

Outstanding (other than Pledged Bonds), which certificate shall provide that such Independent Accountant has reviewed the Net Earnings Certificate and that such Independent Accountant has no knowledge that any statements in such Net Earnings Certificate are not true; but no such certificate need be signed by an Independent Accountant, as to dates or periods not covered by annual reports required to be filed by the Company, in the case of conditions precedent which depend upon a state of facts as of a date or dates or for a period or periods different from that required to be covered by such annual reports.

Section 1.04 Property Additions; Cost

.

(a) "Property Additions" means, as of any particular time, any item, unit or element of property which at such time is owned by the Company and is subject to the Lien of this Indenture. Property Additions:

(i) need not consist of a specific or completed development, plant, betterment, addition, extension, improvement or enlargement, but may include construction work in progress and property in the process of purchase insofar as the Company shall have acquired legal title to such property, and may include the following:

(A) fractional and other undivided interests of the Company in property owned jointly or in common with other Persons, whether or not there are with respect to such property, other agreements or obligations on the part of the Company, if there is a bar against partition of such property which would preclude the sale of such property by any or all of such other Persons or the holder or holders of any Lien or Liens on the interest of any of such other Persons in such property, without the consent of the Company;

(B) engineering, economic, environmental, financial, geological and legal or other surveys, data processing equipment and software, preliminary to or associated with the acquisition or construction of property included or intended to be included in the Mortgaged Property, provided that any such property is not Excepted Property or, if it is Excepted Property, such property has been subjected to the Lien and operation of this Indenture as provided in Granting Clause Third;

(C) paving, grading and other improvements to, under or upon highways, bridges, parks or other public property of analogous character required for or in connection with the installation or repair of overhead, surface or underground facilities and paid for and used or to be used by the Company, notwithstanding that the Company may not hold legal title thereto;

(D) property located over, on or under property owned by other Persons, including governmental or municipal agencies, bodies or

subdivisions, under permits, licenses, easements, franchises and other similar privileges, if the Company shall have the right to remove the same;

(E) intangible property (including any acquisition premium paid in connection with the acquisition of any property); and

(ii) may include renewals, replacements and substitution of property not excluded from the definition of "Property Additions" by virtue of clause (iii) below; but

(iii) shall not include:

(A) Excepted Property (other than Excepted Property which has been subjected to the Lien and operation of this Indenture as provided in Granting Clause Third); or

(B) any property the cost of acquisition or construction of which is properly chargeable to an operating expense account of the Company.

(b) When any Property Additions are certified to the Trustee as the basis of any Authorized Purpose (except as otherwise provided in Section 8.06):

(i) there shall be deducted from the Cost or Fair Value thereof to the Company, as the case may be (as of the date so certified), an amount (which amount shall not be less than zero) equal to the Cost (or as to Property Additions of which the Fair Value to the Company at the time the same became Property Additions was less than the Cost as determined pursuant to subsection (c) of this Section, then such Fair Value in lieu of Cost) of all Property Additions retired on and after the date of execution and delivery of this Indenture (other than the Property Additions, if any, in connection with the application for release of which such certificate is filed), minus the aggregate Cost of all Property Additions acquired or constructed by the Company which are included in the Mortgaged Property after the date of execution and delivery of this Indenture; and

(ii) there may, at the option of the Company, be added to the Cost of Property Additions acquired or constructed by the Company which are included in the Mortgaged Property after the date of execution and delivery of this Indenture, the sum of:

(A) the principal amount of any obligations secured by a Purchase Money Lien and any cash (other than proceeds of such obligations secured by a Purchase Money Lien), not already included in such Cost, received by the Trustee representing the proceeds of insurance on, or of the release or other disposition of, Property Additions retired; and

(B) to the extent not already included in such Cost, an amount equal to 20/15ths of the principal amount of any Bond or Bonds, or

portion of such principal amount, the right to the authentication and delivery of which under the provisions of Section 4.04 and subclause (B) of clause (iii) of Section 8.05(a) shall at any time theretofore have been waived as the basis of the release of Property Additions retired.

(c) The term "Cost" with respect to Property Additions made the basis for one or more Authorized Purposes shall mean the sum of (i) any cash or its equivalent forming a part of such Cost, plus all costs and capitalized financing costs thereof, capitalized future environmental remediation costs and other deferred costs relating to such construction, but only to the extent of the greater of the amount permitted by Generally Accepted Accounting Principles or the amount permitted by accounting regulations or orders issued by any governmental regulatory commission, (ii) an amount equivalent to the fair market value in cash (as of the date of delivery) of any securities or other property delivered in payment therefor or for the acquisition thereof and (iii) the principal amount of any indebtedness incurred or assumed as all or part of the Cost to the Company of such Property Additions; provided, however, that, notwithstanding any other provision of this Indenture, in any case where Property Additions shall have been acquired (otherwise than by construction) by the Company without any consideration consisting of cash, securities or other property or the incurring or assumption of indebtedness, no determination of Cost shall be required, and wherever in this Indenture provision is made for Cost or Fair Value, the Cost, in such case, shall mean an amount equal to the greater of (x) the Fair Value thereof, or (y) the book value of such acquired Property Additions at the time of the acquisition thereof.

(d) If any Property Additions are shown by the Engineer's Certificate provided for in clause (ii) of Section 4.03(b) to include property which has been used or operated by others than the Company in a business similar to that in which it has been or is to be used or operated by the Company, the Cost thereof may include the amount of cash or the value of any portion of the securities paid or delivered for any goodwill, going concern value rights and intangible property simultaneously acquired for which no separate or distinct consideration shall have been paid or apportioned, and in such case the term Property Additions as defined herein may include such goodwill, going concern value rights and intangible property, regardless of whether such Cost is permitted to be recorded in the plant account of the Company or is permitted to be recovered by the Company through the rates that it charges its customers.

(e) For the purposes of the deductions required by this Section, the Cost or the Fair Value to the Company of Property Additions retired shall be the Cost or the Fair Value thereof to the Company at the time such property became Property Additions.

(f) All Property Additions which shall be retired, abandoned, destroyed, released or otherwise disposed of (including damaged or destroyed Property Additions (or portions thereof) for which the Company shall have received proceeds pursuant to Section 6.07(b) but with respect to which the Company shall have elected not to rebuild or repair) shall for the purpose of this Section 1.04 be deemed Property Additions retired and for other purposes of this Indenture shall thereupon cease to be Property Additions, but may at any time thereafter again become Property Additions as provided in this Indenture. Neither any reduction in the Cost or book value of property recorded in the plant account of the Company, nor the transfer of any amount appearing in such account to intangible or adjustment accounts,

otherwise than in connection with actual retirements of physical property abandoned, destroyed, released or disposed of, and otherwise than in connection with the removal of such property in its entirety from the plant account, shall be deemed to constitute a retirement of Property Additions.

Section 1.05 Compliance Certificates and Opinions

.

(a) Except as otherwise expressly provided in this Indenture and as may otherwise be required under the Trust Indenture Act, upon any application or request by the Company to the Trustee to take any action under any provision of this Indenture, the Company shall, if requested by the Trustee, furnish to the Trustee an Officer's Certificate stating that all conditions precedent, if any, provided for in this Indenture relating to the proposed action have been complied with and an Opinion of Counsel stating that in the opinion of such counsel all such conditions precedent, if any, have been complied with and, in such case, otherwise complying with the requirements of the Trust Indenture Act and any other requirements set forth in this Indenture, it being understood that in the case of any such application or request as to which the furnishing of such documents is specifically required by any provision of this Indenture relating to such particular application or request, no additional certificate or opinion need be furnished.

(b) Every certificate or opinion with respect to compliance with a condition or covenant provided for in this Indenture shall include:

(i) a statement that each Person signing such certificate or opinion has read such covenant or condition and the definitions herein relating thereto;

(ii) a brief statement as to the nature and scope of the examination or investigation upon which the statements or opinions contained in such certificate or opinion are based;

(iii) a statement that, in the opinion of each such Person, such Person has made such examination or investigation as is necessary to enable such Person to express an informed opinion as to whether or not such covenant or condition has been complied with; and

(iv) a statement as to whether, in the opinion of each such Person, such condition or covenant has been complied with.

Section 1.06 Content and Form of Documents Delivered to Trustee

.

(a) Any Officer's Certificate may be based (without further examination or investigation), insofar as it relates to or is dependent upon legal matters, upon an opinion of, or representations by, counsel, and, insofar as it relates to or is dependent upon matters which are subject to verification by Accountants, upon a certificate or opinion of, or representations by, an Accountant, and, insofar as it relates to or is dependent upon matters which are required in this Indenture to be covered by a certificate or opinion of, or representations by, an Engineer, upon the certificate or opinion of, or representations by, an Engineer and, insofar as it relates to or dependent upon matters with respect to the Fair Value or fair market value of property, upon a certificate or opinion, or representations by, an Appraiser, unless, in any case, such officer has

actual knowledge that the certificate or opinion or representations with respect to the matters upon which such Officer's Certificate may be based as aforesaid are erroneous.

Any Engineer 's Certificate may be based (without further examination or investigation), insofar as it relates to or is dependent upon legal matters, upon an opinion of, or representations by, counsel, and insofar as it relates to or is dependent upon factual matters information with respect to which is in the possession of the Company and which are not subject to verification by Engineers, upon statements made by the Company in documents filed with any Governmental Authority or upon a certificate or opinion of, or representations by, an officer or officers of the Company and, insofar as it relates to or is dependent upon matters with respect to the Fair Value or fair market value of property, upon a certificate or opinion, or representations by, an Appraiser, unless, in any case, such Engineer has actual knowledge that any such statements, certificate or opinion or representations with respect to the matters upon which such Engineer's Certificate may be based as aforesaid are erroneous.

Any certificate of an Accountant may be based (without further examination or investigation), insofar as it relates to or is dependent upon legal matters, upon an opinion of, or representations by, counsel, and insofar as it relates to or is dependent upon factual matters information with respect to which is in the possession of the Company and which are not subject to verification by Accountants, upon statements made by the Company in documents filed with any Governmental Authority or upon a certificate of, or representations by, an officer or officers of the Company and, insofar as it relates to or is dependent upon matters with respect to the Fair Value or fair market value of property, upon a certificate or opinion, or representations by, an Appraiser, unless, in any case, such Accountant has actual knowledge that any such statements, certificate or opinion or representations with respect to the matters upon which such certificate may be based as aforesaid are erroneous.

Any Appraiser's Certificate may be based (without further examination or investigation), insofar as it relates to or is dependent upon legal matters, upon an opinion of, or representations by, counsel, and insofar as it relates to or is dependent upon factual matters information with respect to which is in the possession of the Company and which are not subject to verification by Appraisers, upon statements made by the Company in documents filed with any Governmental Authority or upon a certificate or opinion of, or representations by, an officer or officers of the Company, unless, in any case, such Appraiser has actual knowledge that any such statements, certificate or opinion or representations with respect to the matters upon which such Appraiser's Certificate may be based as aforesaid are erroneous.

Any Opinion of Counsel may be based (without further examination or investigation), insofar as it relates to or is dependent upon factual matters information with respect to which is in the possession of the Company, upon statements made by the Company in documents filed with any Governmental Authority or upon a certificate or opinion of, or representations by, an officer or officers of the Company, and, insofar as it relates to or is dependent upon matters which are subject to verification by Accountants upon a certificate or opinion of, or representations by, an Accountant, and, insofar as it relates to or is dependent upon matters required in this Indenture to be covered by a certificate or opinion of, or representations by, an Engineer, upon the certificate or opinion of, or representations by, an Engineer and, insofar as it relates to or is dependent upon matters with respect to the Fair Value or fair market value of

property, upon a certificate or opinion, or representations by, an Appraiser, unless, in any case, such counsel has actual knowledge that any such statements, certificate or opinion or representations with respect to the matters upon which his opinion may be based as aforesaid are erroneous. In addition, any Opinion of Counsel may be based (without further examination or investigation), insofar as it relates to or is dependent upon matters covered in an Opinion of Counsel rendered by other counsel, upon such other Opinion of Counsel, unless such counsel has actual knowledge that the Opinion of Counsel rendered by such other counsel with respect to the matters upon which such Opinion of Counsel may be based as aforesaid are erroneous. Further, any Opinion of Counsel with respect to the status of title to or the sufficiency of descriptions of property, and/or the existence of Liens thereon, or the recording or filing of documents, or any similar matters, may be based (without further examination or investigation) upon (i) title insurance policies or commitments and reports, lien search results, reports or certificates and other similar documents, (ii) certificates of, or representations by, officers, employees, agents or other representatives of the Company, (iii) prior opinions of counsel, including in-house counsel, for the Company or any of its subsidiaries, or (iv) any combination of the documents referred to in (i), (ii) and (iii), unless, in any case, such counsel has actual knowledge that the document or documents with respect to the matters upon which his opinion may be based as aforesaid are erroneous. If, in order to render any Opinion of Counsel provided for herein, the signer thereof shall deem it necessary that additional facts or matters be stated in any Officer's Certificate, certificate of an Accountant or Engineer 's Certificate provided for herein, then such certificate may state all such additional facts or matters as the signer of such Opinion of Counsel may request.

(b) In any case where several matters are required to be certified by, or covered by an opinion of, any specified Person, it is not necessary that all such matters be certified by, or covered by the opinion of, only one such Person, or that they be so certified or covered by only one document, but one such Person may certify or give an opinion with respect to some matters and one or more other such Persons as to other matters, and any such Person may certify or give an opinion as to such matters in one or several documents.

(c) Where any Person is required to make, give or execute two or more applications, requests, consents, certificates, statements, opinions or other instruments under this Indenture, they may, but need not, be consolidated and form one instrument.

(d) Whenever, subsequent to the receipt by the Trustee of any Board Resolution, Officer's Certificate, Engineer 's Certificate, Net Earnings Certificate, Opinion of Counsel or other document or instrument, a clerical, typographical or other inadvertent or unintentional error or omission shall be discovered therein, a new document or instrument may be substituted therefor in corrected form with the same force and effect as if originally filed in the corrected form and, irrespective of the date or dates of the actual execution or delivery thereof, such substitute document or instrument shall be deemed to have been executed or delivered as of the date or dates required with respect to the document or instrument for which it is substituted. Anything in this Indenture to the contrary notwithstanding, if any such corrective document or instrument indicates that action has been taken by or at the request of the Company which could have been taken only if the original document or instrument had contained such error or omission, the action so taken shall not be invalidated or otherwise rendered ineffective but shall be and remain in full force and effect, except to the extent that such action was a result

of willful misconduct or bad faith. Without limiting the generality of the foregoing, any Bonds issued under the authority of such defective document or instrument shall nevertheless be the valid obligations of the Company entitled to the benefit of the Lien of this Indenture equally and ratably with all other Outstanding Bonds, except as aforesaid.

Section 1.07 Acts of Holders

.

(a) Any request, demand, authorization, direction, notice, consent, election, waiver or other action provided by this Indenture to be made, given or taken by Holders may be embodied in and evidenced by one or more instruments of substantially similar tenor signed by such Holders in person or by an agent duly appointed in writing or, alternatively, may be embodied in and evidenced by the record of Holders voting in favor thereof, either in person or by proxies duly appointed in writing, at any meeting of Holders duly called and held in accordance with the provisions of Article XV, or a combination of such instruments and any such record. Except as herein otherwise expressly provided, such action shall become effective when such instrument or instruments or record or both are delivered to the Trustee and, where it is hereby expressly required, to the Company. Such instrument or instruments and any such record (and the action embodied therein and evidenced thereby) are herein sometimes referred to as the "Act" of the Holders signing such instrument or instruments and so voting at any such meeting. Proof of execution of any such instrument or of a writing appointing any such agent, or of the holding by any Person of a Bond, shall be sufficient for any purpose of this Indenture and (subject to Section 11.01) conclusive in favor of the Trustee and the Company, if made in the manner provided in this Section. The record of any meeting of Holders shall be proved in the manner provided in Section 15.06.

Without limiting the generality of this Section, unless otherwise provided in or pursuant to this Indenture, (i) a Holder, including a Depository or its nominee that is a Holder of a Global Bond, may give, make or take, by an agent or agents duly appointed in writing, any request, demand, authorization, direction, notice, consent, election, waiver or other action provided in or pursuant to this Indenture to be given, made or taken by Holders, and a Depository or its nominee that is a Holder of a Global Bond may duly appoint in writing as its agent or agents members of, or participants in, such Depository holding interests in such Global Bond in the records of such Depository; and (ii) with respect to any Global Bond the Depository for which is The Depository Trust Company ("DTC"), any consent or other action given, made or taken by an "agent member" of DTC by electronic means in accordance with the Automated Tender Offer Procedures system or other Applicable Procedures of, and pursuant to authorization by, DTC shall be deemed to constitute the "Act" of the Holder of such Global Bond, and such Act shall be deemed to have been delivered to the Company and the Trustee upon the delivery by DTC of an "agent's message" or other notice of such consent or other action having been so given, made or taken in accordance with the Applicable Procedures of DTC.

(b) The fact and date of the execution by any Person of any such instrument or writing may be proved by the affidavit of a witness of such execution or by a certificate of a notary public or other officer authorized by law to take acknowledgments of deeds, certifying that the individual signing such instrument or writing acknowledged to him the execution thereof or may be proved in any other manner which the Trustee and the Company deem sufficient.

Where such execution is by a signer acting in a capacity other than his or her individual capacity, such certificate or affidavit shall also constitute sufficient proof of his or her authority.

(c) The ownership of and the principal amount (except as otherwise contemplated in clause (y) of the proviso to clause (a) of the definition of "Outstanding") and serial numbers of Bonds held by any Person, and the date of holding the same, shall be proved by the Bond Register.

(d) Any request, demand, authorization, direction, notice, consent, election, waiver or other Act of a Holder shall bind every future Holder of the same Bond and the Holder of every Bond issued upon the registration of transfer thereof or in exchange therefor or in lieu thereof in respect of anything done, omitted or suffered to be done by the Trustee or the Company in reliance thereon, whether or not notation of such action is made upon such Bond.

(e) Until such time as written instruments shall have been delivered to the Trustee with respect to the requisite percentage of principal amount of Bonds for the action contemplated by such instruments, any such instrument executed and delivered by or on behalf of the Holder may be revoked with respect to any or all of such Bonds by written notice by such Holder or any subsequent Holder, proven in the manner in which such instrument was proven.

(f) Bonds of any series, or any Tranche thereof, authenticated and delivered after any Act of Holders may, and shall if required by the Trustee, bear a notation in form approved by the Trustee as to any action taken by such Act of Holders. If the Company shall so determine, new Bonds of any series, or any Tranche thereof, so modified as to conform, in the opinion of the Trustee and the Company, to such action may be prepared and executed by the Company and authenticated and delivered by the Trustee in exchange for Outstanding Bonds of such series or Tranche.

(g) The Company may set any day as a record date for the purpose of determining the Holders of Outstanding Bonds of any Series entitled to give, make or take any request, demand, authorization, direction, notice, consent, election, waiver or other action provided or permitted by this Indenture to be given, made or taken by Holders of Bonds of such series; provided, however, that the Company may not set a record date for, and the provisions of this paragraph shall not apply with respect to, the giving, making or taking of any notice, declaration, request or direction referred to in the next paragraph. If any record date is set pursuant to this paragraph, the Holders of Outstanding Bonds of the relevant series on such record date, and no other Holders, shall be entitled to give, make or take the relevant action, whether or not such Holders remain Holders after such record date; provided, however, that no such action shall be effective hereunder unless given, made or taken on or prior to the applicable Expiration Date by Holders of the requisite aggregate principal amount of Outstanding Bonds of such series on such record date. Nothing in this paragraph shall be construed to prevent the Company from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be cancelled and of no effect), and nothing in this paragraph shall be construed to render ineffective any action given, made or taken by Holders of the requisite aggregate principal amount of Outstanding Bonds of the relevant series on the date such action is given, made or taken. Promptly after any record date is set pursuant to this paragraph,

the Company, at its own expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Trustee in writing and to each Holder of Bonds of the relevant series in the manner set forth in Section 1.09.

The Trustee may set any day as a record date for the purpose of determining the Holders of Outstanding Bonds of any series entitled to join in the giving, making or taking of (i) any Notice of Default, (ii) any notice of declaration of acceleration referred to in Section 10.02, if an Event of Default has occurred and is continuing and the Trustee shall not have given such notice of declaration of acceleration to the Company, (iii) any request to institute proceedings referred to in Section 10.11(b) or (iv) any direction referred to in Section 10.16, in each case with respect to Bonds of such series. If any record date is set pursuant to this paragraph, the Holders of Outstanding Bonds of such series on such record date, and no other Holders, shall be entitled to give, make or take such notice, declaration, request or direction, whether or not such Holders remain Holders after such record date; provided, however, that no such action shall be effective hereunder unless given, made or taken on or prior to the applicable Expiration Date by Holders of such series of the requisite aggregate principal amount of Outstanding Bonds on such record date. Nothing in this paragraph shall be construed to prevent the Trustee from setting a new record date for any action for which a record date has previously been set pursuant to this paragraph (whereupon the record date previously set shall automatically and with no action by any Person be cancelled and of no effect), and nothing in this paragraph shall be construed to render ineffective any action given, made or taken by Holders of the requisite aggregate principal amount of Outstanding Bonds of the relevant series on the date such action is given, made or taken. Promptly after any record date is set pursuant to this paragraph, the Trustee, at the Company's expense, shall cause notice of such record date, the proposed action by Holders and the applicable Expiration Date to be given to the Company in writing and to each Holder of Bonds of the relevant series in the manner set forth in Section 1.09.

With respect to any record date set pursuant to this Section, the party hereto which sets such record date may designate any day as the Expiration Date" and from time to time may change the Expiration Date to any earlier or later day; provided, however, that no such change shall be effective unless notice of the proposed new Expiration Date is given to the other party hereto in writing, and to each Holder of Bonds of the relevant series in the manner set forth in Section 1.09, on or prior to the existing Expiration Date. If an Expiration Date is not designated with respect to any record date set pursuant to this Section, the party hereto which set such record date shall be deemed to have initially designated the 180th day after such record date as the Expiration Date with respect thereto, subject to its right to change the Expiration Date to an earlier day as provided in this paragraph. Notwithstanding the foregoing, no Expiration Date shall be later than the 180th day after the applicable record date.

Without limiting the foregoing, a Holder entitled hereunder to give, make or take any action hereunder with regard to any particular Bond may do so, or duly appoint in writing any Person or Persons as its agent or agents to do so, with regard to all or any part of the principal amount of such Bond.

Section 1.08 Notices, Etc. to Trustee and Company

.

(a) Any request, demand, authorization, direction, notice, consent, election, waiver or Act of Holders or other document provided or permitted by this Indenture to be made, given or furnished to, or filed with, the Trustee by any Holder or by the Company, or the Company by the Trustee or by any Holder, shall be sufficient for every purpose hereunder (unless otherwise expressly provided herein) if the same shall be in writing and delivered personally to an officer or other responsible employee of the addressee, or transmitted by telecopy or other direct written electronic means, or transmitted by registered or certified mail or reputable overnight courier, charges prepaid to the applicable address set under such party's name below or to such other address as either party hereto may, from time to time designate:

If to the Trustee, to:

The Bank of New York Trust Company, N.A.
1660 West 2nd Street, Suite 830
Cleveland, Ohio 44113
Attention: Global Corporate Trust

If to the Company, to:

FirstEnergy Generation Corp.
76 South Main Street
Akron, Ohio 44308
Attention: Treasurer

(b) Any communication contemplated herein shall be deemed to have been made, given, furnished and filed if personally delivered, on the date of delivery, if transmitted by telecopy or other direct written electronic means, on the date of transmission, and if transmitted by registered or certified mail or reputable overnight courier, on the date of receipt. For purposes hereof, "electronic means" includes a writing or other communication delivered by e-mail transmission addressed to the relevant party at the e-mail address as such party may designate in writing from time to time and further includes, but is not limited to, documents and writings attached to emails in Portable Document Format (a/k/a .pdf). The initial email address for the Trustee is biagio.impala@bnymellon.com.

Section 1.09 Notice to Holders of Bonds; Waiver

.

(a) Except as otherwise expressly provided herein, where this Indenture provides for notice to Holders of any event, such notice shall be sufficiently given, and shall be deemed given, to Holders if in writing and mailed, first-class postage prepaid, to each Holder affected by such event, at the address of such Holder as it appears in the Bond Register, not later than the latest date, and not earlier than the earliest date, prescribed for the giving of such notice.

(b) In case by reason of the suspension of regular mail service or by reason of any other cause it shall be impracticable to give such notice to Holders by mail, then such notification as shall be made with the approval of the Trustee shall constitute a sufficient notification for every purpose hereunder. In any case where notice to Holders is given by mail,

neither the failure to mail such notice, nor any defect in any notice so mailed, to any particular Holder shall affect the sufficiency of such notice with respect to other Holders.

(c) Any notice required by this Indenture may be waived in writing by the Person entitled to receive such notice, either before or after the event otherwise to be specified therein, and such waiver shall be the equivalent of such notice. Waivers of notice by Holders shall be filed with the Trustee, but such filing shall not be a condition precedent to the validity of any action taken in reliance upon such waiver.

(d) Where this Indenture provides for notice of any event to a Holder of a Global Bond, such notice shall be sufficiently given if given to the Depository for such Bond (or its designee), pursuant to its Applicable Procedures, not later than the latest date (if any), and not earlier than the earliest date (if any), prescribed for the giving of such notice.

Section 1.10 Conflict with Trust Indenture Act

.

If any provision of this Indenture limits, qualifies or conflicts with any duties under any required provision of the Trust Indenture Act imposed hereon by Section 318(c) thereof, or any successor section of such Act, such required provision shall control. If any provision of this Indenture modifies or excludes any provision of the Trust Indenture Act that may be so modified or excluded, the provision of the Trust Indenture Act shall be deemed to apply to this Indenture as so modified or shall be excluded, as the case may be.

Section 1.11 Effect of Headings and Table of Contents

.

The Article and Section headings in this Indenture and the Table of Contents are for convenience only and shall not affect the construction hereof.

Section 1.12 Successors and Assigns

.

All covenants and agreements in this Indenture by the Company shall bind its successors and assigns, whether so expressed or not.

Section 1.13 Separability Clause

.

In case any provision in this Indenture or the Bonds shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

Section 1.14 Benefits of Indenture

.

Nothing in this Indenture or the Bonds, express or implied, shall give to any Person, other than the parties hereto, their successors hereunder and the Holders, any benefit or any legal or equitable right, remedy or claim under this Indenture, except as may otherwise be provided pursuant to Section 3.01 with respect to any Bonds of a particular series or under this Indenture with respect to such Bonds.

Section 1.15 Governing Law

.

This Indenture and the Bonds shall be governed by and construed in accordance with the laws of the State of Ohio, except (a) to the extent that the law of any other jurisdiction shall be mandatorily applicable, (b) to the extent that perfection and the effect of perfection of the Lien of this Indenture may be governed by the laws of states other than the State of Ohio as provided by law, and (c) that the rights, duties, obligations, privileges and immunities of the Trustee under this Indenture and the Bonds shall be governed by the laws of the State of New York, in the case of The Bank of New York Trust Company, N.A., and of the jurisdiction in which the Corporate Trust Office of the Trustee is located in all other cases.

Section 1.16 Legal Holidays

.

In any case where any Interest Payment Date, Redemption Date or Stated Maturity of any Bond shall not be a Business Day at any Place of Payment, then (notwithstanding any other provision of this Indenture or of the Bonds other than a provision in Bonds of any series, or any Tranche thereof, or in the indenture supplemental hereto which establishes the terms of such Bonds or Tranche, which specifically states that such provision shall apply in lieu of this Section), payment of interest or principal and premium, if any, need not be made at such Place of Payment on such date, but may be made on the next succeeding Business Day at such Place of Payment with the same force and effect as if made on the Interest Payment Date or Redemption Date, or at the Stated Maturity, and, if such payment is made or duly provided for on such Business Day, no interest shall accrue on the amount so payable for the period from and after such Interest Payment Date, Redemption Date or Stated Maturity, as the case may be, to such Business Day.

Section 1.17 Investment of Cash Held by Trustee

.

Any cash held by the Trustee or any Paying Agent under any provision of this Indenture shall, except as otherwise provided in Article IX, at the request of the Company evidenced by Company Order, be invested or reinvested in Investment Securities designated by the Company, and any interest on such Investment Securities shall be promptly paid over to the Company as received free and clear of the Lien of this Indenture or any Lien arising by or through the Trustee, provided, however, that following the occurrence and during the continuance of an Event of Default, the Trustee shall not pay such interest over to the Company, but shall instead hold such interest as part of the Mortgaged Property. Such Investment Securities shall be held subject to the same provisions hereof as the cash used to purchase the same, but upon a like request of the Company shall be sold, in whole or in designated part, and the proceeds of such sale shall be held subject to the same provisions hereof as the cash used to purchase the Investment Securities so sold. If such sale shall produce a net sum less than the cost of the Investment Securities so sold, the Company shall pay to the Trustee or any such Paying Agent, as the case may be, such amount in cash as, together with the net proceeds from such sale, shall equal the cost of the Investment Securities so sold, and if such sale shall produce a net sum greater than the cost of the Investment Securities so sold, the Trustee or any such Paying Agent, as the case may be, shall promptly pay over to the Company an amount in cash equal to such excess, free and clear of any Lien.

Section 1.18 Approval of Signers

.

The acceptance by the Trustee of any document, the signer of which is required by some provision hereof to be approved by the Trustee, shall be sufficient evidence of its approval of the signer within the meaning of this Indenture.

Section 1.19 No Adverse Interpretation of Other Agreements

.

This Indenture may not be used to interpret any other indenture, loan or other agreement of the Company or of any other Person. Any such indenture, loan or other agreement may not be used to interpret this Indenture.

Section 1.20 Language of Notices, Etc

.

Any request, demand, authorization, direction, notice, consent, waiver or Act required or permitted under this Indenture shall be in the English language, except that any published notice may be in an official language of the country of publication.

Section 1.21 Security Agreement; Fixture Filing

.

(a) The parties hereto intend for this Indenture to create a Lien on the Mortgaged Property in favor of the Trustee. The parties hereto acknowledge that some of the Mortgaged Property may be determined under applicable law to be personal property or fixtures. To the extent that any Mortgaged Property may be or be determined to be personal property or fixtures, the Company, as debtor, hereby grants the Trustee, as secured party, a security interest in all such Mortgaged Property, to secure payment and performance of the Bonds. This Indenture constitutes a security agreement under the Uniform Commercial Code as in effect in each jurisdiction in which the Mortgaged Property is located, as amended or recodified from time to time, covering all such Mortgaged Property.

(b) This Indenture constitutes a financing statement filed as a fixture filing under Article 9 of the Uniform Commercial Code (as in effect in the relevant jurisdiction) consisting of “goods” (as defined in such Uniform Commercial Code) which now are or later may become fixtures relating to the real property described in Exhibit A of this Indenture. For this purpose, the respective addresses of the Company, as debtor, and the Trustee, as secured party, are as set forth in the preamble of this Indenture, the Company is the record owner of the real property (except as otherwise set forth on Exhibit A), and the Company’s organizational identification number is 1187274.

ARTICLE II

BOND FORMS

Section 2.01 Forms Generally

.

(a) The definitive Bonds of each series shall be in substantially the form or forms thereof established in the indenture supplemental hereto establishing such series, or in a Board Resolution establishing such series, or in an Officer’s Certificate pursuant to a

supplemental indenture or Board Resolution, in each case with such appropriate insertions, omissions, substitutions and other variations as are required or permitted by this Indenture, and may have such letters, numbers or other marks of identification and such legends or endorsements placed thereon as may be required to comply with the rules of any securities exchange or as may, consistently herewith, be determined by the officers executing such Bonds, as evidenced by their execution of such Bonds. If the form or forms of Bonds of any series are established in a Board Resolution or in an Officer's Certificate pursuant to a supplemental indenture or a Board Resolution, such Board Resolution and Officer's Certificate, if any, shall be delivered to the Trustee at or prior to the delivery of the Company Order contemplated by clause (ii) of Section 4.01(a) for the authentication and delivery of such Bonds.

(b) Bonds of each series shall be issuable in registered form without coupons. The definitive Bonds shall be produced in such manner as shall be determined by the officers executing such Bonds, as evidenced by their execution thereof.

Section 2.02 Form of Trustee's Certificate of Authentication

.

The Trustee's certificate of authentication shall be in substantially the form set forth below:

This is one of the Bonds of the series designated therein referred to in the within-mentioned Indentu

_____

as Trustee

By: _____

Authorized Signatory

Section 2.03 Form of Legend for Global Bonds

.

Unless otherwise specified as contemplated by Section 3.01 for the Bonds evidenced thereby, every Global Bond authenticated and delivered hereunder shall bear a legend in substantially the following form:

THIS BOND IS A GLOBAL BOND WITHIN THE MEANING OF THE INDENTURE HEREINAFTER REFERRED TO AND IS REGISTERED IN THE NAME OF A DEPOSITORY OR A NOMINEE THEREOF. THIS BOND MAY NOT BE EXCHANGED IN WHOLE OR IN PART FOR A BOND REGISTERED, AND NO TRANSFER OF THIS BOND IN WHOLE OR IN PART MAY BE REGISTERED, IN THE NAME OF ANY PERSON OTHER THAN SUCH DEPOSITORY OR A NOMINEE THEREOF, EXCEPT IN THE LIMITED CIRCUMSTANCES DESCRIBED IN THE INDENTURE.

ARTICLE III

THE BONDS

Section 3.01 Amount of Bonds Unlimited; Issuable in Series

.

(a) The aggregate principal amount of Bonds which may be authenticated and delivered under this Indenture shall be unlimited.

(b) The Bonds may be issued in one or more series, each of which series may be issued in Tranches. Subject to subsection (c) of this Section, there shall be established in one or more indentures supplemental hereto, or in a Board Resolution, or in an Officer's Certificate pursuant to an indenture supplemental hereto or a Board Resolution, prior to the issuance of Bonds of any series:

(i) the title of the Bonds of such series (which title shall distinguish the Bonds of such series from Bonds of all other series);

(ii) any limit upon the aggregate principal amount of the Bonds of such series which may be authenticated and delivered under this Indenture (except for Bonds authenticated and delivered upon registration of transfer of, or in exchange for, or in lieu of, other Bonds of such series pursuant to Section 3.04, 3.05, 3.06, 5.06 or 14.06 and except for any Bonds which, pursuant to Section 3.03(e), are deemed never to have been authenticated and delivered hereunder);

(iii) the Person (without specific identification) to whom interest on the Bonds of such series, or any Tranche thereof, shall be payable on any Interest Payment Date, if other than the Person in whose name that Bond (or one or more Predecessor Bonds) is registered at the close of business on the Regular Record Date for such interest;

(iv) the date or dates on which the principal of the Bonds of such series (including any scheduled amortization payments payable prior to the final Maturity of the Bonds), or any Tranche thereof, is payable or any formulary or other method or other means by which such date or dates shall be determined, by reference to an index or other fact or event ascertainable outside this Indenture or otherwise (without regard to any provisions for redemption, prepayment, acceleration, purchase or extension);

(v) the rate or rates at which the Bonds of such series, or any Tranche thereof, shall bear interest, if any (including the rate or rates at which overdue principal, premium or interest shall bear interest, if any), or any method or methods by which such rate or rates shall be determined, the date or dates from which such interest shall accrue, the Interest Payment Dates on which such interest shall be payable and the Regular Record Date, if any, for the interest payable on the Bonds on any Interest Payment Date; and the basis of computation of interest, if other than as provided in Section 3.10;

(vi) the place or places where or manner or method by which (A) the principal of (including installments of principal, if any, payable prior to the final Maturity of the Bonds) and premium, if any, and interest, if any, on the Bonds of such series, or any Tranche thereof, shall be payable upon presentation thereof (and, if payments of principal are to be paid prior to the final Maturity thereof, the method, if any, of evidencing the payment of such principal amounts), (B) Bonds of such series, or any Tranche thereof, may be surrendered for registration of transfer, (C) Bonds of such series, or any Tranche thereof; may be surrendered for exchange, and (D) notices and demands to or upon the Company in respect of the Bonds of such series, or any Tranche thereof, and this Indenture may be served;

(vii) the period or periods within which, the price or prices at which and the terms and conditions upon which the Bonds of such series, or any Tranche thereof, may be redeemed, in whole or in part, at the option of the Company and any notice to be given in connection therewith (if other than as provided in Section 5.04);

(viii) the obligation, if any, of the Company to redeem or purchase the Bonds of such series, or any Tranche thereof, pursuant to any sinking fund or analogous provisions or at the option of a Holder thereof and the period or periods within which, the price or prices at which and the terms and conditions upon which such Bonds shall be redeemed or purchased, in whole or in part, pursuant to such obligation;

(ix) the denominations in which Bonds of such series, or any Tranche thereof, shall be issuable if other than denominations of $1,000 and any integral multiple thereof;

(x) the currency or currencies, including composite currencies, in which payment of the principal of and premium, if any, and interest, if any, on the Bonds of such series, or any Tranche thereof, shall be payable (if other than in Dollars) and the manner of determining the equivalent thereof in Dollars for any purpose, including for the purposes of making payment in the currency of Dollars and applying the definition of “Outstanding” in Section 1.01; provided, however, that, unless otherwise expressly provided herein, for purposes of calculations under this Indenture (including calculations of Annual Interest Requirements contemplated by Section 1.03 and calculations of principal amount under Article IV), any amounts denominated in a currency other than Dollars or in a composite currency shall be converted to Dollar equivalents by calculating the amount of Dollars which could have been purchased by the amount of such other currency based (A) on the average of the mean of the buying and selling spot rates quoted by three banks which are members of the New York Clearing House Association selected by the Company in effect at 11:00 A.M. (New York time) in The City of New York on the fifth Business Day preceding the date of such calculation, or (B) if on such fifth Business Day it shall not be possible or practical to obtain such quotations from such three banks, on such other quotations or alternative methods of determination as shall be selected by an

Authorized Executive Officer and which shall be reasonably acceptable to the Trustee;

(xi) if the principal of or premium, if any, or interest, if any, on the Bonds of such series, or any Tranche thereof, are to be payable, at the election of the Company or a Holder thereof, in a currency or currencies, including composite currencies, other than that in which the Bonds are stated to be payable, the currency or currencies, including composite currencies, in which the principal of or any premium or interest on such Bonds as to which such election is made shall be payable, the period or periods within which, and the terms and conditions upon which, such election may be made and the amount so payable (or the manner in which such amount shall be determined);

(xii) if the principal of or premium, if any, or interest, if any, on the Bonds of such series, or any Tranche thereof, are to be payable, or are to be payable at the election of the Company or a Holder thereof, in securities or other property, the type and amount of such securities or other property, or the method by which such amount shall be determined, and the period or periods within which, and the terms and conditions upon which, any such election may be made; provided, however, that, notwithstanding any provision of this Indenture to the contrary, for purposes of calculations under this Indenture (including without limitation calculations under Article IV), any such election shall be disregarded;

(xiii) if the amount of payments of principal of or premium, if any, or interest, if any, on the Bonds of such series, or any Tranche thereof, may be determined with reference to an index, formula or other method or other fact or event ascertainable outside of this Indenture, the manner in which such amounts shall be determined;

(xiv) if other than the principal amount thereof, the portion of the principal amount of Bonds of such series, or any Tranche thereof, which shall be payable upon declaration of acceleration of the Maturity thereof pursuant to Section 10.02(a);

(xv) if the principal amount payable at the Stated Maturity of any Bonds of such series, or any Tranche thereof, will not be determinable as of any one or more dates prior to the Stated Maturity, the amount which shall be deemed to be the principal amount of such Bond as of any such date for any purpose thereunder or hereunder, including the principal amount thereof which shall be due and payable upon any Maturity other than the Stated Maturity or which shall be deemed to be Outstanding as of any date prior to the Stated Maturity (or, in any such case, the manner in which such amount deemed to be the principal amount shall be determined);

(xvi) the terms, if any, pursuant to which the Bonds of such series, or Tranche thereof, may be converted into or exchanged for shares of capital stock or other securities of the Company or any other Person;

(xvii) the obligations or instruments, if any, which shall be considered Eligible Obligations in respect of the Bonds of such series, or any Tranche thereof, denominated in a currency other than Dollars or in a composite currency, and any additional or alternative provisions for the reinstatement of the Company's indebtedness in respect of such Bonds after the satisfaction and discharge thereof as provided in Section 9.01;

(xviii) if a service charge will be made for the registration of transfer or exchange of Bonds of such series, or any Tranche thereof, the amount or terms thereof;

(xix) any exceptions to Section 1.16, or variation in the definition "Business Day", with respect to the Bonds of such series, or any Tranche thereof;

(xx) the terms of any sinking, improvement, maintenance, replacement or analogous fund for any series;

(xxi) if applicable, that any Bonds of such series, or any Tranche thereof, shall be issuable in whole or in part in the form of one or more Global Bonds and, in such case, (A) the respective Depositories for such Global Bonds, (B) the form of any legend or legends which shall be borne by any such Global Bond in addition to or in lieu of that set forth in Section 2.03, (C) any addition to, elimination of or other change in the circumstances set forth in Clause (2) of Section 3.05(h) in which any such Global Bond may be exchanged in whole or in part for Bonds registered, and any transfer of such Global Bond in whole or in part may be registered, in the name or names of Persons other than the Depository for such Global Bond or a nominee thereof, (D) any limitations on the rights of the Holder or Holders thereof to transfer or exchange such Bonds or to obtain the registration of transfer thereof, (E) any limitations on the rights of the Holder or Holders thereof to obtain certificates therefor, (F) any other provisions governing exchanges or transfers of such Global Bonds, and (G) any and all other matter incidental to the issuance of such Bonds in global form;

(xxii) any addition to, elimination of or other change in the covenants set forth in Article VI which applies to Bonds of such series, or any Tranche thereof;

(xxiii) any provisions necessary to permit or facilitate the issuance, payment or conversion of any Bonds of such series, or any Tranche thereof, that may be converted into securities or other property other than Bonds of the same series and Tranche and of like tenor, whether in addition to, or in lieu of, any payment of principal or other amount and whether at the option of the Company or otherwise;

(xxiv) if applicable, that Persons other than those specified in Section 1.14 shall have such benefits, rights, remedies and claims with respect to any Bonds of such series, or any Tranche thereof, or under this Indenture with respect to such Bonds, as and to the extent provided for such Bonds; and

(xxv) any other terms of the Bonds of such series, or any Tranche thereof, not inconsistent with the provisions of this Indenture.

(c) With respect to Bonds of a series subject to a Periodic Offering, the indenture supplemental hereto or the Board Resolution, or Officer's Certificate pursuant to an indenture supplemental hereto or Board Resolution, as the case may be, which establishes such series may provide general terms or parameters for Bonds of such series and provide either that the specific terms of particular Bonds of such series shall be specified in a Company Order or that such terms shall be determined by the Company or its agent in accordance with a Company Order as contemplated by clause (ii) of Section 4.01(a).

(d) All Bonds of any one series shall be substantially identical except as to denomination and except as may otherwise be provided in or pursuant to the indenture supplemental hereto or the Board Resolution, or Officer's Certificate pursuant to an indenture supplemental hereto or Board Resolution, as the case may be, which establishes such series.

Section 3.02 Denominations

.

Unless otherwise provided as contemplated by Section 3.01 with respect to any series of Bonds, the Bonds of each series shall be issuable in denominations of $1,000 and any integral multiple thereof.

Section 3.03 Execution, Dating, Certificate of Authentication

.

(a) The Bonds shall be executed on behalf of the Company by an Authorized Executive Officer, and may have the corporate seal of the Company affixed thereto or reproduced thereon and attested by any other Authorized Executive Officer. The signature of any or all of these officers on the Bonds may be manual or facsimile.

(b) Bonds bearing the manual or facsimile signatures of individuals who were at any time the proper officers of the Company shall bind the Company, notwithstanding that such individuals or any of them have ceased to hold such offices prior to the authentication and delivery of such Bonds or did not hold such offices at the date of such Bonds.

(c) Each Bond shall be dated the date of its authentication.

(d) If the form or terms of the Bonds of any series have been established by or pursuant to a Board Resolution as permitted by Sections 2.01 or 3.01, the Trustee shall not be required to authenticate such Bonds if the issuance of such Bonds pursuant to this Indenture will affect the Trustee's own rights, duties or immunities under the Bonds and this Indenture or otherwise in a manner which is not reasonably acceptable to the Trustee.

(e) No Bond shall be entitled to any benefit under this Indenture or be valid or obligatory for any purpose unless there appears on such Bond a certificate of authentication substantially in the form provided for herein executed by the Trustee or an Authenticating Agent by manual signature, and such certificate upon any Bond shall be conclusive evidence, and the only evidence, that such Bond has been duly authenticated and delivered hereunder and is entitled to the benefits of this Indenture. Notwithstanding the foregoing, if any Bond shall have

been authenticated and delivered hereunder to the Company, or any Person acting on its behalf, but shall never have been issued and sold by the Company, and the Company shall deliver such Bond to the Bond Registrar for cancellation or shall cancel such Bond and deliver evidence of such cancellation to the Trustee, together with a written statement (which need not comply with Section 1.05 and need not be accompanied by an Opinion of Counsel) stating that such Bond has never been issued and sold by the Company, for all purposes of this Indenture such Bond shall be deemed never to have been authenticated and delivered hereunder and shall never be entitled to the benefits hereof.

Section 3.04 Temporary Bonds

.

(a) Pending the preparation of definitive Bonds of any series, the Company may execute, and upon Company Order the Trustee shall authenticate and deliver, temporary Bonds which are printed, lithographed, typewritten, mimeographed, photocopied or otherwise produced, in any authorized denomination, substantially of the tenor of the definitive Bonds in lieu of which they are issued, with such appropriate insertions, omissions, substitutions and other variations as the officers executing such Bonds may determine, as evidenced by their execution of such Bonds, provided, however, that temporary Bonds need not recite specific redemption, sinking fund, conversion or exchange provisions.

(b) After the preparation of definitive Bonds of such series, the temporary Bonds all of such series shall be exchangeable for definitive Bonds of such series upon surrender of the temporary Bonds of such series at the office or agency of the Company maintained pursuant to Section 6.02 in a Place of Payment for such series, without charge to the Holder. Upon surrender for cancellation of any one or more temporary Bonds of any series, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor definitive Bonds of the same series, of authorized denominations and of like tenor and aggregate principal amount.

(c) Until exchanged in full as hereinabove provided, the temporary Bonds shallin all respects be entitled to the same benefits under this Indenture as definitive Bonds of the same series and Tranche and of like tenor authenticated and delivered hereunder.

Section 3.05 Registration, Registration of Transfer and Exchange

.

(a) The Company shall cause to be kept in each office designated pursuant to Section 6.02 a register (all registers kept in accordance with this Section being collectively referred to herein as the "Bond Register") in which, subject to such reasonable regulations as it may prescribe, the Company shall provide for the registration of Bonds and the registration of transfer thereof. All Persons maintaining a Bond Register are referred to herein collectively as the "Bond Registrar." Anything herein to the contrary notwithstanding, the Company may designate one or more of its offices as an office in which the Bond Register shall be maintained, in which event the Company shall act as Bond Registrar. The Bond Register shall be in written form or in any other form capable of being converted into written form within a reasonable time. The Bond Register shall be open for inspection by the Trustee and the Company at all reasonable times. The Trustee, if not a Bond Registrar, shall be entitled to receive and shall be fully protected in relying upon a certificate of a Bond Registrar as to the names and addresses of the

holders of Bonds and the principal amounts and numbers of such Bonds. Anything herein to the contrary notwithstanding, the Company hereby appoints the Trustee as initial Bond Registrar.

(b) Upon surrender for registration of transfer of any Bond at the office or agency of the Company maintained pursuant to Section 6.02 in a Place of Payment for such series, the Company shall execute, and the Trustee shall authenticate and deliver, in the name of the designated transferee or transferees, one or more new Bonds of the same series and Tranche, of authorized denominations and of like tenor and aggregate principal amount.

(c) At the option of the Holder, any Bond may be exchanged for one or more new Bonds of the same series and Tranche, of authorized denominations and of like tenor and aggregate principal amount, upon surrender of the Bonds to be exchanged at any such office or agency. Whenever any Bonds are so surrendered for exchange, the Company shall execute, and the Trustee shall authenticate and deliver, the Bonds which the Holder making the exchange is entitled to receive.

(d) All Bonds issued upon any registration of transfer or exchange of Bonds shall be the valid obligations of the Company, evidencing the same debt, and entitled to the same benefits under this Indenture, as the Bonds surrendered upon such registration of transfer or exchange.

(e) Every Bond presented or surrendered for registration of transfer or for exchange shall (if so required by the Company or the Trustee or any transfer agent) be duly endorsed or shall be accompanied by a written instrument of transfer in form satisfactory to the Company and the Bond Registrar or any transfer agent duly executed by the Holder thereof or his attorney duly authorized in writing.

(f) Unless otherwise provided in the indenture supplemental hereto, a Board Resolution or Officer's Certificate pursuant to a supplemental indenture or a Board Resolution with respect to Bonds of any series, or any Tranche thereof, no service charge shall be made for any registration of transfer or exchange of Bonds, but the Company may require payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in connection with any registration of transfer or exchange of Bonds, other than exchanges pursuant to Section 3.04, 5.06 or 14.06 not involving any transfer.

(g) The Company shall not be required to issue and the Bond Registrar shall not be required to register the transfer of or to exchange (a) Bonds of any series during a period of fifteen (15) days immediately preceding the date notice is given identifying the serial numbers of the Bonds of such series called for redemption, or (b) any Bond so selected for redemption in whole or in part, except the unredeemed portion of any Bond being redeemed in part.

(h) The provisions of Clauses (1), (2), (3) and (4) below shall apply only to Global Bonds:

(1) Each Global Bond authenticated under this Indenture shall be registered in the name of the Depository designated for such Global Bond or a nominee thereof and delivered to such Depository or a nominee thereof or custodian therefor, and each such Global Bond shall constitute a single Bond for all purposes of this Indenture.

(2) Notwithstanding any other provision in this Indenture, and subject to such applicable provisions, if any, as may be specified as contemplated by Section 3.01, no Global Bond may be exchanged in whole or in part for Bonds registered, and no transfer of a Global Bond in whole or in part may be registered, in the name of any Person other than the Depository for such Global Bond or a nominee thereof unless (A) such Depository has notified the Company that it (i) is unwilling or unable to continue as Depository for such Global Bond or (ii) has ceased to be a clearing agency registered under the Exchange Act, (B) there shall have occurred and be continuing an Event of Default or (C) the Company has executed and delivered to the Trustee a Company Order stating that such Global Bond shall be exchanged in whole for Bonds that are not Global Bonds (in which case such exchange shall promptly be effected by the Trustee). If the Company receives a notice of the kind specified in Clause (A) above or has delivered a Company Order of the kind specified in Clause (C) above, the Company may, in its sole discretion, designate a successor Depository for such Global Bond within sixty (60) days after receiving such notice or delivery of such order, as the case may be. If the Company designates a successor Depository as aforesaid, such Global Bond shall promptly be exchanged in whole for one or more other Global Bonds registered in the name of the successor Depository, whereupon such designated successor shall be the Depository for such successor Global Bond or Global Bonds and the provisions of Clauses (1), (2), (3) and (4) of this Section shall continue to apply thereto.

(3) Subject to Clause (2) above, any exchange of a Global Bond for other Bonds may be made in whole or in part, and all Bonds issued in exchange for a Global Bond or any portion thereof shall be registered in such names as the Depository for such Global Bond shall direct.

(4) Every Bond authenticated and delivered upon registration of transfer of, or in exchange for or in lieu of, a Global Bond or any portion thereof, whether pursuant to this Section, Section 3.04, 3.05, 3.06, 5.06 or 14.06 or otherwise, shall be authenticated and delivered in the form of, and shall be, a Global Bond, unless such Bond is registered in the name of a Person other than the Depository for such Global Bond or a nominee thereof.

Section 3.06 Mutilated, Destroyed, Lost and Wrongfully Taken Bonds

.

(a) If any mutilated Bond is surrendered to the Trustee, the Company shall execute and the Trustee shall authenticate and deliver in exchange therefor a new Bond of the same series, and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

(b) If both (i) there shall be delivered to the Company and the Trustee (A) a claim by a Holder as to the destruction, loss or wrongful taking of any Bond of such Holder and a request thereby for a new replacement Bond, and (B) such indemnity bond as may be required by them to save each of them and any agent of either of them harmless and (ii) such other reasonable requirements as may be imposed by the Company as permitted by Section 8-405 of the Uniform Commercial Code have been satisfied, then, in the absence of notice to the Company or the Trustee that such Bond has been acquired by a “protected purchaser” within the

meaning of Section 8-303 of the Uniform Commercial Code, the Company shall execute and the Trustee shall authenticate and deliver, in lieu of any such destroyed, lost or wrongfully taken Bond, a new Bond of the same series and Tranche, and of like tenor and principal amount and bearing a number not contemporaneously outstanding.

(c) Notwithstanding the foregoing, in case any such mutilated, destroyed, lost or wrongfully taken Bond has become or is about to become due and payable, the Company in its discretion may, instead of issuing a new Bond, pay such Bond.

(d) Upon the issuance of any new Bond under this Section, the Company may require the payment of a sum sufficient to cover any tax or other governmental charge that may be imposed in relation thereto and any other reasonable expenses (including the fees and expenses of the Trustee) connected therewith.

(e) Every new Bond of any series issued pursuant to this Section in lieu of any destroyed, lost or wrongfully taken Bond shall constitute an original additional contractual obligation of the Company, whether or not the destroyed, lost or wrongfully taken Bond shall be at any time enforceable by anyone, and any such new Bond shall be entitled to all the benefits of this Indenture equally and proportionately with any and all other Bonds of such series duly issued hereunder.

(f) The provisions of this Section are exclusive and shall preclude (to the extent lawful) all other rights and remedies with respect to the replacement or payment of mutilated, destroyed, lost or wrongfully taken Bonds.

Section 3.07 Payment of Interest; Interest Rights Preserved

.

(a) Unless otherwise provided as contemplated by Section 3.01 with respect to the Bonds of any series, or any Tranche thereof, interest on any Bond which is payable, and is punctually paid or duly provided for, on any Interest Payment Date shall be paid to the Person in whose name that Bond (or one or more Predecessor Bonds) is registered at the close of business on the Regular Record Date for such interest.

(b) Any interest on any Bond of any series which is payable, but is not punctually paid or duly provided for, on any Interest Payment Date (herein called “Defaulted Interest”) shall forthwith cease to be payable to the Holder on the related Regular Record Date by virtue of having been such Holder, and such Defaulted Interest may be paid by the Company, at its election in each case, as provided in clause (i) or (ii) below.

(i) The Company may elect to make payment of any Defaulted Interest to the Persons in whose names the Bonds of such series (or their respective Predecessor Bonds) are registered at the close of business on a Special Record Date for the payment of such Defaulted Interest, which shall be fixed in the following manner. The Company shall notify the Trustee in writing of the amount of Defaulted Interest proposed to be paid on each Bond of such series and the date of the proposed payment, and at the same time the Company shall deposit with the Trustee an amount of money equal to the aggregate amount proposed to be paid in respect of such Defaulted Interest or shall make arrangements

satisfactory to the Trustee for such deposit prior to the date of the proposed payment, such money when deposited to be held in trust for the benefit of the Persons entitled to such Defaulted Interest as provided in this clause (i). Thereupon the Trustee shall fix a Special Record Date for the payment of such Defaulted Interest which shall be not more than fifteen (15) days and not less than ten (10) days prior to the date of the proposed payment and not less than ten (10) days after the receipt by the Trustee of the notice of the proposed payment. The Trustee shall promptly notify the Company of such Special Record Date and, in the name and at the expense of the Company, shall promptly cause notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor to be mailed, first-class postage prepaid, to each Holder of Bonds of such series at the address of such Holder as it appears in the Bond Register, not less than ten (10) days prior to such Special Record Date. Notice of the proposed payment of such Defaulted Interest and the Special Record Date therefor having been so mailed, such Defaulted Interest shall be paid to the Persons in whose names the Bonds of such series (or their respective Predecessor Bonds) are registered at the close of business on such Special Record Date and shall no longer be payable pursuant to the following clause (ii).

(ii) The Company may make payment of any Defaulted Interest on the Bonds of any series in any other lawful manner not inconsistent with the requirements of any securities exchange on which such Bonds may be listed, and upon such notice as may be required by such exchange, if, after notice is given by the Company to the Trustee of the proposed payment pursuant to this clause (ii), such manner of payment shall be deemed practicable by the Trustee.

(c) Subject to the foregoing provisions of this Section and Section 3.05, each Bond delivered under this Indenture upon registration of, transfer of, or in exchange for, or in lieu of, any other Bond shall carry the rights to interest accrued and unpaid, and to accrue, which were carried by such other Bond.

(d) Except as may otherwise be provided in this Section 3.07 or as contemplated in Section 3.01 with respect to any Bonds of a series, the Person to whom interest shall be payable on any Bond that first becomes payable on a day that is not an Interest Payment Date shall be the Holder of such Bond on the day such interest is paid.

Section 3.08 Persons Deemed Owners

.

The Company, the Trustee and any agent of the Company or the Trustee may treat the Person in whose name any Bond, issued in registered form without coupons, is registered as the absolute owner of such Bond for the purpose of receiving payment of principal of and premium, if any, and (subject to Sections 3.05 and 3.07) interest, if any, on such Bond and for all other purposes whatsoever, whether or not such Bond be overdue, and neither the Company, the Trustee nor any agent of the Company or the Trustee shall be affected by notice to the contrary.

Section 3.09 Cancellation by Bond Registrar

.

All Bonds surrendered for payment, redemption, registration of transfer or exchange, or upon purchase or other acquisition by or on behalf of the Company, shall, if surrendered to any Person other than the Bond Registrar, be delivered to the Bond Registrar and, if not theretofore canceled, shall be promptly canceled by the Bond Registrar. The Company may at any time deliver to the Bond Registrar for cancellation any Bonds previously authenticated and delivered hereunder which the Company may have acquired in any manner whatsoever or which the Company shall not have issue and sold, and all Bonds so delivered shall be promptly canceled by the Bond Registrar. No Bonds shall be authenticated in lieu of or in exchange for any Bonds canceled as provided in this Section, except as expressly permitted by this Indenture. All canceled Bonds held by the Bond Registrar shall be disposed of in accordance with a Company Order and the Bond Registrar shall promptly deliver a certificate of disposition to the Company unless, by a Company Order, the Company shall direct that canceled Bonds be returned to it. The Bond Registrar shall promptly deliver evidence of any cancellation of a Bond in accordance with this Section to the Trustee and the Company.

Section 3.10 Computation of Interest

.

Except as otherwise specified as contemplated by Section 3.01 for Bonds of any series, or any Tranche thereof, interest (if any) on the Bonds of each series shall be computed on the basis of a 360-day year consisting of twelve 30-day months.

Section 3.11 Payment to Be in Proper Currency

.

In the case of any Bonds denominated in any currency other than Dollars or in a composite currency (the “Required Currency”), except as otherwise provided therein, the obligation of the Company to make any payment of the principal thereof, or the premium, if any, or interest, if any, thereon, shall not be discharged or satisfied by any tender by the Company, or recovery by the Trustee, in any currency other than the Required Currency, except to the extent that such tender or recovery shall result in the Trustee timely holding the full amount of the Required Currency then due and payable. If any such tender or recovery is in a currency other than the Required Currency, the Trustee may take such actions as it considers appropriate to exchange such currency for the Required Currency. The costs and risks of any such exchange, including without limitation the risks of delay and exchange rate fluctuation, shall be borne by the Company, the Company shall remain fully liable for any shortfall or delinquency in the full amount of Required Currency then due and payable, and in no circumstances shall the Trustee be liable therefor except in the case of its negligence or willful misconduct. The Company hereby waives any defense of payment based upon any such tender or recovery which is not in the Required Currency, or which, when exchanged for the Required Currency by the Trustee, is less than the full amount of Required Currency then due and payable.

Section 3.12 CUSIP and ISIN Numbers

.

The Company in issuing the Bonds may use CUSIP, ISIN or other similar numbers (if then generally in use), and, if so, the Trustee shall use CUSIP, ISIN or other similar numbers in notices of redemption or other notices in respect of the Bonds as a convenience to

Holders in accordance with Section 5.04(b)(viii); provided, however, that any such notice may state that no representation is made as to the correctness of such CUSIP, ISIN or other similar numbers either as printed on the Bonds or as contained in any notice and that reliance may be placed only on the other identification numbers printed on the Bonds, and any such redemption or other action or event as to which notice is given shall not be affected by any defect in or omission of such CUSIP, ISIN or other similar numbers.

ARTICLE IV

ISSUANCE OF BONDS

Section 4.01 General

.

(a) Subject to the provisions of Section 4.02, 4.03, 4.04 or 4.05, whichever may be applicable, the Trustee shall authenticate and deliver Bonds of a series, for original issue, at one time or from time to time in accordance with the Company Order referred to below, upon receipt by the Trustee of:

(i) if the terms of such series are established in an indenture supplemental hereto or in a Board Resolution, or in an Officer's Certificate pursuant to an indenture supplemental hereto or Board Resolution, such indenture supplemental hereto or Board Resolution, or such Officer's Certificate and the related indenture supplemental hereto or Board Resolution;

(ii) a Company Order requesting the authentication and delivery of such Bonds and, to the extent that the terms of such Bonds shall not have been established in an indenture supplemental hereto which established such series, in a Board Resolution or in an Officer's Certificate pursuant to an indenture supplemental hereto or Board Resolution, all as contemplated by Section 3.01, either establishing such terms or, in the case of Bonds of a series subject to a Periodic Offering, specifying procedures, acceptable to the Trustee, by which such terms are to be established (which procedures may provide for authentication and delivery pursuant to oral or electronic instructions from the Company or any agent or agents thereof, which oral instructions are to be promptly confirmed electronically or in writing);

(iii) the Bonds of such series or Tranche, executed on behalf of the Company as provided herein;

(iv) a Net Earnings Certificate showing the Adjusted Net Earnings of the Company for the period therein specified to have been not less than an amount equal to two (2) times the Annual Interest Requirements therein specified, all in accordance with the provisions of Section 1.03; provided, however, that the Trustee shall not be entitled to receive a Net Earnings Certificate hereunder if the Bonds of such series are to have no Stated Interest Rate prior to Maturity; and provided, further, that, with respect to Bonds of a series subject to a Periodic Offering, other than Bonds theretofore authenticated and delivered, (A) it shall be

assumed in the Net Earnings Certificate delivered in connection with the authentication and delivery of Bonds of such series that none of the Bonds of such series not yet authenticated and delivered shall have a Stated Interest Rate in excess of a maximum rate to be stated therein, and thereafter Bonds of such series which would have a Stated Interest Rate at the time of the initial authentication and delivery thereof in excess of such maximum rate shall not be authenticated and delivered under the authority of such Net Earnings Certificate but instead shall be authenticated and delivered only under the authority of a new Net Earnings Certificate which complies with the requirements of this clause (iv), including the proviso relating to Bonds of a series subject to a Periodic Offering, and (B) so long as the Stated Interest Rate that Bonds of a series subject to a Periodic Offering bear at the time of the initial authentication and delivery thereof does not exceed the maximum rate assumed in the most recent Net Earnings Certificate delivered with respect to the Bonds of such series, the Trustee shall not be entitled to receive a new Net Earnings Certificate at the time of any subsequent authentication and delivery of the Bonds of such series (unless such Bonds are authenticated and delivered on or after the date which is two years after the most recent Net Earnings Certificate with respect to such series was delivered pursuant to this clause (iv), in which case this subclause (B) shall not apply);

(v) an Opinion of Counsel to the effect that:

(A) the forms of such Bonds have been duly authorized by the Company and have been established in conformity with the provisions of this Indenture;

(B) the terms of such Bonds have been duly authorized by the Company and have been established in conformity with the provisions of this Indenture; and

(C) such Bonds, when authenticated and delivered by the Trustee and issued and delivered by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will have been duly issued under this Indenture and will constitute valid and legally binding obligations of the Company, entitled to the benefits provided by this Indenture, and enforceable in accordance with their terms, subject to the Customary Exceptions;

provided, however, that, with respect to Bonds of a series subject to a Periodic Offering, the Trustee shall be entitled to receive such Opinion of Counsel only once at or prior to the time of the first authentication and delivery of Bonds of such series and that the opinions described in subclauses (B) and (C) of clause (v) above may state, respectively:

(1) that, when the terms of such Bonds shall have been established pursuant to a Company Order or Orders or pursuant to such procedures as may be specified from time to time by a Company Order or

Orders, all as contemplated by and in accordance with the indenture supplemental hereto delivered pursuant to clause (i) above, such terms will have been duly authorized by the Company and will have been established in conformity with the provisions of this Indenture; and

(2) that such Bonds, when authenticated and delivered by the Trustee in accordance with this Indenture and the Company Order or Orders or the specified procedures referred to in subclause (1) above and issued and delivered by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will have been duly issued under this Indenture and will constitute valid and legally binding obligations of the Company, entitled to the benefits provided by this Indenture, and enforceable in accordance with their terms, subject to the Customary Exceptions;

(vi) an Officer's Certificate to the effect that, to the knowledge of the signer, no Event of Default, or event which with lapse of time would constitute an Event of Default, has occurred and is continuing; provided, however, that with respect to Bonds of a series subject to a Periodic Offering, either (A) such an Officer's Certificate shall be delivered at the time of the authentication and delivery of each Bond of such series, or (B) the Officer's Certificate delivered at the time of the first authentication and delivery of the Bonds of such series shall state that the statements therein shall be deemed to be made at the time of each subsequent authentication and delivery of Bonds of such series; and

(vii) such other Opinions of Counsel, certificates and other documents as may be required under Section 4.02, 4.03, 4.04 or 4.05, whichever may be applicable to the authentication and delivery of the Bonds of such series.

(b) With respect to Bonds of a series subject to a Periodic Offering, the Trustee may conclusively rely, as to the authorization by the Company of any of such Bonds, the forms and terms thereof, the legality, validity, binding effect and enforceability thereof and the compliance of the authentication and delivery thereof with the terms and conditions of this Indenture, upon the Opinion or Opinions of Counsel and the certificates and other documents delivered pursuant to this Article IV at or prior to the time of the first authentication and delivery of Bonds of such series until any of such opinions, certificates or other documents have been superseded or revoked or expire by their terms.

(c) In connection with the authentication and delivery of Bonds of a series subject to a Periodic Offering, the Trustee shall be entitled to assume that the Company's instructions to authenticate and deliver such Bonds do not violate any laws with respect to, or any rules, regulations or orders of, any governmental agency or commission having jurisdiction over the Company.

(d) Upon the receipt by the Trustee of any Board Resolution or Officer's Certificate pursuant to clause (i) of Section 4.01(a), such Board Resolution or Officer's Certificate shall be deemed to be a "supplemental indenture" for purposes of clause (i) of

Section 6.08(a) and an "indenture supplemental to this Indenture" for purposes of clause (ii) of said Section 6.08(a).

Section 4.02 Issuance of Bonds on the Basis of Pledged Bonds

.

(a) Bonds of any one or more series may be authenticated and delivered upon the basis of, and in an aggregate principal amount not exceeding, the aggregate principal amount of Unbonded Class "A" Bonds issued and delivered to the Trustee for such purpose.

(b) No Bonds of any series shall be authenticated and delivered by the Trustee upon the basis of the issuance and delivery to the Trustee of Class "A" Bonds until the Trustee shall have received:

(i) Class "A" Bonds (A) maturing on such dates and in such principal amounts that, at each Stated Maturity of the Bonds of such series (or the Tranche thereof then to be authenticated and delivered), there shall mature Class "A" Bonds equal in principal amount to the Bonds of such series or Tranche then to mature, and (B) containing, in addition to any mandatory redemption provisions applicable to all Class "A" Bonds Outstanding under the related Class "A" Mortgage, mandatory redemption provisions correlative to the provisions, if any, for the mandatory redemption (pursuant to a sinking fund or otherwise) of the Bonds of such series or Tranche or for the redemption thereof at the option of the Holder; it being expressly understood that such Class "A" Bonds (1) may, but need not, bear interest, any such interest to be payable at the same times as interest on the Bonds of such series or Tranche, (2) may, but need not, contain provisions for the redemption thereof at the option of the Company, any such redemption to be made at a redemption price or prices not less than the principal amount thereof, and (3) shall be held by the Trustee in accordance with Article VII;

(ii) the documents with respect to the Bonds of such series specified in Section 4.01provided, however, that no Net Earnings Certificate shall be required to be delivered if there shall be delivered an Officer's Certificate to the effect that such Class "A" Bonds have been authenticated and delivered under the related Class "A" Mortgage on the basis of retired Class "A" Bonds;

(iii) an Opinion of Counsel to the effect that:

(A) the forms of such Class "A" Bonds have been duly authorized by the Company and have been established in conformity with the provisions of the related Class "A" Mortgage;

(B) the terms of such Class "A" Bonds have been duly authorized by the Company and have been established in conformity with the provisions of the related Class "A" Mortgage; and

(C) such Class "A" Bonds have been duly issued under the related Class "A" Mortgage and constitute valid and legally binding

obligations of the Company, entitled to the benefits provided by such Class “A” Mortgage, and enforceable in accordance with their terms, subject to the Customary Exceptions;

provided, however, that, with respect to Bonds of a series subject to a Periodic Offering, the Trustee shall be entitled to receive such Opinion of Counsel only once at or prior to the time of the first authentication and delivery of Bonds of such series and that the opinions described in subclauses (B) and (C) of clause (iii) above may state, respectively:

(1) that, when the terms of such Class “A” Bonds shall have been established in accordance with the instrument or instruments creating the series of which such Class “A” Bonds are a part, such terms will have been duly authorized by the Company and will have been established in conformity with the provisions of the related Class “A” Mortgage; and

(2) that such Class “A” Bonds, when authenticated and delivered by the trustee under the related Class “A” Mortgage in accordance with such instrument or instruments and issued and delivered by the Company in the manner and subject to any conditions specified in such Opinion of Counsel, will have been duly issued under such Class “A” Mortgage, and will constitute valid and legally binding obligations of the Company, entitled to the benefits provided by such Class “A” Mortgage, and enforceable in accordance with their terms, subject to the Customary Exceptions; and

(iv) an Officer’s Certificate stating that no part of the principal amount of the Class “A” Bonds upon the basis of which the Bonds are to be authenticated and delivered has theretofore been Bonded.

Section 4.03 Issuance of Bonds on the Basis of Property Additions

.

(a) Bonds of any one or more series may be authenticated and delivered upon the basis of Property Additions which do not constitute Bonded Property Additions in a principal amount not exceeding 75% of the balance of the Cost or of the Fair Value (whichever shall be less) of such Unbonded Property Additions to the Company after making any deductions pursuant to Section 1.04(b).

(b) No Bonds of any series shall be authenticated and delivered by the Trustee upon the basis of Property Additions until the Trustee shall have received:

(i) the documents with respect to the Bonds of such series specified in Section 4.01;

(ii) an Engineer's Certificate dated as of a date not more than ninety (90) days prior to the date of the Company Order requesting the authentication and delivery of such Bonds:

(A) stating the amount, as of a date not more than ninety (90) days prior to the date of such Company Order, of Property Additions made a basis for such application;

(B) stating that all such property constitutes Property Additions;

(C) stating that such Property Additions are desirable for use in the proper conduct of the business of the Company;

(D) stating that such amount of Property Additions is not then Bonded;

(E) stating, except as to Property Additions acquired, made or constructed wholly through the delivery of securities or other property or the incurrence of other obligations, that the amount of cash forming all or part of the Cost thereof was equal to or more than an amount to be stated therein;

(F) briefly describing, with respect to any Property Additions acquired, made or constructed in whole or in part through the delivery of securities or other property or the incurrence of other obligations, the securities or other property so delivered or other obligations so incurred and stating the date of such delivery or incurrence;

(G) stating what part, if any, of such Property Additions includes property which within six months prior to the date of acquisition thereof by the Company had been used or operated by others than the Company in a business similar to that in which it has been or is to be used or operated by the Company and stating whether or not, in the judgment of the signers, the Fair Value thereof to the Company, as of the date of such certificate, is less than $25,000 and whether or not such Fair Value is less than 1% of the sum of (x) the aggregate principal amount of Bonds then Outstanding, and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds);

(H) stating, in the judgment of the signers, the Fair Value to the Company, as of the date of such certificate, of such Property Additions, except any thereof with respect to the Fair Value to the Company of which a statement is to be made in an Independent Engineer's Certificate as provided for in clause (iii) below;

(I) stating the amount required to be deducted under clause (i) of Section 1.04(b) and the amount elected to be added under subclauses (A) and (B) of clause (ii) of Section 1.04(b); and

(J) stating that the Liens, if any, of the character described (1) in clause (e) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject do not, in the judgment of the signers, materially impair the use by the Company of the Mortgaged Property considered as a whole; (2) in clause (h)(ii) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject do not, in the judgment of the signers, materially impair the use by the Company of such property for the purposes for which it is held by the Company or (3) in clause (n)(ii) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject would not, if enforced, in the judgment of the signers, adversely affect the interests of the Company in such property in any material respect;

(iii) in case any Property Additions are shown by the Engineer's Certificate provided for in clause (ii) above to include property which, within six months prior to the date of acquisition thereof by the Company, had been used or operated by others than the Company in a business similar to that in which it has been or is to be used or operated by the Company and such certificate does not show the Fair Value thereof to the Company, as of the date of such certificate, to be less than $25,000 or less than 1% of the sum of (x) the aggregate principal amount of Bonds then Outstanding, and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds), an Independent Engineer's Certificate stating, in the judgment of the signer, the Fair Value to the Company, as of the date of such Independent Engineer's Certificate, of (A) such Property Additions which have been so used or operated and (at the option of the Company) as to any other Property Additions included in the Engineer's Certificate provided for in clause (ii) above, and (B) in case such Independent Engineer's Certificate is being delivered in connection with the authentication and delivery of Bonds, any property so used or operated which has been subjected to the Lien of this Indenture since the commencement of the then current calendar year which has been used as the basis for the authentication and delivery of Bonds and as to which an Independent Engineer's Certificate has not previously been furnished to the Trustee;

(iv) in case any Property Additions are shown by the Engineer's Certificate provided for in clause (ii) above to have been acquired, made or constructed in whole or in part through the delivery of securities or other property, a written appraisal of an Engineer or Appraiser stating, in the judgment of such Engineer or Appraiser, the fair market value in cash of such securities or other property at the time of delivery thereof in payment for or for the acquisition of such Property Additions;

(v) an Opinion of Counsel to the effect:

(A) that (i) (except as to paving, grading and other improvements to, under or upon highways, bridges, parks or other public property of analogous character) this Indenture is, or upon the delivery of, or the filing or recording in the proper places and manner of, the instruments of conveyance, assignment or transfer, if any, specified in said opinion, will be, a Lien on all the Property Additions to be made the basis of the authentication and delivery of such Bonds; and (ii) the Property Additions to be made the basis of the authentication and delivery of such Bonds are (x) subject to no mortgage or other consensual Lien thereon prior to the Lien of this Indenture except Permitted Liens and (y) to the knowledge of such counsel, subject to no Lien thereon prior to the Lien of this Indenture except (1) Permitted Liens, and (2) where the existence of any Liens prior to the Lien of this Indenture would not materially and adversely affect the security afforded by this Indenture, subject in all cases to the Customary Exceptions and

(B) that the Company has corporate authority to operate the Property Additions with respect to which such application is made; and

(vi) copies of the instruments of conveyance, assignment and transfer, if any, specified in the Opinion of Counsel provided for in clause (v) above.

(c) The amount of the Cost of any Property Additions and the Fair Value thereof to the Company and the fair market value in cash of any securities or other property so delivered in payment therefor or for the acquisition thereof and the amount of any deductions and any additions made pursuant to Section 1.04 shall be determined for the purposes of this Section by the appropriate certificate provided for in this Section.

Section 4.04 Issuance of Bonds on the Basis of Retired Bonds

.

(a) Subject to the provisions of subsection (c) of this Section, Bonds of any one or more series may be authenticated and delivered upon the basis of, and in an aggregate principal amount not exceeding the aggregate principal amount of, Unbonded Retired Bonds.

(b) No Bonds of any series shall be authenticated and delivered by the Trustee upon the basis of Retired Bonds until the Trustee shall have received:

(i) the documents with respect to the Bonds of such series specified in Section 4.01 provided, however, that no Net Earnings Certificate shall be required to be delivered unless:

(A) the original, final Stated Maturity of the Retired Bonds to be made the basis of the authentication and delivery of such Bonds under this Section was a date less than five years after the date of the Company Order which requested the authentication and delivery of such Retired Bonds; and

(B) the maximum Stated Interest Rate, if any, on such Retired Bonds at the time of their authentication and delivery was less than the maximum Stated Interest Rate, if any, on such Bonds to be in effect upon the initial authentication and delivery thereof; and

(ii) an Officer's Certificate stating that Retired Bonds, specified by series, in an aggregate principal amount not less than the aggregate principal amount of Bonds to be authenticated and delivered, have theretofore been authenticated and delivered and, as of the date of such Officer's Certificate, constitute Retired Bonds and are the basis for the authentication and delivery of such Bonds, and further stating that no part of such principal amount of Retired Bonds has theretofore been Bonded.

(c) No Bonds shall be authenticated or delivered hereunder on the basis of any Retired Bonds theretofore authenticated and delivered on the basis of Pledged Bonds pursuant to Section 4.02 if such Pledged Bonds can again be used as the basis for the issuance of Bonds pursuant to Section 4.02, until the Class "A" Mortgage under which such Pledged Bonds were issued has been discharged pursuant to the provisions thereof.

Section 4.05 Issuance of Bonds upon Deposit of Cash with Trustee

.

(a) Bonds of any one or more series may be authenticated and delivered upon the basis of, and in an aggregate principal amount not exceeding the amount of, any deposit with the Trustee of cash for such purpose.

(b) No Bonds of any series shall be authenticated and delivered by the Trustee upon the basis of the deposit of cash until the Trustee shall have received the documents with respect to the Bonds of such series specified in Section 4.01.

(c) All cash deposited with the Trustee under the provisions of this Section, and all cash required by Section 7.02(a) to be used or applied in accordance with the provisions of this Section, shall be held by the Trustee as a part of the Mortgaged Property and may be withdrawn from time to time by the Company, upon application of the Company to the Trustee, in an amount equal to the aggregate principal amount of Bonds to the authentication and delivery of which the Company shall be entitled under any of the provisions of this Indenture by virtue of compliance with all applicable provisions of this Indenture (except as otherwise provided in subsection (d) of this Section).

(d) Upon any such application for withdrawal, the Company shall comply with all applicable provisions of this Indenture relating to the authentication and delivery of Bonds except that the Company shall not in any event be required to comply with Section 4.01.

(e) Any withdrawal of cash under subsection (c) of this Section shall operate as a waiver by the Company of its right to the authentication and delivery of the Bonds on which it is based and such Bonds may not thereafter be authenticated and delivered hereunder. Any Property Additions which have been made the basis of any such right to the authentication and delivery of Bonds so waived shall be deemed to have been made the basis of the withdrawal of such cash; any Retired Bonds which have been made the basis of any such right to the

authentication and delivery of Bonds so waived shall be deemed to have been made the basis of the withdrawal of such cash; and any Pledged Bonds which have been made the basis of any such right to the authentication and delivery of Bonds so waived shall be deemed to have been made the basis of the withdrawal of such cash.

(f) If at any time the Company shall so direct, any sums deposited with the Trustee under the provisions of this Section may be used or applied to the purchase, redemption or payment of Bonds in the manner and subject to the conditions provided in clauses (iv) and (v) of Section 8.06(a); provided, however, that, none of such cash shall be applied to the payment of more than the principal amount of any Bonds so purchased, redeemed or paid, except to the extent that the aggregate principal amount of all Bonds theretofore, and of all Bonds then to be, purchased, redeemed or paid with cash deposited under this Section is not less than the aggregate cost for principal, premium, if any, interest, if any, and brokerage commission, if any, on or with respect to all Bonds theretofore, and on or with respect to all Bonds then to be, purchased, redeemed or paid with cash so deposited.

ARTICLE V

REDEMPTION OF BONDS

Section 5.01 Applicability of Article

.

Bonds of any series, or any Tranche thereof, which are redeemable before their Stated Maturity shall be redeemable in accordance with their terms and (except as otherwise specified as contemplated by Section 3.01 for Bonds of such series or Tranche) in accordance with this Article.

Section 5.02 Election to Redeem; Notice to Trustee

.

The election of the Company to redeem any Bonds shall be evidenced by a Board Resolution or an Officer's Certificate. The Company shall, at least forty-five (45) days prior to the Redemption Date fixed by the Company (unless a shorter notice shall be satisfactory to the Trustee), notify the Trustee in writing of such Redemption Date and of the series and principal amount of such Bonds to be redeemed. In the case of any redemption of Bonds (a) prior to the expiration of any restriction on such redemption provided in the terms of such Bonds or elsewhere in this Indenture, or (b) pursuant to an election of the Company which is subject to a condition specified in the terms of such Bonds, the Company shall furnish the Trustee with an Officer's Certificate evidencing compliance with such restriction or condition.

Section 5.03 Selection of Bonds to Be Redeemed

.

(a) If less than all the Bonds of any series, or any Tranche thereof, are to be redeemed, the particular Bonds (or portions thereof) to be redeemed shall be selected by the Bond Registrar from the Outstanding Bonds of such series or Tranche not previously called for redemption, by such method as shall be provided for any particular series, or, in the absence of any such provision, by such method as the Bond Registrar, with the approval of the Trustee, shall deem fair and appropriate and which may, in any case, provide for the selection for redemption of portions (equal to the minimum authorized denomination for Bonds of such series or Tranche

or any integral multiple thereof) of the principal amount of Bonds of such series or Tranche of a denomination equal to or larger than the minimum authorized denomination for Bonds of such series or Tranche; provided, however, that if, as indicated in an Officer's Certificate, the Company shall have offered to purchase all Bonds then Outstanding of any series, or any Tranche thereof, and less than all of such Bonds shall have been tendered to the Company for such purchase, the Bond Registrar, if so directed by Company Order, shall select for redemption only such Bonds which have not been so tendered.

(b) The Bond Registrar shall promptly notify the Company and the Trustee in writing of the Bonds selected for redemption and, in the case of any Bonds selected to be redeemed in part, the principal amount thereof to be redeemed.

(c) For all purposes of this Indenture, unless the context otherwise requires, all provisions relating to the redemption of Bonds shall relate, in the case of any Bonds redeemed or to be redeemed only in part, to the portion of the principal amount of such Bonds which has been or is to be redeemed.

Section 5.04 Notice of Redemption

.

(a) Except as otherwise specified as contemplated by Section 3.01 for Bonds of any series, or Tranche thereof, notice of redemption shall be given in the manner provided in Section 1.09 to the Holders of the Bond to be redeemed not less than thirty (30) nor more than one hundred eighty (180) days prior to the Redemption Date.

(b) All notices of redemption shall state:

(i) the Redemption Date;

(ii) the Redemption Price;

(iii) if less than all the Bonds of any series or Tranche are to be redeemed, the identification of the particular Bonds to be redeemed and the portion of the principal amount of any Bond to be redeemed in part;

(iv) that on the Redemption Date the Redemption Price, together with accrued interest, if any, to the Redemption Date, will become due and payable upon each such Bond to be redeemed and, if applicable, that interest thereon will cease to accrue on and after said date;

(v) the place or places where such Bonds are to be surrendered for payment of the Redemption Price;

(vi) the name and address of the Paying Agent;

(vii) that the redemption is for a sinking or other fund, if such is the case;

(viii) subject to Section 3.12, the CUSIP, ISIN or other similar number, if any, applicable to the Bonds to be redeemed; and

(ix) such other matters as the Company shall deem desirable or appropriate.

(c) With respect to any notice of redemption of Bonds at the election of the Company, unless, upon the giving of such notice, such Bonds shall be deemed to have been paid in accordance with Section 9.01, such notice may state that such redemption shall be conditional upon the receipt by the Trustee or Paying Agent, on or prior to the date fixed for such redemption, of money sufficient to pay the principal of and premium, if any, and interest, if any, on such Bonds and that if such money shall not have been so received such notice shall be of no force or effect and the Company shall not be required to redeem such Bonds. In the event that such notice of redemption contains such a condition and such money is not so received, the redemption shall not be made and within a reasonable time thereafter notice shall be given, in the manner in which the notice of redemption was given, that such money was not so received and such redemption was not required to be made.

(d) Notice of redemption of Bonds to be redeemed at the election of the Company, and any notice of non-satisfaction of a condition for redemption as aforesaid, shall be given by the Company or, at the Company's request, by the Bond Registrar in the name and at the expense of the Company. Notice of mandatory redemption of Bonds shall be given by the Bond Registrar in the name and at the expense of the Company.

Section 5.05 Bonds Payable on Redemption Date

.

Notice of redemption having been given as aforesaid, and the conditions, if any, set forth in such notice having been satisfied, the Bonds or portions thereof so to be redeemed shall, on the Redemption Date, become due and payable at the Redemption Price therein specified, and from and after such date (unless, the Company shall default in the payment of the Redemption Price and accrued interest, if any) such Bonds or portions thereof, if interest-bearing, shall cease to bear interest. Upon surrender of any such Bond for redemption in accordance with such notice, such Bond or portion thereof shall be paid by the Company at the Redemption Price, together with accrued interest, if any, to the Redemption Date; provided, however, that, except as otherwise specified as contemplated by Section 3.01 with respect to Bonds of any series, or Tranche thereof, any installment of interest on any Bond the Stated Maturity of which is on or prior to the Redemption Date shall be payable to the Holder of such Bond, or one or more Predecessor Bonds, registered as such at the close of business on the related Regular Record Date according to the terms of such Bond and subject to the provisions of Section 3.07.

Section 5.06 Bonds Redeemed in Part

.

Any Bond which is to be redeemed only in part shall be surrendered at a Place of Payment therefor (with, if the Company or the Trustee so requires, due endorsement by, or a written instrument of transfer in form satisfactory to the Company and the Trustee duly executed by, the Holder thereof or his attorney duly authorized in writing), and the Company shall

execute, and the Trustee shall authenticate and deliver to the Holder of such Bond, without service charge, a new Bond or Bonds of the same series and Tranche, of any authorized denomination requested by such Holder and of like tenor and in aggregate principal amount equal to and in exchange for the unredeemed portion of the principal of the Bond so surrendered; provided, however, that the payment of any principal in accordance with the scheduled amortization payments specified for the Bonds of any series, or any Tranche thereof as contemplated by Section 3.01, shall not constitute a redemption in part subject to this Section 5.06 (except as otherwise specified as contemplated by Section 3.01 for Bonds of such series or Tranche).

ARTICLE VI

REPRESENTATIONS AND COVENANTS

Section 6.01 Payment of Bonds; Lawful Possession; Maintenance of Lien

.

(a) The Company shall pay the principal of and premium, if any, and interest, if any, on the Bonds of each series in accordance with the terms of such Bonds and this Indenture.

(b) At the date of the execution and delivery of this Indenture, the Company is lawfully possessed of the Mortgaged Property and has good right and lawful authority to mortgage and pledge the Mortgaged Property, as provided in and by this Indenture.

(c) The Company shall maintain and preserve the Lien of this Indenture so long as any Bonds shall remain Outstanding, subject, however, to the provisions of Articles IX and XIII.

Section 6.02 Maintenance of Office or Agency

.

(a) The Company shall maintain in each Place of Payment for the Bonds of any series, or any Tranche thereof, an office or agency where such Bonds may be presented or surrendered for payment, where such Bonds may be surrendered for registration of transfer or exchange and where notices and demands to or upon the Company in respect of such Bonds and this Indenture may be served. The Company shall give prompt written notice to the Trustee of the location, and any change in the location, of such office or agency and prompt notice to the Holders of any such change in the manner specified in Section 1.09. If at any time the Company shall fail to maintain any such required office or agency in respect of Bonds of any series, or any Tranche thereof, or shall fail to furnish the Trustee with the address thereof, such presentations and surrenders of such Bonds may be made and notices and demands may be made or served at the Corporate Trust Office of the Trustee, and the Company hereby appoints the Trustee as its agent to receive such respective presentations, surrenders, notices and demands.

(b) The Company may also from time to time designate one or more other offices or agencies where the Bonds of one or more series, or any Tranche thereof, may be presented or surrendered for any or all such purposes and may from time to time rescind such designations; provided, however, that no such designation or rescission shall in any manner relieve the Company of its obligation to maintain an office or agency for such purposes in each

Place of Payment for such Bonds in accordance with the requirements set forth above. The Company shall give prompt written notice to the Trustee, and prompt notice to the Holders in the manner specified in Section 1.09, of any such designation or rescission and of any change in the location of any such other office or agency.

(c) Anything herein to the contrary notwithstanding, any office or agency required by this Section may be maintained at an office of the Company, in which event the Company shall perform all functions to be performed at such office or agency.

(d) With respect to any Global Bond, and except as otherwise may be specified for such Global Bond as contemplated by Section 3.01, the Corporate Trust Office of the Trustee shall be the Place of Payment where such Global Bond may be presented or surrendered for payment or for registration of transfer or exchange, or where successor Bonds may be delivered in exchange therefor, provided, however, that any such payment, presentation, surrender or delivery effected pursuant to the Applicable Procedures of the Depository for such Global Bond shall be deemed to have been effected at the Place of Payment for such Global Bond in accordance with the provisions of this Indenture.

Section 6.03 Money for Bond Payments to Be Held in Trust
.

(a) If the Company shall at any time act as its own Paying Agent with respect to the Bonds of any series, or any Tranche thereof, it shall, on or before each due date of the principal of and premium, if any, or interest, if any, on any of such Bonds, segregate and hold in trust for the benefit of the Persons entitled thereto a sum sufficient to pay the principal and premium or interest so becoming due until such sums shall be paid to such Persons or otherwise disposed of as herein provided and shall promptly notify the Trustee of its action or failure so to act.

(b) Whenever the Company shall have one or more Paying Agents for the Bonds of any series, or any Tranche thereof, it shall, on or before each due date of the principal of and premium, if any, or interest, if any, on such Bonds, deposit with such Paying Agents sums sufficient (without duplication) to pay the principal and premium or interest so becoming due, such sums to be held in trust for the benefit of the Persons entitled to such principal, premium or interest, and (unless such Paying Agent is the Trustee) the Company shall promptly notify the Trustee of its action or failure, so to act. Anything herein to the contrary notwithstanding, the Company hereby appoints the Trustee as initial Paying Agent for the Bonds of all series.

(c) The Company shall cause each Paying Agent for the Bonds of any series, or any Tranche thereof, other than the Trustee, to execute and deliver to the Trustee an instrument in which such Paying Agent shall agree with the Trustee, subject to the provisions of this Section, that such Paying Agent shall:

(i) hold all sums held by it for the payment of the principal of and premium, if any, or interest, if any, on the Bonds of such series or Tranche in trust for the benefit of the Persons entitled thereto until such sums shall be paid to such Persons or otherwise disposed of as herein provided;

(ii) give the Trustee notice of any default by the Company (or any other obligor upon the Bonds of such series) in the making of any payment of principal of and premium, if any, or interest, if any, on the Bonds of such series or Tranche; and

(iii) at any time during the continuance of any such default upon the written request of the Trustee, forthwith pay to the Trustee all sums so held in trust by such Paying Agent and furnish to the Trustee such information as it possesses regarding the names and addresses of the Persons entitled to such sums.

(d) The Company may at any time pay, or by Company Order direct any Paying Agent to pay, to the Trustee all sums held in trust by the Company or such Paying Agent, such sums to be held by the Trustee upon the same trusts as those upon which such sums were held by the Company or such Paying Agent and, if so stated in a Company Order delivered to the Trustee, in accordance with the provisions of Article IX; and, upon such payment by any Paying Agent to the Trustee, such Paying Agent shall be released from all further liability with respect to such money.

(e) Subject to applicable laws regarding abandoned property, any money deposited with the Trustee (other than money held under the provisions of Article IX) or any Paying Agent, or then held by the Company, in trust for the payment of the principal of and premium, if any, or interest, if any, on any Bond and remaining unclaimed for two years after such principal and premium, if any, or interest, if any, has become due and payable shall be paid to the Company on Company Request, or, if then held by the Company, shall be discharged from such trust; and the Holder of such Bond shall thereafter, as an unsecured general creditor, look only to the Company for payment thereof and all liability of the Trustee or such Paying Agent with respect to such trust money, and all liability of the Company as trustee thereof, shall thereupon cease; provided, however, that the Trustee or such Paying Agent, before being required to make any such payment to the Company, may at the expense of the Company cause to be mailed, on one occasion only, notice to such Holder that such money remains unclaimed and that, after a date specified therein, which shall not be less than thirty (30) days from the date of such mailing, any unclaimed balance of such money then remaining will be paid to the Company.

Section 6.04 Corporate Existence

.

Subject to the rights of the Company under Article XIII, the Company shall do or cause to be done all things necessary to preserve and keep in full force and effect its corporate existence and the rights (charter and statutory) and franchises of the Company; provided, however, that the Company shall not be required to preserve any such right or franchise if, in the judgment of the Company, the preservation thereof is no longer desirable in the conduct of the business of the Company and the loss thereof would not adversely affect the interests of the Holders in any material respect.

Section 6.05 Maintenance of Properties

.

The Company shall cause (or, with respect to property owned in common with others, make reasonable effort to cause) the Mortgaged Property, considered as a whole, to be maintained and kept in good condition, repair and working order, reasonable wear and tear excepted, and shall cause (or, with respect to property owned in common with others, make reasonable effort to cause) to be made such repairs, renewals, replacements, betterments and improvements thereof, as, in the judgment of the Company, may be necessary in order that the operation of the Mortgaged Property, considered as a whole, may be conducted in accordance with common industry practice; provided, however, that nothing in this Section shall prevent the Company from discontinuing, or causing the discontinuance of, the operation and maintenance of any of its properties if such discontinuance is, in the judgment of the Company, desirable in the conduct of its business; and provided, further, that nothing in this Section shall prevent the Company from selling, transferring or otherwise disposing of, or causing the sale, transfer or other disposition of, any portion of the Mortgaged Property.

Section 6.06 Payment of Taxes; Discharge of Liens

.

The Company shall pay all taxes and assessments and other governmental charges lawfully levied or assessed upon the Mortgaged Property, or upon any part thereof, or upon the interest of the Trustee in the Mortgaged Property, before the same shall become delinquent, and will duly observe and conform in all material respects to all valid requirements of any Governmental Authority relative to any of the Mortgaged Property, and all covenants, terms and conditions upon or under which any of the Mortgaged Property is held; and, after the date of execution and delivery of this Indenture, the Company shall not suffer any Lien to be created upon the Mortgaged Property, or any part thereof, prior to the Lien hereof other than Permitted Liens and other than, in the case of property hereafter acquired, vendors' Liens, Purchase Money Liens and any other Lien thereon at the time of the acquisition thereof (including, but not limited to, the Lien of any Class "A" Mortgage); and within four months after any lawful claim or demand for labor, materials, supplies or other objects has become delinquent which if unpaid would or might by law be given precedence over the Lien of this Indenture as a Lien upon any of the Mortgaged Property, the Company shall pay or cause to be discharged or make adequate provisions to satisfy or discharge the same; provided, however, that nothing in this Section contained shall require the Company (i) to observe or conform to any requirement of a Governmental Authority or to cause to be paid or discharged, or to make provision for, any such Lien, or to pay any such tax, assessment or governmental charge so long as the validity thereof shall be contested in good faith and by appropriate legal proceedings; (ii) to pay, discharge or make provisions for any tax, assessment or other governmental charge the validity of which shall not be so contested if adequate security for the payment of such tax, assessment or other governmental charge and for any damages (including penalties and interest, if any) which may reasonably be anticipated from failure to pay the same shall be given to the Trustee; or (iii) to pay, discharge or make provisions for any Liens existing on the Mortgaged Property at the date of execution and delivery of this Indenture; and provided, further, that nothing in this Section shall prohibit the issuance or other incurrence of additional indebtedness, or the refunding of outstanding indebtedness, secured by a Lien prior to the Lien hereof which is permitted hereunder to continue to exist.

Section 6.07 Insurance

.

(a) The Company will keep or cause to be kept all the Mortgaged Property insured with reasonable deductibles and retentions against loss by fire to the extent that property of similar character is usually so insured by companies similarly situated and operating like properties, by insurance companies which the Company believes to be reputable; or the Company will, in lieu of or supplementing such insurance in whole or in part, adopt some other method or plan of protection, which may include, either alone or in conjunction with any other Person or Persons, creation of an insurance fund to protect the Mortgaged Property against loss by fire.

(b) Proceeds of any insurance or alternative method or plan of protection of the Company against losses of the kind specified in Section 6.07(a) shall, at the request of the Company, be paid to the Company, and the Company shall be under no obligation to use such proceeds to rebuild or repair damaged or destroyed Mortgaged Property to the extent that the Fair Value of all of the Mortgaged Property after the damage or destruction of Mortgaged Property with respect to which such proceeds are payable equals or exceeds an amount equal to 20/15ths of the aggregate principal amount of Bonds Outstanding and Class "A" Bonds Outstanding (other than Pledged Bonds), as evidenced by, and within ten (10) days after receipt by the Trustee of:

(i) an Engineer's Certificate stating that the Fair Value, in the opinion of the signers of such Engineer's Certificate, of the Mortgaged Property remaining after such damage or destruction of Mortgaged Property is a specified amount; and

(ii) an Officer's Certificate stating that the Fair Value of all of the Mortgaged Property, as certified in the Engineer's Certificate provided for in clause (i) of Section 6.07(b) equals or exceeds an amount equal to 20/15ths of the aggregate principal amount of Bonds Outstanding and Class "A" Bonds Outstanding (other than Pledged Bonds).

(c) To the extent that the Fair Value of all of the Mortgaged Property after such damage or destruction of Mortgaged Property does not equal or exceed an amount equal to 20/15ths of the aggregate principal amount of Bonds Outstanding and Class "A" Bonds Outstanding (other than Pledged Bonds), as evidenced by an Engineer's Certificate and an Officer's Certificate similar to those described in clauses (i) and (ii) of Section 6.07(b), (i) the proceeds of such insurance paid with respect to any such loss shall be paid to the Trustee, as the interest of the Trustee may appear, or to the trustee of a Class "A" Mortgage, or to the trustee or other holder of any mortgage or other Lien prior hereto upon the Mortgaged Property so destroyed or damaged, if the terms thereof require such proceeds so to be paid; and (ii) if the Company shall adopt such other method or plan, it will pay or cause to be paid to the Trustee on account of any loss sustained because of the destruction or damage of any Mortgaged Property by fire, an amount of cash equal to such loss less any amount otherwise paid with respect to such loss to the Trustee, or to the trustee of a Class "A" Mortgage, or to the trustee or other holder of any mortgage or other Lien prior hereto upon the Mortgaged Property so destroyed or damaged, if the terms thereof require payments for such loss so to be paid. Any amounts of cash so

required to be paid by the Company pursuant to any such method or plan shall for the purposes of this Indenture be deemed to be proceeds of insurance.

(d) All moneys paid to the Trustee by the Company or received by the Trustee as proceeds of any insurance shall, subject to Section 6.07(b) and to the requirements of any Class "A" Mortgage or any mortgage or other Lien prior hereto upon the Mortgaged Property, be held by the Trustee and, subject to such requirements, shall, at the request of the Company, be paid by the Trustee to the Company to reimburse or fund the Company for an equal amount spent or committed to be spent for the purchase or other acquisition of property which becomes Mortgaged Property at the time of such purchase or acquisition, or in the rebuilding or renewal of the Mortgaged Property destroyed or damaged, upon receipt by the Trustee of:

(i) an Officer's Certificate requesting such reimbursement;

(ii) an Engineer's Certificate stating the amounts so expanded or committed for expenditure and the nature of such rebuilding or renewal and the Fair Value to the Company of the property rebuilt or renewed or to be rebuilt or renewed and if:

(A) within six months prior to the date of acquisition thereof by the Company, such property has been used or operated, by a Person other than the Company, in a business similar to that in which it has been or is to be used or operated by the Company, and

(B) the Fair Value to the Company of such property as set forth in such Engineer's Certificate is not less than $25,000 and not less than 1% of the sum of (1) the principal amount of the Bonds at the time Outstanding, and (2) the principal amount of Class "A" Bonds Outstanding (other than Pledged Bonds) at the time,

the Engineer making such certificate shall be an Independent Engineer; and

(iii) an Opinion of Counsel stating that, in the opinion of the signer, the property so rebuilt or renewed or to be rebuilt or renewed is or will be subject to the Lien hereof to the same extent as was the property so destroyed or damaged.

(e) Any such money not so applied within eighteen (18) months after its receipt by the Trustee, or in respect of which notice in writing of intention to apply the same to the work of rebuilding or renewal then in progress and uncompleted shall not have been given to the Trustee by the Company within such eighteen (18) months, or which the Company shall at any time notify the Trustee is not to be so applied, shall thereafter be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 8.06.

(f) Whenever under the provisions of this Section the Company is required to deliver moneys to the Trustee and at the same time shall have satisfied the conditions set forth herein for reimbursement, there shall be paid to or retained by the Trustee or reimbursed to the Company, as the case may be, only the net amount.

(g) In the event that the Company adopts a method or plan of protection other than insurance as provided in Section 6.07(a), the Company shall furnish to the Trustee a certificate of a qualified Person appointed by the Company with respect to the adequacy of such method or plan.

Section 6.08 Recording, Filing, Etc.

(a) The Company shall cause this Indenture and all indentures and instruments supplemental hereto (or notices, memoranda or financing statements as may be recorded or filed to place third parties on notice thereof), including all financing statements and continuation statements covering security interests in personal property, and all Purchase Money Liens securing obligations delivered to the Trustee pursuant to Section 8.05, to be promptly recorded and filed and re-recorded and re-filed and will execute or cause to be executed and file such financing statements and such continuation statements, all in such manner and in such places, as may be required by law in order fully to preserve and protect the security of the Holders of the Bonds and all rights of the Trustee, and shall furnish to the Trustee:

(i) promptly after the execution and delivery of this Indenture and of each supplemental indenture and instrument supplemental hereto, an Opinion of Counsel either stating that in the opinion of such counsel this Indenture, such supplemental indenture or instrument supplemental hereto (or notice or memorandum thereof or financing statement in connection therewith) has been properly recorded and filed, so as to make effective the Lien intended to be created hereby or thereby, and reciting the details of such action, or stating that in the opinion of such counsel no such action is necessary to make such Lien effective. The Company shall be deemed to be in compliance with this clause (i) if (A) the Opinion of Counsel herein required to be delivered to the Trustee shall state that this Indenture, such supplemental indenture or instrument supplemental hereto (or financing statement or notice or memorandum thereof) has been received for recording or filing in each jurisdiction in which it is required to be recorded or filed and that, in the opinion of such counsel (if such is the case), such receipt for recording or filing makes effective the Lien intended to be created by this Indenture, such supplemental indenture or instrument supplemental hereto, and (B) such opinion is delivered to the Trustee within such time, following the date of the execution and delivery of this Indenture, such supplemental indenture or instrument supplemental hereto, as shall be practicable having due regard to the number and distance of the jurisdictions in which this Indenture, such supplemental indenture or instrument supplemental hereto is required to be recorded or filed; and

(ii) on or before June 1 of each year, beginning June 1, 2009, an Opinion of Counsel either stating that in the opinion of the signer such action has been taken, since the date of the most recent Opinion of Counsel furnished pursuant to this clause (ii) or the first Opinion of Counsel furnished pursuant to clause (i) of this subsection (a), with respect to the recording, filing, re-recording, and re-filing of this instrument and of each indenture and instrument supplemental to this Indenture (or financing statement or notice or memorandum thereof), as is

necessary to maintain the Lien hereof, and reciting the details of such action, or stating that in the opinion of such counsel no such action is necessary to maintain such Lien.

(b) The Company shall execute and deliver such supplemental indenture or indentures and such further instruments and do such further acts as may, be necessary or proper to carry out the purposes of this Indenture and to make subject to the Lien hereof any property hereafter acquired, made or constructed, intended to be subject to the Lien hereof, and to transfer to any new trustee or trustees or co-trustee or co-trustees, the estate, powers, instruments or funds held in trust hereunder.

(c) Notwithstanding the foregoing, the Company authorizes the Trustee to file one or more financing statements and such other documents as the Trustee may from time to time reasonably require to perfect or continue the perfection of the Lien of this Indenture on any Mortgaged Property. In case the Company fails to file any financing statements or other documents for the perfection or continuation of any security interest, the Company hereby appoints the Trustee as its true and lawful attorney-in-fact to file any such documents on its behalf. If any financing statement or other document is filed in the records normally pertaining to personal property, that filing shall never be construed as in any way derogating from or impairing this Indenture or the rights or obligations of the parties hereto under it in respect of any real property.

Section 6.09 Waiver of Certain Covenants

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Subject to the provisions of the Trust Indenture Act, the Company may omit in any particular instance to comply with any term, provision or condition set forth in (a) Section 6.02 or any additional covenant or restriction specified with respect to the Bonds of any series, or any Tranche thereof, as contemplated by Section 3.01 if before the time for such compliance the Holders of at least a majority in aggregate principal amount of the Outstanding Bonds of all series and Tranches with respect to which compliance with Section 6.02 or such additional covenant or restriction is to be omitted, considered as one class, shall, by Act of such Holders, either waive such compliance in such instance or generally waive compliance with such term, provision or condition, and (b) Section 6.04, 6.05, 6.06, 6.07 or 6.08 or Article XIII if before the time for such compliance the Holders of at least a majority in aggregate principal amount of Bonds Outstanding under this Indenture shall, by Act of such Holders, either waive such compliance in such instance or generally waive compliance with such term, provision or condition; but, in the case of (a) or (b), no such waiver shall extend to or affect such term, provision or condition except to the extent so expressly waived, and, until such waiver shall become effective, the obligations of the Company and the duties of the Trustee in respect of any such term, provision or condition shall remain in full force and effect. A waiver of compliance given by or on behalf of any Holder of the Bonds in connection with a purchase of, or tender or exchange offer for, such Holder's Bonds will not be rendered invalid by such purchase, tender or exchange.

Section 6.10 Statement as to Compliance

.

For so long as the Trustee Indenture Act shall so require, the Company will deliver to the Trustee, on or prior to June 1 of each year, beginning with June 1, 2009, a brief certificate from the principal executive officer, principal financial officer or principal accounting officer as to his or her knowledge of the Company's compliance with all conditions and covenants under this Indenture. For purposes of this Section 6.10, such compliance shall be determined without regard to any period of grace or requirement of notice under this Indenture.

Section 6.11 Use of Trust Moneys and Advances by Trustee

.

If the Company shall fail to perform any of its covenants contained in Sections 6.04, 6.05, 6.06 and 6.07 hereof, the Trustee may, at any time and from time to time, but shall not be obligated to, use and apply any Funded Cash held by it pursuant to Section 8.06, or make advances, to effect performance of any such covenant on behalf of the Company; and all moneys so used or advanced by the Trustee shall be repaid by the Company, together with interest thereon at a rate per annum equal to the highest interest rate per annum borne by Bonds Outstanding at the time of such repayment, upon demand by the Trustee and any such advances by the Trustee shall be secured under this Indenture prior to the Bonds. For the repayment of all such advances by the Trustee the Trustee shall have the right to use and apply any Funded Cash held by it pursuant to Section 8.06, but no such use or application of Funded Cash nor any such advance shall relieve the Company from any default hereunder.

Section 6.12 Limited Issuance of Class "A" Bonds

.

So long as any Bonds are Outstanding, the Company will not issue any additional Class "A" Bonds except (i) to replace mutilated, destroyed, lost or wrongfully taken Class "A" Bonds of the same series or to effect transfers and exchanges of Class "A" Bonds or (ii) such Class "A" Bonds as shall immediately after issuance be made the basis for the authentication and delivery of Bonds under Section 4.02.

ARTICLE VII

PLEDGED BONDS: ADDITIONAL CLASS "A" MORTGAGES; DISCHARGE OF CLASS "A" MORTGAGE

Section 7.01 Registration and Ownership of Pledged Bonds

.

All Pledged Bonds shall be registered in the name of the Trustee or its nominee and shall be owned and held by the Trustee, subject to the provisions of this Indenture, for the benefit of the Holders of all Bonds from time to time Outstanding, and the Company shall have no interest therein. The Trustee shall be entitled to exercise all rights of bondholders under each Class "A" Mortgage either in its discretion (which it need not exercise) or as otherwise provided in this Article or in Article X.

Section 7.02 Payments on Pledged Bonds

.

(a) Any payment by the Company of principal of or premium or interest on any Pledged Bonds shall be applied by the Trustee to the payment of any principal, premium or interest, as the case may be, in respect of the Bonds which is then due, and, to the extent of such application, the obligation of the Company hereunder to make such payment in respect of the Bonds shall be deemed to have been satisfied and discharged. If at the time of any such payment of principal of Pledged Bonds, there shall be no principal then due in respect of the Bonds, the proceeds of such payment in respect of the Pledged Bonds shall be deemed to constitute Funded Cash and shall be held by the Trustee as part of the Mortgaged Property, to be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 4.05. If, at the time of any such payment of premium or interest on Pledged Bonds, there shall be no premium or interest, as the case may be, then due in respect of the Bonds, the proceeds of such payment in respect of the Pledged Bonds shall be remitted to the Company upon receipt by the Trustee of a Company Order requesting the same; provided, however, that following the occurrence and during the continuance of an Event of Default, the Trustee shall not pay such proceeds over to the Company, but shall instead hold such proceeds as part of the Mortgaged Property.

(b) Each supplemental indenture pursuant to which any Pledged Bonds are issued shall contain a provision to the effect that any payment by the Company hereunder of principal of or premium or interest on Bonds which shall have been authenticated and delivered upon the basis of the issuance and delivery to the Trustee of such Pledged Bonds (other than by the application of the proceeds of a payment in respect of such Pledged Bonds) shall, to the extent thereof, be deemed to satisfy and discharge the obligation of the Company, if any, to make a payment of principal, premium or interest, as the case may be, in respect of such Pledged Bonds which is then due.

Section 7.03 Surrender of Pledged Bonds

.

At the time any Bonds of any series, or any Tranche thereof, which shall have been authenticated and delivered upon the basis of Pledged Bonds, cease to be Outstanding (other than as a result of the application of the proceeds of the payment or redemption of such Pledged Bonds), the Trustee shall upon the receipt of a Company Order surrender to or upon the order of the Company an equal principal amount of such Pledged Bonds having the same Stated Maturity and provisions, if any, for mandatory redemption as such Bonds.

Section 7.04 No Transfer of Pledged Bonds

.

Subject to the provisions of Section 10.20 hereof the Trustee shall not sell, assign or otherwise transfer any Pledged Bonds except to a successor trustee under this Indenture. The Company may take such actions as it shall deem necessary, desirable or appropriate to effect compliance with such restrictions on transfer, including the placing of a legend on each Pledged Bond and the issuance of stop-transfer instructions to the trustee under the related Class “A” Mortgage or any other transfer agent thereunder.

Section 7.05 Voting of Pledged Bonds

.

The Trustee shall, as the holder of Pledged Bonds Outstanding under each Class "A" Mortgage, attend such meeting or meetings of bondholders under such Class "A" Mortgage, or at its option, deliver its proxy in connection therewith, as relate to matters with respect to which it is entitled to vote or consent. So long as no Event of Default hereunder shall have occurred and be continuing, either at any such meeting or meetings, or otherwise when the consent of the holders of the Class "A" Bonds Outstanding under any Class "A" Mortgage is sought without a meeting, the Trustee shall vote as holder of such Pledged Bonds, or shall consent with respect thereto, as follows:

(a) at any time when the Pledged Bonds Outstanding constitute less than a majority in aggregate principal amount of the Class "A" Bonds then Outstanding under such Class "A" Mortgage, the Trustee shall vote all Pledged Bonds Outstanding under such Class "A" Mortgage then held by it, or consent with respect thereto, proportionately with what the Trustee reasonably believes will be the vote or consent of the holders of all other Class "A" Bonds Outstanding under such Class "A" Mortgage the holders of which are eligible to vote or consent; provided, however, that the Trustee shall not so vote in favor of, or so consent to, any amendment or modification of a Class "A" Mortgage which, if it were an amendment or modification of this Indenture, would require the consent of Holders, without the prior consent, obtained in the manner prescribed in Section 14.02, of Holders of Bonds which would be required under said Section 14.02 for such an amendment or modification of this Indenture; and

(b) at any time when the Pledged Bonds Outstanding constitute at least a majority in aggregate principal amount of the Class "A" Bonds then Outstanding under such Class "A" Mortgage, the Trustee shall vote all Pledged Bonds Outstanding under such Class "A" Mortgage then held by it, or consent with respect thereto, in accordance with the written direction of the Company evidenced by an Officer's Certificate or, in the absence of any such direction, proportionately with what the Trustee reasonably believes will be the vote or consent of the holders of all other Class "A" Bonds Outstanding under such Class "A" Mortgage the holders of which are eligible to vote or consent; provided, however, that the Trustee shall not so vote in favor of, or so consent to, any amendment or modification of a Class "A" Mortgage which, if it were an amendment or modification of this Indenture, would require the consent of Holders, without the prior consent, obtained in the manner prescribed in Section 14.02, of Holders of Bonds which would be required under said Section 14.02 for such an amendment or modification of this Indenture.

Section 7.06 Designation of Class "A" Mortgages

.

(a) In the event that, after the date of execution and delivery of this Indenture, a corporation which was the mortgagor under a mortgage or deed of trust or similar indenture qualified under the Trust Indenture Act is merged into or consolidated with the Company, such mortgage, deed of trust or similar indenture may be designated a Class "A" Mortgage upon delivery to the Trustee of the following:

(i) a Company Order authorizing the designation of such mortgage, deed of trust or similar indenture as a Class "A" Mortgage;

(ii) an Officer's Certificate (A) stating that no event has occurred and is continuing which entitles the trustee under such mortgage, deed of trust or similar indenture to accelerate the maturity of the obligations outstanding thereunder, (B) reciting the aggregate principal amount of obligations theretofore issued under such mortgage, deed of trust or similar indenture and the aggregate principal amount of obligations then outstanding thereunder, and (C) either (x) stating that all obligations outstanding under such mortgage, deed of trust or similar indenture that were issued on the basis of property additions were issued in principal amounts that did not exceed 75% of the cost or Fair Value of such property additions to the issuer thereof (whichever was less), or (y) in the event that the foregoing clause (x) is not the case, stating that the Company has irrevocably waived its right to the authentication and delivery of further obligations under such mortgage, deed of trust or similar indenture in a principal amount equal to the excess of the aggregate dollar amount of property additions certified to the trustee under such mortgage, deed of trust or similar indenture as the basis for all obligations outstanding thereunder that were issued on the basis of property additions (and outstanding obligations issued on the basis of retirements of obligations issued on the basis of property additions) over 20/15ths of the aggregate principal amount of all such outstanding obligations; and

(iii) an Opinion of Counsel to the effect that (A) the corporation that was the mortgagor under such mortgage, deed of trust or similar indenture has been duly and lawfully merged into or consolidated with the Company; (B) such mortgage, deed of trust or similar indenture is qualified under the Trust Indenture Act; (C) the Company has duly assumed and agreed to perform and pay the obligations of the mortgagor under such mortgage, deed of trust or similar indenture; (D) such mortgage, deed of trust or similar indenture constitutes a Lien upon the property described therein prior to the Lien of this Indenture; (E) the Lien of this Indenture constitutes a Lien on the property described in such mortgage, deed of trust or similar indenture of the character described in Granting Clause First, and in any subsequent generic grant of unspecified property as contemplated in Granting Clause Third, acquired by the Company from such corporation by virtue of such merger or consolidation, subject to no Lien thereon prior to the Lien of this Indenture except the Lien of such mortgage, deed of trust or similar indenture, Permitted Liens and Liens of the character permitted to exist or to be hereafter created under Section 6.06; (F) the terms of such mortgage, deed of trust or similar indenture, as then in effect do not permit the further issuance of obligations thereunder except on the basis of cash, property additions of a character substantially similar to Property Additions or the retirement of outstanding obligations; (G) the terms of such mortgage, deed of trust or similar indenture, as then in effect and taking into account any waiver contemplated by clause (y) of subclause (C) of clause (ii) above, do not permit the further issuance of obligations thereunder upon the basis of property additions in a principal amount exceeding 75% of the cost or the Fair Value thereof to the issuer thereof (whichever shall be less); and (H) the indenture supplemental hereto referred to in subsection (b) of this Section complies with the requirements of clauses (i) and (ii) of said subsection (b).

(b) At such time as the Company and the Trustee have executed, and the Company has caused to be recorded:

(i) an indenture supplemental hereto (A) in which such mortgage, deed of trust or similar indenture has been designated as a Class “A” Mortgage, and (B) by which the Company has specifically imposed the Lien of this Indenture upon properties of the character described in Granting Clause First, and in any subsequent generic grant of unspecified property as contemplated in Granting Clause Third, acquired by the Company from such corporation by virtue of the merger or consolidation (and later improvements, extensions and additions thereto and renewals and replacements thereof); and

(ii) an indenture supplemental to such mortgage, deed of trust or similar indenture by which such mortgage, deed of trust or similar indenture has been amended to provide that a Matured Event of Default thereunder shall include an Event of Default hereunder or a Matured Event of Default under any other Class “A” Mortgage; provided, however, that the waiver or cure of such Event of Default or Matured Event of Default and the rescission and annulment of the consequences thereof shall constitute a waiver of the corresponding Matured Event of Default under such mortgage, deed of trust or similar indenture and a rescission and annulment of the consequences thereof;

then such mortgage, deed of trust or similar indenture and all obligations issued and outstanding thereunder shall for all purposes hereof be treated as a Class “A” Mortgage and as Class “A” Bonds, respectively, to the full and same extent as if specifically identified in Article I.

Section 7.07 Discharge of Class “A” Mortgages

.

(a) The Trustee shall surrender for cancellation to the trustee under any Class “A” Mortgage all Pledged Bonds then held by the Trustee issued under such Class “A” Mortgage upon receipt by the Trustee of

(i) a Company Order requesting such surrender for cancellation of such Pledged Bonds;

(ii) an Officer’s Certificate to the effect that no Class “A” Bonds are Outstanding under such Class “A” Mortgage (other than Pledged Bonds) and that promptly upon such surrender such Class “A” Mortgage will be satisfied and discharged pursuant to the terms thereof;

(iii) an Engineer’s Certificate:

(A) describing in reasonable detail all property constituting Property Additions designated by the Company, in its discretion, to be deemed, on and after the date of such surrender for cancellation and for all purposes of this Indenture, to have been made the basis of the authentication and delivery of all Bonds then Outstanding which shall

have been authenticated and delivered under Section 4.02 on the basis of Pledged Bonds authenticated and delivered under such Class “A” Mortgage, such Property Additions to have, in the aggregate, a Cost (or as to Property Additions of which the Fair Value to the Company specified pursuant to subclause (H) or clause (iv) below is less than the Cost thereof, then such Fair Value in lieu of Cost) not less than 20/15ths of the aggregate principal amount of such Bonds;

(B) stating that all such property constitutes Property Additions;

(C) stating that such Property Additions are desirable for use in the proper conduct of the business of the Company;

(D) stating that such Property Additions, to the extent of the Cost (or as to Property Additions of which the Fair Value to the Company specified pursuant to subclause (H) or clause (iv) below is less than the Cost thereof, then such Fair Value in lieu of Cost) to the Company to be deemed to have been made the basis of the authentication and delivery of such Bonds, will no longer constitute Bonded Property Additions (other than pursuant to clause (vi) of the definition of “Bonded”) upon the discharge of the Class “A” Mortgage pursuant to which such Pledged Bonds were issued;

(E) stating, except as to Property Additions acquired, made or constructed wholly through the delivery of securities or other property or the incurrence of other obligations, that the amount of cash forming all or part of the Cost thereof was equal to or more than an amount to be stated therein;

(F) briefly describing, with respect to any Property Additions acquired, made or constructed in whole or in part through the delivery of securities or other property or other property or the incurrence of other obligations, the securities or other property so delivered or other obligations so incurred and stating the date of such delivery or incurrence;

(G) stating what part, if any, of such Property Additions included property which within six months prior to the date of acquisition thereof by the Company had been used or operated by others than the Company in a business similar to that in which it has been or is to be used or operated by the Company and stating whether or not, in the judgment of the signers, the Fair Value thereof to the Company, as of the date of such certificate, is less than $25,000 and whether or not the fair value thereof to the Company, as of such date, is less than 1% of the sum of (x) the aggregate principal amount of Bonds then Outstanding, and (y) the aggregate principal amount of Class “A” Bonds then Outstanding (other than Pledged Bonds);

(H) stating, in the judgment of the signers, the Fair Value to the Company, as of the date of such certificate, of such Property Additions, except any thereof with respect to the Fair Value to the Company of which a statement is to be made in an Independent Engineer's Certificate as provided for in clause (iv) below; provided, however, that if any such Property Additions shall have theretofore been certified to the trustee under such Class "A" Mortgage as the basis for the authentication and delivery of Class "A" Bonds:

(x) which are Pledged Bonds as of the date of such certificate; or

(y) the retirement of which shall have theretofore been made the basis (whether directly or indirectly when considered in light of the issuance and retirement of successive issues of Class "A" Bonds) of the authentication and delivery of Pledged Bonds then held by the Trustee;

then there may be stated, in lieu of the Fair Value of such Property Additions as of the date of such certificate, the Fair Value thereof as so certified to the trustee under such Class "A" Mortgage; and

(I) stating that the Liens, if any, of the character described (1) in clause (e) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject do not, in the judgment of the signers, materially impair the use by the Company of the Mortgaged Property considered as a whole; (2) in clause (h)(ii) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject do not, in the judgment of the signers, materially impair the use by the Company of such property for the purposes for which it is held by the Company; (3) in clause (n)(ii) of the definition of "Permitted Liens" to which any property included in such Property Additions is subject would not, if enforced, in the judgment of the signers, adversely affect the interests of the Company in such property in any material respect;

(iv) in case any Property Additions are shown by the Engineer's Certificate provided for in clause (iii) above to include property which, within six months prior to the date of acquisition thereof by the Company, had been used or operated by others than the Company in a business similar to that in which it has been or is to be used or operated by the Company and such certificate does not show the Fair Value thereof to the Company, as of the date of such certificate, to be less than $25,000 or less than 1% of the sum of (x) the aggregate principal amount of Bonds then Outstanding, and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds), an Independent Engineer's Certificate stating, in the judgment of the signer, the Fair Value to the Company, as of the date of such Independent Engineer's Certificate, of (A) such

Property Additions which have been so used or operated and (at the option of the Company) as to any other Property Additions included in the Engineer's Certificate provided for in clause (iii) above, and (B) any property so used or operated which has been subjected to the Lien of this Indenture since the commencement of the then current calendar year as the basis for the authentication and delivery of Bonds and as to which an Independent Engineer's Certificate has not previously been furnished to the Trustee;

(v) in case any Property Additions are shown by the Engineer's Certificate provided for in clause (iii) above to have been acquired, made or constructed in whole or in part through the delivery of securities or other property, a written appraisal of an Engineer or Appraiser stating, in the judgment of such Engineer or Appraiser, the Fair Value in cash of such securities or other property at the time of delivery thereof in payment for or for the acquisition of such Property Additions;

(vi) an Opinion of Counsel to the effect:

(A) that (except as to paving, grading and other improvements to, under or upon highways, bridges, parks or other public property of analogous character) this Indenture is, or upon (x) the delivery of, or the filing or recording in the proper places and manner of, the instruments of conveyance, assignment or transfer, if any, specified in said opinion, or (y) the satisfaction and discharge of the Class "A" Mortgage to be satisfied and discharged pursuant to this Section, will be, a Lien on all the Property Additions to be deemed to have been made the basis of the authentication and delivery of Bonds then Outstanding which shall have been authenticated and delivered under Section 4.02 on the basis of Pledged Bonds authenticated and delivered under such Class "A" Mortgage, subject to no Lien thereon prior to the Lien of this Indenture except Permitted Liens; and

(B) that the Company has corporate authority to operate the Property Additions with respect to which such application is made;

(vii) an Opinion of Counsel to the effect that upon satisfaction and discharge of such Class "A" Mortgage the Lien of this Indenture on the property formerly subject to the lien of such Class "A" Mortgage, to the extent the same is part of the Mortgaged Property, will be subject to no Lien prior to the Lien of this Indenture except Permitted Liens and Liens of the character permitted to exist or to be hereafter created under Section 6.06; and

(viii) copies of the instruments of conveyance, assignment and transfer, if any, specified in the Opinion of Counsel provided for in clause (vi) above.

(b) The amount of the Cost of any Property Additions and the Fair Value thereof to the Company and the fair market value in cash of any securities or other property so

delivered in payment therefor or for the acquisition thereof shall be determined for the purposes of this Section by the appropriate certificate provided for in this Section.

ARTICLE VIII

POSSESSION, USE AND RELEASE OF MORTGAGED PROPERTY

Section 8.01 Quiet Enjoyment

.

Unless one or more Events of Default shall have occurred and be continuing, the Company shall be permitted to possess, use and enjoy the Mortgaged Property (except such cash as is expressly required to be deposited with the Trustee and except, to the extent not otherwise provided herein, such securities as are expressly required to be deposited with the Trustee).

Section 8.02 Dispositions without Release

.

Unless an Event of Default shall have occurred and be continuing, the Company may at any time and from time to time, without any release or consent by, or report to, the Trustee:

(a) sell or otherwise dispose of, free from the Lien of this Indenture, or abandon or otherwise retire, any machinery, apparatus, equipment, frames, towers, poles, wire, pipe, cable, conduit, mains, tubes, drains, valves, tools, or implements, or any other fixture or personality, then subject to the Lien hereof, which shall have become inadequate, obsolete, worn out, unfit, or unserviceable or, provided that (at the time of any sale or disposal) the bonding test ratio specified in Section 8.03 is satisfied, shall have become undesirable or unnecessary for use in the Primary Purposes of the Company's Business;

(b) cancel or make changes in or alterations of or substitutions for any and all leases;

(c) alter, change the location of, add to, repair and replace any and all transmission and distribution lines, pipes, substations, machinery, fixtures and other equipment;

(d) cancel, make changes in or substitutions for or dispose of any and all rights of way (including easements and licenses);

(e) surrender or assent to the modification of any franchise (including in that term any ordinances, indeterminate permits, licenses or other operating rights, however denominated, granted by federal, state, municipal or other governmental authority) under which the Company may be operating if, in the judgment of the Company, it is advisable to do so;

(f) abandon, or permit the abandonment of, the operation of any Mortgaged Property and surrender any franchise (as defined in Section 8.02(e)) under which such Mortgaged Property is operated, if, in the judgment of the Company, the operation of such Mortgaged Property and such franchise is not, under the circumstances, necessary or important for the operation of the remaining Mortgaged Property, or whenever the Company deems such abandonment or surrender to be advisable for any reason; provided, however, that if the amount

at which such Mortgaged Property and all other Mortgaged Property so abandoned or surrendered during the same calendar year was originally charged to the fixed property accounts of the Company is equal to 10% or more of the sum of (x) the aggregate principal amount of Bonds then Outstanding and (y) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds) immediately prior to such abandonment or surrender, there shall be furnished to the Trustee an Independent Engineer's Certificate to the effect that neither such Mortgaged Property nor such franchise is, under the circumstances, necessary or important for the operation of the remaining property of the Company or that such abandonment or surrender is advisable for some other specified reason, and in either case that such abandonment or surrender will not impair the security under this Indenture in contravention of the provisions hereof; and

(g) grant, free from the Lien of this Indenture, easements, ground leases or rights of way in, upon, over or across the property or rights of way of the Company for the purpose of roads, pipe lines, transmission lines, distribution lines, communication lines, railways, removal of coal or other minerals or timber, and other like purposes, or for the joint or common use of real property, rights of way, facilities or equipment; provided, however, that such grant shall not materially impair the use of the property or rights of way for the purposes for which such property or rights of way are held by the Company.

Section 8.03 Release of Mortgaged Property if Bonding Ratio Test Satisfied

.

Unless an Event of Default shall have occurred and be continuing, upon receipt of a Company Order requesting the release of Mortgaged Property pursuant to this Section 8.03, the Trustee shall execute and deliver to the Company the documents and instruments described in Section 8.03(a), releasing from the Lien of this Indenture any Mortgaged Property if the Fair Value, after, in this case, deducting the principal amount of indebtedness secured by any Prior Liens thereon other than the Liens under any Class "A" Mortgage and other Permitted Liens (except for Permitted Liens, up to the Fair Value to the Company of the Mortgaged Property subject to the Permitted Lien, described in clause (g) of the definition thereof), of all of the Mortgaged Property (excluding the Mortgaged Property to be released but including any Property Additions to be acquired by the Company with the proceeds of, or otherwise in connection with, such release) stated on the Engineer's Certificates delivered pursuant to Section 8.03(b) and Section 8.03(c), equals or exceeds an amount equal to 20/15ths of the sum of (x) the aggregate principal amount of Bonds Outstanding and (y) the aggregate principal amount of Class "A" Bonds Outstanding (other than Pledged Bonds) at the date of such Company Order as stated on the Officer's Certificate delivered pursuant to Section 8.03(d), upon receipt by the Trustee of:

(a) documents and instruments releasing without recourse the interest of the Trustee in the Mortgaged Property to be released, and describing in reasonable detail the Mortgaged Property to be released;

(b) an Engineer's Certificate, dated the date of such Company Order, stating (i) that the signers of such Engineer's Certificate have examined the Officer's Certificate delivered pursuant to Section 8.03(d) in connection with such release, (ii) the Fair Value, after, in this case, deducting the principal amount of indebtedness secured by any Prior Liens thereon

other than Permitted Liens (except for Permitted Liens, up to the Fair Value to the Company of the Mortgaged Property subject to the Permitted Lien, described in clause (g) of the definition thereof), in the opinion of the signers of such Engineer's Certificate, of (A) all of the Mortgaged Property, and (B) the Mortgaged Property to be released, in each case, as of a date not more than ninety (90) days prior to the date of such Company Order, and (iii) that in the judgment of such signers, such release (A) will not materially adversely affect the Primary Purposes of the Company's Business, and (B) will not impair the security under this Indenture in contravention of the provisions hereof;

(c) in case any Property Additions are being acquired by the Company with the proceeds of, or otherwise in connection with, such release, an Engineer's Certificate, dated the date of such Company Order, as to the Fair Value, as of a date not more than ninety (90) days prior to the date of such Company Order, of the Property Additions being so acquired (and if within six months prior to the date of acquisition by the Company of the Property Additions being so acquired, any property included within such Property Additions had been used or operated by others than the Company in a business similar to that in which it has been or is to be used or operated by the Company, and the Fair Value thereof to the Company, as set forth in such Engineer's Certificate, is not less than $25,000 and not less than 1% of the sum of (i) the aggregate principal amount of Bonds then Outstanding, and (ii) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds), such certificate shall be an Independent Engineer's Certificate); and

(d) an Officer's Certificate, dated the date of such Company Order, stating (i) the sum of (x) the aggregate principal amount of Bonds Outstanding and (y) the aggregate principal amount of Class "A" Bonds Outstanding (other than Pledged Bonds) at the date of such Company Order, and stating that the Fair Value, after, in this case, deducting the principal amount of indebtedness secured by any Prior Liens thereon other than the Liens under any Class "A" Mortgage and other Permitted Liens (except for Permitted Liens, up to the Fair Value to the Company of the Mortgaged Property subject to the Permitted Lien, described in clause (g) of the definition thereof), of all of the Mortgaged Property (excluding the Mortgaged Property to be released but including any Property Additions to be acquired by the Company with the proceeds of, or otherwise in connection with, such release) stated on the Engineer's Certificate filed pursuant to Section 8.03(b) equals or exceeds an amount equal to 20/15ths of such aggregate principal amount, and (ii) that, to the knowledge of the signer, no Event of Default has occurred and is continuing.

Section 8.04 Release of Limited Amount of Mortgaged Property

.

If the Company is unable, or elects not, to obtain, in accordance with Section 8.03, the release from the Lien of this Indenture of Mortgaged Property, unless an Event of Default shall have occurred and be continuing, upon receipt of a Company Order requesting the release of Mortgaged Property pursuant to this Section 8.04, the Trustee shall execute and deliver to the Company the documents and instruments described in Section 8.04(a) releasing from the Lien of this Indenture any Mortgaged Property if the Fair Value thereof, as stated on the Engineer's Certificate delivered pursuant to Section 8.04(b), is less than 1% of the aggregate principal amount of Bonds Outstanding and Class "A" Bonds Outstanding (other than Pledged Bonds) at the date of such Company Order, provided that the aggregate Fair Value of all

Mortgaged Property released pursuant to this Section 8.04, as stated on all Engineer's Certificates filed pursuant to this Section 8.04(b) in any period of 12 consecutive calendar months which includes the date of such Engineer's Certificate, shall not exceed the greater of (x) $30,000,000 and (y) 3% of the sum of (A) the aggregate principal amount of Bonds then Outstanding and (B) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds) at the date of such Company Order as stated on the Officer's Certificate delivered pursuant to Section 8.04(c), upon receipt by the Trustee of:

(a) documents and instruments releasing without recourse the interest of the Trustee in the Mortgaged Property to be released, and describing in reasonable detail the Mortgaged Property to be released;

(b) an Engineer's Certificate, dated the date of such Company Order, stating (i) that the signer of such Engineer's Certificate has examined the Officer's Certificate delivered pursuant to Section 8.04(c) in connection with such release, (ii) the Fair Value, in the opinion of the signers of such Engineer's Certificate, of such Mortgaged Property to be released as of a date not more than ninety (90) days prior to the date of such Company Order, and (iii) that in the judgment of such signers, such release will not impair the security under this Indenture in contravention of the provisions hereof;

(c) an Officer's Certificate, dated the date of such Company Order, stating (i) the aggregate principal amount of Bonds Outstanding and Class "A" Bonds Outstanding (other than Pledged Bonds) at the date of such Company Order, (ii) that 1% of such aggregate principal amount exceeds the Fair Value of the Mortgaged Property for which such release is applied for, (iii) that 3% of such aggregate principal amount exceeds the aggregate Fair Value of all Mortgaged Property released from the Lien of this Indenture pursuant to this Section 8.04, as shown by all Engineer's Certificates filed pursuant to Section 8.04(b) in such period of 12 consecutive calendar months, and (iv) that, to the knowledge of the signer, no Event of Default has occurred and is continuing.

Section 8.05 Release of Mortgaged Property Not Subject to a Class "A" Mortgage

.

(a) If the Company is unable, or elects not, to obtain, in accordance with Section 8.03, the release from the Lien of this Indenture of Mortgaged Property which is not subject to a Class "A" Mortgage, unless an Event of Default shall have occurred and be continuing, on the basis of cash, Government Obligations, obligations securing Purchase Money Liens, Property Additions acquired by the Company with the proceeds of, or otherwise in connection with, such release, or the waiver of the right to the authentication and delivery of Bonds as described in subclause (B) of clause (iii) of this Section 8.05(a), or a combination thereof, upon receipt of a Company Order requesting the release of Mortgaged Property pursuant to this Section 8.05, the Trustee shall execute and deliver to the Company the documents and instruments described in Section 8.05(a)(i) releasing such Mortgaged Property from the Lien of this Indenture, upon receipt by the Trustee of:

(i) appropriate documents and instruments releasing without recourse the interest of the Trustee in the Mortgaged Property to be released, describing in

reasonable detail the Mortgaged Property to be released and stating the amount and character of the proceeds to be received by the Company therefor;

(ii) an Engineer's Certificate, dated the date of such Company Order, stating (A) that the signers of such Engineer's Certificate have examined the Officer's Certificate, if any, delivered pursuant to clause (iii) of this Section 8.05(a) in connection with such release, (B) the Fair Value, in the opinion of the signers of such Engineer's Certificate, of the Mortgaged Property to be released as of a date not more than ninety (90) days prior to the date of such Company Order, (C) the fair market value in cash, in the opinion of such signers (which opinion may be based on an Appraiser's Certificate), of any Government Obligations and obligations securing Purchase Money Liens included in the consideration for such release, and (D) that in the judgment of such signers, such release will not impair the security under this Indenture in contravention of the provisions hereof;

(iii) (A) an aggregate amount of Government Obligations and obligations securing Purchase Money Liens having a fair market value in cash as evidenced by an Appraiser's Certificate, cash and evidence of the acquisition by the Company of Property Additions with the proceeds of, or otherwise in connection with, such release (the amount of such Property Additions shall be the Fair Value thereof to the Company as of a date not more than ninety (90) days prior to the date of such Company Order, as evidenced to the Trustee by an Engineer's Certificate dated the date of such Company Order, and if within six months prior to the date of acquisition by the Company of the Property Additions being so acquired, any property included within such Property Additions had been used or operated by others than the Company in a business similar to that in which it has been or is to be used or operated by the Company, and the Fair Value thereof to the Company, as set forth in such Engineer's Certificate, is not less than $25,000 and not less than 1% of the sum of (i) the aggregate principal amount of Bonds then Outstanding and (ii) the aggregate principal amount of Class "A" Bonds then Outstanding (other than Pledged Bonds), such certificate shall be an Independent Engineer's Certificate), not less than the Fair Value of the Mortgaged Property to be released, or (B) an Officer's Certificate, dated the date of such Company Order, waiving the right of the Company to the authentication and delivery of an aggregate principal amount of Bonds 20/15ths of which is the amount required by subclause (A) of clause (iii) of this Section 8.05(a), on the basis of Class "A" Bonds under Section 4.02 or on the basis of Retired Bonds under Section 4.04, and stating the matters required to be stated in the Officer's Certificates provided for in clause (vi) of Section 4.01(a) and in clause (iv) of Section 4.02(b) or clause (ii) of Section 4.04(b), as the case may be, in either case appropriately modified to reflect that the action being taken is the waiver of the right to, rather than a request for, the authentication and delivery of Bonds, or (C) a combination of the items specified in subclauses (A) and (B) of clause (iii) of this Section 8.05(a);

(iv) in case any obligations secured by a Purchase Money Lien upon the Mortgaged Property to be released are included in the consideration for such release and are delivered to the Trustee in connection with such release, an Opinion of Counsel, dated the date of the Company Order, stating that, in the opinion of the signer, such obligations are valid obligations enforceable in accordance with their terms, subject to the Customary Exceptions, and that the Purchase Money Lien securing the same is sufficient to afford a valid Purchase Money Lien upon the property to be released subject to no Lien prior thereto except Permitted Liens and such Liens, if any, as shall have existed thereon just prior to such release as Liens prior to the Lien of this Indenture; and

(v) an Officer's Certificate, dated the date of such Company Order, stating that, to the knowledge of the signer, no Event of Default has occurred and is continuing.

(b) Any obligation securing a Purchase Money Lien received or to be received by the Trustee under this Indenture in consideration for the release of any Mortgaged Property from the Lien of this Indenture by the Trustee, and the Purchase Money Lien securing such obligations, shall be released by the Trustee from the Lien of this Indenture and delivered or assigned to the Company, or as it shall request, upon payment by the Company to the Trustee of the unpaid principal of such Purchase Money Lien or of the obligations thereby secured; the principal of any such obligations securing a Purchase Money Lien not so released shall be paid to or collected by the Trustee as and when such principal shall become payable, and the Trustee may take any action which in its judgment may be desirable or necessary to preserve the security of such Purchase Money Lien.

(c) Any cash deposited with the Trustee under this Section 8.05 may thereafter be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 8.06.

Section 8.06 Withdrawal or Other Application of Funded Cash

.

(a) Subject to the provisions of Section 4.05 and Section 6.07 and except as hereafter in this Section provided, unless an Event of Default shall have occurred and be continuing, any Funded Cash held by the Trustee, and any other cash which is required to be withdrawn, used or applied as provided in this Section:

(i) may be withdrawn from time to time by the Company to the extent of the Cost or the Fair Value to the Company (whichever is less) of Unbonded Property Additions, after making any deductions pursuant to Section 1.04(b), described in an Engineer's Certificate, dated not more than ninety (90) days prior to the date of the Company Order requesting such withdrawal and complying with clause (ii) of Section 4.03(b), delivered to the Trustee; provided, however, that the deductions contemplated by Section 1.04(b) shall not be required to be made if such Property Additions were acquired, made or constructed on or after the ninetieth (90th) day preceding the date of such Company Order;

(ii) may be withdrawn from time to time by the Company on the basis of Bonds the authentication and delivery of which the Company shall be entitled under the provisions of Section 4.04, by virtue of compliance with all applicable provisions of Section 4.04 (except as hereinafter in this Section otherwise provided) (A) in the case of cash deposited with the Trustee under Section 4.05 or Section 7.02(a), in an amount equal to the aggregate principal amount of such Bonds and (B) in the case of all other Funded Cash and any other cash, in an amount equal to 20/15ths of such aggregate principal amount; provided, however, that such withdrawal of cash shall operate as a waiver by the Company of the authentication and delivery of such Bonds and, to such extent no such Bonds may thereafter be authenticated and delivered hereunder; and any such Bonds which were the basis of such right to the authentication and delivery of Bonds so waived shall be deemed to have been made the basis of such withdrawal of cash;

(iii) may be withdrawn from time to time by the Company in an amount equal to 20/15ths of the aggregate principal amount of any Outstanding Bonds delivered to the Trustee;

(iv) may, upon the request to the Company, be used by the Trustee for the purchase of Bonds in the manner, at the time or times, in the amount or amounts, at the price or prices (not exceeding 20/15ths of the principal amount thereof) and otherwise as directed or approved by the Company; or

(v) may, upon the request of the Company, be applied by the Trustee to the payment at Stated Maturity of any Bonds or to the redemption of any Bonds which are, by their terms, redeemable, in each case of such series as may be designated by the Company, any such redemption to be in the manner and as provided in Article V.

(b) Such moneys shall, from time to time, be paid or used or applied by the Trustee, as aforesaid, upon the request of the Company in a Company Order, and upon receipt by the Trustee of an Officer's Certificate stating that no Event of Default has occurred and is continuing. If and to the extent that the withdrawal of cash is based upon Unbonded Property Additions (as permitted under the provisions of clause (i) of Section 8.06(a)), the Company shall, subject to the provisions of said clause (i) and except as hereafter in this subsection provided, comply with all applicable provisions of this Indenture as if such Property Additions were made the basis for the authentication and delivery of Bonds equal in principal amount to 75% of the cash to be withdrawn. If and to extent that the withdrawal of cash is based upon the right to the authentication and delivery of Bonds (as permitted under the provisions of clause (ii) of Section 8.06(a)), the Company shall, except as hereafter in this subsection (b) provided, comply with all applicable provisions of Section 4.04 relating to such authentication and delivery. Notwithstanding the foregoing provisions of this subsection (b) and of Section 4.04, in no event shall the Company be required to comply with Section 4.01.

(c) The principal of and interest on any obligations secured by a Purchase Money Lien held by the Trustee shall be collected by the Trustee as and when the same become payable. Unless an Event of Default shall have occurred and be continuing, the interest received

by the Trustee on any such obligations shall be remitted to the Company, and any payments received by the Trustee on account of the principal of any such obligations in excess of the amount of credit used by the Company in respect of such obligations upon the release of any property from the Lien hereof shall be deemed not to constitute Funded Cash and shall also be remitted to the Company. The Trustee shall have and may exercise all the rights and powers of an owner of such obligations and of all substitutions therefor and, without limiting the generality of the foregoing, may collect and receive all insurance moneys payable to it under any of the provisions thereof and apply the same in accordance with the provisions thereof, may consent to extensions thereof at a higher or lower rate of interest, may join in any plan or plans of voluntary or involuntary reorganization or readjustment or rearrangement and may accept and hold hereunder new obligations, stocks or other securities issued in exchange therefor under any such plan. Any discretionary action which the Trustee may be entitled to take in connection with any such obligations or substitutions therefor shall be taken, so long as no Event of Default shall exist, in accordance with a Company Order, and, during the existence of an Event of Default, in its own discretion.

(d) Any Bonds received by the Trustee pursuant to the provisions of this Section shall forthwith be canceled by the Trustee.

Section 8.07 Release of Property Taken by Eminent Domain, etc.

Should any of the Mortgaged Property, or any interest therein, be taken by exercise of the power of eminent domain or be sold to an entity possessing the power of eminent domain under a threat to exercise the same, and should the Company not elect to obtain the release of such property pursuant to other provisions of this Article VIII, the Trustee shall, upon request of the Company evidenced by a Company Order, release from the Lien hereof all its right, title and interest in and to the property so taken or sold (or with respect to an interest in property, subordinate the Lien hereof to such interest), upon receiving (a) an opinion of Counsel to the effect that such property has been taken by exercise of the power of eminent domain or has been sold to an entity possessing the power of eminent domain under threat of an exercise of such power, (b) an Officer's Certificate stating the amount of net proceeds received or to be received for such property so taken or sold under threat of exercise of such power, and the amount so stated shall be deemed to be the Fair Value of such property for the purpose of any notice to the Holders of Bonds, and (c) a deposit by the Company of an amount in cash equal to the Cost of the Mortgaged Property so taken or sold (or, if the Fair Value to the Company of such property at the time the same became Mortgaged Property was less than the Cost thereof, then such Fair Value in lieu of Cost); provided, however, that no such deposit shall be required to be made hereunder if the proceeds of such taking or sale shall, as indicated in an Officer's Certificate delivered to the Trustee, have been deposited with the trustee or other holder of a Class "A" Mortgage or other Lien prior to the Lien of this Indenture. Any cash deposited with the Trustee under this Section may thereafter be withdrawn, used or applied in the manner, to the extent and for the purposes, and subject to the conditions, provided in Section 8.06.

Section 8.08 Alternative Release Provision

.

In lieu of the other provisions for the release of the Mortgaged Property provided in this Indenture, unless an Event of Default shall have occurred and be continuing, the Company

may in the alternative obtain the release of any part of the Mortgaged Property which is subject to the Lien of a Class "A" Mortgage (except cash or obligations secured by a Purchase Money Lien) by delivery to the Trustee of an Officer's Certificate as to the non-existence of an Event of Default referred to above, an Engineer's Certificate as to the Fair Value of the property to be released and a copy of a release of such part of the Mortgaged Property from the Lien of such Class "A" Mortgage executed by the trustee thereunder; provided, however, that this Section shall not apply with respect to any release of Mortgaged Property from the Lien of any Class "A" Mortgage in connection with the discharge of such Class "A" Mortgage.

Section 8.09 Disclaimer or Quitclaim

In case the Company has sold, exchanged, dedicated or otherwise disposed of, or has agreed or intends to sell, exchange, dedicate or otherwise dispose of, or a Governmental Authority has lawfully ordered the Company to divest itself of, any property of a character excepted from the Lien hereof, or the Company desires to disclaim or quitclaim title to property to which the Company does not purport to have title, the Trustee shall, from time to time, execute such instruments of disclaimer or quitclaim as may be appropriate upon receipt by the Trustee of the following:

(a) an Officer's Certificate describing in reasonable detail the property to be disclaimed or quitclaimed; and

(b) an Opinion of Counsel stating the signer's opinion that such property is not subject to the Lien hereof or required to be subject thereto by any of the provisions hereof and that the execution of such disclaimer or quitclaim is appropriate.

Section 8.10 Miscellaneous

.

(a) If the Mortgaged Property shall be in the possession of a receiver or trustee, lawfully appointed, the powers hereinbefore conferred upon the Company with respect to the release of any part of the Mortgaged Property or any interest therein or the withdrawal of cash may be exercised, with the approval of the Trustee, by such receiver or trustee, notwithstanding that an Event of Default may have occurred and be continuing, and any request, certificate, appointment or approval made or signed by such receiver or trustee for such purposes shall be as effective as if made by the Company or any of its officers or appointees in the manner herein provided; and if the Trustee shall be in possession of the Mortgaged Property under any provision of this Indenture, then such powers may be exercised by the Trustee in its discretion notwithstanding that an Event of Default may have occurred and be continuing.

(b) If the Company shall continue to own or otherwise retain any interest in any property released from the Lien of this Indenture as provided in Section 8.03, 8.04 or 8.05, this Indenture shall not become or be, or be required to become or be, a Lien upon such property or any improvement, extension or addition to such property or renewals, replacements or substitutions of or for any part or parts of such property unless the Company shall execute and deliver to the Trustee an indenture supplemental hereto, in recordable form, containing a grant, conveyance, transfer and mortgage thereof to the Trustee.

(c) Notwithstanding the occurrence and continuance of an Event of Default, the Trustee, in its discretion, may release from the Lien hereof any part of the Mortgaged Property or permit the withdrawal of cash, upon compliance with the other conditions specified in this Article in respect thereof.

(d) No purchaser or grantee in good faith of property purporting to have been released hereunder shall be bound to ascertain the authority of the Trustee to execute the release, or to inquire as to any facts required by the provisions hereof for the exercise of this authority; nor shall any purchaser or grantee of any property or rights permitted by this Article to be sold, granted, exchanged, dedicated or otherwise disposed of, be under obligation to ascertain or inquire into the authority of the Company to make any such sale, grant, exchange, dedication or other disposition.

ARTICLE IX

SATISFACTION AND DISCHARGE

Section 9.01 Satisfaction and Discharge of Bonds

.

(a) Any Bond or Bonds, or any portion of the principal amount thereof, shall be deemed to have been paid for all purposes of this Indenture, and the entire indebtedness of the Company in respect thereof shall be deemed to have been satisfied and discharged, if there shall have been irrevocably deposited with the Trustee or any Paying Agent (other than the Company), in trust for the benefit of the Holders of the Bonds:

(i) money (including Funded Cash not otherwise applied pursuant to Section 8.06) in an amount which shall be sufficient, or

(ii) in the case of a deposit made prior to the Maturity of such Bonds or portions thereof, Eligible Obligations, which shall not contain provisions permitting the redemption or other prepayment thereof at the option of the issuer thereof, the principal of and the interest on which when due, without any regard to reinvestment thereof, will provide moneys which, together with the money, if any, deposited with or held by the Trustee or such Paying Agent, shall be sufficient, or

(iii) a combination of (i) and (ii) which shall be sufficient,

to pay when due the principal of and premium, if any, and interest, if any, due and to become due on such Bonds or portions thereofprovided, however, that in the case of the provision for payment or redemption of less than all the Bonds of any series or Tranche, such Bonds or portions thereof shall have been selected by the Bond Registrar as provided herein and, in the case of a redemption, the notice requisite to the validity of such redemption shall have been given or irrevocable authority shall have been given by the Company to the Trustee and the Bond Registrar to give such notice, under arrangements satisfactory to the Trustee; and provided, further, that the Company shall have delivered to the Trustee and such Paying Agent:

(x) if such deposit shall have been made prior to the Maturity of such Bonds, a Company Order stating that the money and Eligible

Obligations deposited in accordance with this Section shall be held in trust, as provided in Section 9.03; and

(y) if Eligible Obligations shall have been deposited, an Opinion of Counsel that the obligations so deposited constitute Eligible Obligations and do not contain provisions permitting the redemption or other prepayment at the option of the issuer thereof, and an opinion of an Independent Accountant of nationally recognized standing, selected by the Company, to the effect that the other requirements set forth in clause (ii) above have been satisfied.

(b) Upon the deposit of money or Eligible Obligations, or both, in accordance with this Section, together with the documents required by clauses (x) and (y) of Section 9.01(a), (i) the Holders of the Bonds or portions thereof in respect of which such deposit was made shall no longer be entitled to the benefit of the covenants of the Company under Article VI (except the covenants contained in Sections 6.01(a), 6.02 and 6.03), and (ii) the Trustee shall, upon receipt of a Company Request, acknowledge in writing that such Bonds or portions thereof are deemed to have been paid for all purposes of this Indenture and that the entire indebtedness of the Company in respect thereof is deemed to have been satisfied and discharged.

(c) If payment at Stated Maturity of less than all of the Bonds of any series, or any Tranche thereof, is to be provided for in the manner and with the effect provided in this Section, the Bond Registrar shall select such Bonds, or portions of principal amount thereof, in the manner specified by Section 5.03 for selection for redemption of less than all the Bonds of a series or Tranche, unless a different manner is specified as contemplated by Section 3.01 for Bonds of such series or Tranche.

(d) In the event that Bonds which shall be deemed to have been paid as provided in this Section do not mature and are not to be redeemed within the sixty (60) day period commencing with the date of the deposit with the Trustee or such Paying Agent of moneys or Eligible Obligations as aforesaid, the Company shall, as promptly as practicable, give a notice, in the same manner as a notice of redemption with respect to such Bonds, to the Holders of such Bonds to the effect that such deposit has been made and the effect thereof.

(e) Notwithstanding the satisfaction and discharge of any Bonds as aforesaid, the obligations of the Company and the Trustee in respect of such Bonds under Sections 3.04, 3.05, 3.06, 5.04, 6.02, 6.03, 11.07 and 11.15, Article VII and this Article IX shall survive.

(f) The Company shall pay, and shall indemnify the Trustee and each Holder of Bonds which are deemed to have been paid as provided in this Section against, any tax, fee or other charge imposed on or assessed against the Eligible Obligations deposited with the Trustee or the principal or interest received by the Trustee in respect of such Eligible Obligations.

(g) Anything herein to the contrary notwithstanding, if at any time after a Bond would be deemed to have been satisfied or discharged pursuant to this Section (without regard to the provisions of this subsection (g)), the Trustee shall be required to return the money or Eligible Obligations, or combination thereof, deposited with it as aforesaid to the Company or

its representative under any applicable federal or state bankruptcy, insolvency or other similar law, the indebtedness of the Company in respect of such Bond shall thereupon be deemed retroactively not to have been satisfied and discharged, as aforesaid, and to remain Outstanding.

Section 9.02 Satisfaction and Discharge of Indenture

.

(a) This Indenture shall upon Company Request cease to be of further effect (except as hereinafter expressly provided), and the Trustee, at the expense of the Company, shall execute proper instruments acknowledging satisfaction and discharge of this Indenture, when

(i) either:

(A) all Bonds theretofore authenticated and delivered (other than (1) Bonds which have been destroyed, lost or wrongfully taken and which have been replaced or paid as provided in Section 3.06, and (2) Bonds deemed to have been paid in accordance with Section 9.01) have been delivered to the Trustee for cancellation; or

(B) all Bonds not theretofore delivered to the Trustee for cancellation (other than Bonds described in clause (1) of subclause (A) above) shall be deemed to have been paid in accordance with Section 9.01;

(ii) the Company has paid or caused to be paid all other sums payable hereunder by the Company; and

(iii) the Company has delivered to the Trustee an Officer's Certificate and an Opinion of Counsel, each stating that all conditions precedent herein provided for relating to the satisfaction and discharge of this Indenture have been complied with.

(b) Notwithstanding the satisfaction and discharge of this Indenture as aforesaid, the obligations of the Company and the Trustee under Sections 11.07 and 11.15 and this Article IX shall survive.

(c) Upon satisfaction and discharge of this Indenture as provided in this Section, the Trustee shall assign, transfer, reconvey and otherwise turn over to the Company the Mortgaged Property (other than money and Eligible Obligations held by the Trustee pursuant to Section 9.03) and shall execute and deliver to the Company such deeds and other instruments as, in the judgment of the Company, shall be necessary, desirable or appropriate to effect or evidence such assignment, transfer, reconveyance and turning over and the release and discharge of the Lien of this Indenture.

Section 9.03 Application of Trust Money

.

Neither the Eligible Obligations nor the money deposited with the Trustee pursuant to Section 9.01, nor the principal or interest payments on any such Eligible Obligations, shall be withdrawn or used for any purpose other than, and shall be held in trust for, the payment

of the principal of and premium, if any, and interest, if any, on the Bonds or portions of principal amount thereof in respect of which such deposit was made, all subject, however, to the provisions of Section 6.03; provided, however, that, unless an Event of Default shall have occurred and be continuing, any cash received from such principal or interest payments on such Eligible Obligations deposited with the Trustee, if not then needed for such purpose, shall, to the extent practicable, be invested in Eligible Obligations of the type described in clause (ii) of Section 9.01(a), and, subject to the rights of the Trustee under Section 11.07, interest earned from such reinvestment shall be paid over to the Company as received by the Trustee, free and clear of the Lien of this Indenture; and provided, however, that unless an Event of Default shall have occurred and be continuing, any moneys held by the Trustee in accordance with this Section on the Maturity of all such Bonds in excess of the amount required to pay the principal of and premium, if any, and interest, if any, then due on such Bonds, subject to the rights of the Trustee under Section 11.07, shall be paid over to the Company free and clear of the Lien of this Indenture.

ARTICLE X

EVENTS OF DEFAULT; REMEDIES

Section 10.01 Events of Default

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An “Event of Default”, wherever used herein with respect to the Bonds, means any one the following events:

(a) failure to pay interest, if any, on any Bond within sixty (60) days after same becomes due and payable; or

(b) failure to pay the principal of or premium, if any, on any Bond within three (3) Business Days after its Maturity; or

(c) failure to perform or breach of any covenant or warranty of the Company in this Indenture (other than a covenant or warranty a default in the performance of which or breach of which is elsewhere in this Section specifically dealt with) for a period of ninety (90) days after there has been given, by registered or certified mail, to the Company by the Trustee, or to the Company and the Trustee by the Holders of at least 33% in aggregate principal amount of the Bonds then Outstanding, a written notice specifying such default or breach and requiring it to be remedied and stating that such notice is a “Notice of Default” hereunder, unless the Trustee, or the Trustee and the Holders of an aggregate principal amount of Bonds not less than the aggregate principal amount of Bonds the Holders of which gave such notice, as the case may be, shall agree in writing to an extension of such period prior to its expiration, provided, however, that the Trustee, or the Trustee and the Holders of such aggregate principal amount of Bonds, as the case may be, shall be deemed to have agreed to an extension of such period if corrective action is initiated by the Company within such period and is being diligently pursued; or

(d) the entry by a court having jurisdiction in the premises of (i) a decree or order for relief in respect of the Company in an involuntary case or proceeding under any

applicable federal or state bankruptcy, insolvency, reorganization or other similar law, or (ii) a decree or order adjudging the Company a bankrupt or insolvent, or approving as properly filed a petition by one or more Persons other than the Company seeking reorganization, arrangement, adjustment or composition of or in respect of the Company under applicable federal or state law, or appointing a custodian, receiver, liquidator, assignee, trustee, sequestrator or other similar official for the Company or for any substantial part of its property, or ordering the winding up or liquidation of its affairs, and any such decree or order for relief or any such other decree or order shall have remained unstayed and in effect for a period of ninety (90) consecutive days; or

(e) the commencement by the Company of a voluntary case or proceeding under any applicable federal or state bankruptcy, insolvency, reorganization or other similar law or of any other case or proceeding to be adjudicated a bankrupt or insolvent, or the consent by it to the entry of a decree or order for relief in respect of the Company in a case or proceeding under any applicable federal or state bankruptcy, insolvency, reorganization or other similar law or to the commencement of any bankruptcy or insolvency case or proceeding against it, or the filing by it of a petition or answer or consent seeking reorganization or relief under any applicable federal or state law, or the consent by it to the filing of such petition or to the appointment of or taking possession by a custodian, receiver, liquidator, assignee, trustee, sequestrator or similar official of the Company or of any substantial part of its property, or the making by it of an assignment for the benefit of creditors, or the admission by it in writing of its inability to pay its debts generally as they become due, or the authorization of such action by the Board of Directors; or

(f) the occurrence of a Matured Event of Default under any Class "A" Mortgage;provided, however, that, anything in this Indenture to the contrary notwithstanding, the waiver or cure of such event of default under such Class "A" Mortgage and the rescission and annulment of the consequences thereof shall constitute a waiver of the corresponding Event of Default hereunder and a rescission and annulment of the consequences thereof.

Section 10.02 Acceleration of Maturity; Rescission and Annulment

.

(a) If an Event of Default shall have occurred and be continuing, then in every such case the Trustee or the Holders of not less than 33% in aggregate principal amount of the Bonds then Outstanding may declare the principal amount of all of the Bonds (or, in the case of any Bond of any series the terms of which specify an amount to be due and payable thereon upon acceleration of the Maturity thereof as contemplated by Section 3.01, such amount as may be specified by the terms thereof) to be due and payable immediately, by a notice in writing to the Company (and to the Trustee if given by Holders), and upon receipt by the Company of notice of such declaration such principal amount (or specified amount), together with premium, if any, and accrued interest, if any, thereon, shall become immediately due and payable.

(b) At any time after such a declaration of acceleration of the maturity of the Bonds then Outstanding shall have been made, but before any sale of any of the Mortgaged Property has been made and before a judgment or decree for payment of the money due shall have been obtained by the Trustee as provided in this Article, the Event or Events of Default giving rise to such declaration of acceleration shall, without further act, be deemed to have been

waived, and such declaration and its consequences shall, without further act, be deemed to have been rescinded and annulled, if:

(i) the Company shall have paid or deposited with the Trustee a sum sufficient to pay

(A) all overdue interest, if any, on all Bonds then Outstanding;

(B) the principal of and premium, if any, on any Bonds then Outstanding which have become due otherwise than by such declaration of acceleration and interest thereon at the rate or rates prescribed therefor in such Bonds; and

(C) all amounts due to the Trustee under Section 11.07; and

(ii) any other Event or Events of Default, other than the non-payment of the principal of Bonds which shall have become due solely by such declaration of acceleration, shall have been cured or waived as provided in Section 10.17.

No such rescission shall affect any subsequent Event of Default or impair any right consequent thereon.

Section 10.03 Entry Upon Mortgaged Property

.

If an Event of Default shall have occurred and be continuing, the Company, upon demand of the Trustee and if and to the extent permitted by law, shall forthwith surrender to the Trustee the actual possession of, and the Trustee, by such officers or agents as it may appoint, may enter upon, and take possession of, the Mortgaged Property; and the Trustee may hold, operate and manage the Mortgaged Property, and in that connection shall have access to the relevant books and accounts of the Company, and may make all needful repairs and such renewals, replacements, betterments and improvements as to the Trustee shall seem prudent; and the Trustee, subject to the rights, if any, of others to receive collections from former, present or future customers, may receive the rents, issues, profits, revenues and other income of the Mortgaged Property; and, after deducting the costs and expenses of entering, taking possession, holding, operating and managing the Mortgaged Property, as well as payments for insurance and taxes and other proper charges upon the Mortgaged Property prior to the Lien of this Indenture and reasonable compensation to itself, its agents and counsel, the Trustee may apply the same as provided in Section 10.07. Whenever all that is then due in respect of the principal of and premium, if any, and interest, if any, on the Bonds and under any of the terms of this Indenture shall have been paid and all defaults hereunder shall have been cured, the Trustee shall surrender possession of the Mortgaged Property to the Company.

Section 10.04 Power of Sale; Suits for Enforcement

.

If an Event of Default shall have occurred and be continuing, the Trustee, by such officers or agents as it shall appoint, with or without entry, in its discretion may, subject to the provisions of Section 10.16 and if and to the extent permitted by law:

(a) sell, subject to any mandatory requirements of applicable law, the Mortgaged Property as an entirety, or in such parcels as the Holders of a majority in aggregate principal amount of the Bonds then Outstanding shall in writing request, or in the absence of such request, as the Trustee may determine, to the highest bidder at public auction at such place and at such time (which sale may be adjourned by the Trustee from time to time in its discretion by announcement at the time and place fixed for such sale, without further notice) and upon such terms as the Trustee may fix and briefly specify in a notice of sale to be published once in each week for four successive weeks prior to such sale in an Authorized Publication in each Place of Payment for the Bonds of each series; or

(b) proceed to protect and enforce its rights and the rights of the Holders of Bonds under this Indenture by sale pursuant to judicial proceedings or by a suit, action or proceeding in equity or at law or otherwise, whether for the specific performance of any covenant or agreement contained in this Indenture or in aid of the execution of any power granted in this Indenture or for the foreclosure of this Indenture or for the enforcement of any other legal, equitable or other remedy, as the Trustee, being advised by counsel, shall deem most effectual to protect and enforce any of the rights of the Trustee or the Holders of Bonds.

Section 10.05 Incidents of Sale

.

Upon any sale of any of the Mortgaged Property, whether made under the power of sale hereby given or pursuant to judicial proceedings, to the extent permitted by law:

(a) the principal amount (or, if any of the Bonds are Discount Bonds, such portion of the principal amount of such Bonds as may be specified in the terms thereof as contemplated by Section 3.01) of all Outstanding Bonds, if not previously due, shall at once become and be immediately due and payable together with premium, if any, and accrued interest, if any, thereon;

(b) any Holder or Holders of Bonds or the Trustee may bid for and purchase the property offered for sale, and upon compliance with the terms of sale may hold, retain and possess and dispose of such property, without further accountability, and may, in paying the purchase money therefor, deliver any Outstanding Bonds or claims for interest thereon in lieu of cash to the amount which shall, upon distribution of the net proceeds of such sale, be payable thereon, and such Bonds, in case the amounts so payable thereon shall be less than the amount due thereon, shall be returned to the Holders thereof after being appropriately stamped to show partial payment;

(c) the Trustee may make and deliver to the purchaser or purchasers a good and sufficient deed, bill of sale and instrument of assignment and transfer of the property sold;

(d) the Trustee is hereby irrevocably appointed the true and lawful attorney of the Company, in its name and stead, to make all necessary deeds, bills of sale and instruments of assignment and transfer of the property so sold; and for that purpose it may execute all necessary deeds, bills of sale and instruments of assignment and transfer, and may substitute one or more persons, firms or corporations with like power, the Company hereby ratifying and confirming all that its said attorney or such substitute or substitutes shall lawfully do by virtue hereof; but, if so

requested by the Trustee or by any purchaser, the Company shall ratify and confirm any such sale or transfer by executing and delivering to the Trustee or to such purchaser or purchasers all proper deeds, bills of sale, instruments of assignment and transfer and releases as may be designated in any such request;

(e) all right, title, interest, claim and demand whatsoever, either at law or in equity or otherwise, of the Company of, in and to the property so sold shall be divested and such sale shall be a perpetual bar both at law and in equity against the Company, its successors and assigns, and against any and all persons claiming or who may claim the property sold or any part thereof from, through or under the Company, subject, however, to the rights, if any, held by others to receive collections from former, present or future customers; and

(f) the receipt of the Trustee or of the officer making such sale shall be a sufficient discharge to the purchaser or purchasers at such sale for his or her or their purchase money and such purchaser or purchasers and his or her or their assigns or personal representatives shall not, after paying such purchase money and receiving such receipt, be obliged to see to the application of such purchase money, or be in anywise answerable for any loss, misapplication or non-application thereof

Section 10.06 Collection of Indebtedness and Suits for Enforcement by Trustee

.

(a) If an Event of Default described in Section 10.01(a) or 10.01(b) shall have occurred and be continuing, the Company shall, upon demand of the Trustee, pay to it, for the benefit of the Holders of the Bonds with respect to which such Event of Default shall have occurred, the whole amount then due and payable on such Bonds for principal and premium, if any, and interest, if any, and, in addition thereto, such further amount as shall be sufficient to cover any amounts due to the Trustee under Section 11.07.

(b) If the Company shall fail to pay such amounts forthwith upon such demand, the Trustee, in its own name and as trustee of an express trust, may institute a judicial proceeding for the collection of the sums so due and unpaid, may prosecute such proceeding to judgment or final decree and may enforce the same against the Company or any other obligor upon such Bonds and collect the moneys adjudged or decreed to be payable in the manner provided by law out of the property of the Company or any other obligor upon such Bonds, wherever situated.

(c) The Trustee shall, to the extent permitted by law, be entitled to sue and recover judgment as aforesaid either before, during or after the pendency of any proceedings for the enforcement of the Lien of this Indenture, and in case of a sale of the Mortgaged Property or any part thereof and the application of the proceeds of sale as aforesaid, the Trustee, in its own name and as trustee of an express trust, shall be entitled to enforce payment of and to receive, all amounts then remaining due and unpaid upon the Bonds then Outstanding for principal, premium, if any, and interest, if any, for the benefit of the Holders thereof, and shall be entitled to recover judgment for any portion of the same remaining unpaid, with interest as aforesaid. No recovery of any such judgment by the Trustee and no levy of any execution upon any such judgment upon any of the Mortgaged Property or any other property of the Company shall affect or impair the Lien of this Indenture upon the Mortgaged Property or any part thereof or any

rights, powers or remedies of the Trustee hereunder, or any rights, powers or remedies of the Holders of the Bonds.

Section 10.07 Application of Money Collected

.

Any money collected by the Trustee pursuant to this Article, including any rents, issues, profits, revenues and other income collected pursuant to Section 10.03 (subject to the rights, if any, of others to receive collections therein referred to and after the deductions therein provided) and any proceeds of any sale (after deducting the costs and expenses of such sale, including a reasonable compensation to the Trustee, its agents and counsel, and any taxes, assessments or liens prior to the Lien of this Indenture, except any thereof subject to which such sale shall have been made), whether made under any power of sale herein granted or pursuant to judicial proceedings, and any other money collected by the Trustee under the provisions of this Indenture (unless otherwise herein specifically provided for), together with, in the case of an entry or sale or as otherwise provided herein, any other sums then held by the Trustee as part of the Mortgaged Property, shall be applied in the following order, at the date or dates fixed by the Trustee and, in case of the distribution of such money on account of principal or premium, if any, or interest, if any, upon presentation of the Bonds and the notation thereon of the payment if only partially paid and upon surrender thereof if fully paid:

FIRST: To the payment of all amounts due the Trustee under Section 11.07;

SECOND: To the payment of the whole amount then due and unpaid upon the Outstanding Bonds for principal and premium, if any, and interest, if any, in respect of which or for the benefit of which such money has been collected; and in case such proceeds shall be insufficient to pay in full the whole amount so due and unpaid upon such Bonds, then to the payment of such principal and interest, if any, without any preference or priority, ratably according to the aggregate amount so due and unpaid, with any balance then remaining to the payment of premium, if any, ratably as aforesaid; provided, however, that any money specifically collected by the Trustee in respect of interest or pursuant to Section 10.03 shall first be applied to the payment of interest so due; and

THIRD: To the payment of the remainder, if any, to the Company or to whomsoever may be lawfully entitled to receive the same or as a court of competent jurisdiction may order.

Section 10.08 Receiver

.

If an Event of Default shall have occurred and, during the continuance thereof, the Trustee shall have commenced judicial proceedings to enforce any right under this Indenture, the Trustee shall, to the extent permitted by law, be entitled, as against the Company, without notice or demand and without regard to the adequacy of the security for the Bonds or the solvency of the Company, to the appointment of a receiver of the Mortgaged Property, and, subject to the rights, if any, of others to receive collections from former, present or future customers, of the rents, issues, profits, revenues and other income thereof but, notwithstanding the appointment of any receiver, the Trustee shall be entitled to retain possession and control of, and to collect and

receive the income from, cash, securities and other personal property held by, or required to be deposited or pledged with, the Trustee hereunder.

Section 10.09 Trustee May File Proofs of Claim

.

(a) In case of the pendency of any receivership, insolvency, liquidation, bankruptcy, reorganization, arrangement, adjustment, composition or other judicial proceeding relative to the Company or any other obligor upon the Bonds or the property of the Company or of such other obligor or their creditors, the Trustee (irrespective of whether the principal of the Bonds shall then be due and payable as therein expressed or by declaration or otherwise and irrespective of whether the Trustee shall have made any demand on the Company for the payment of overdue principal or interest) shall be entitled and empowered, by intervention in such proceeding or otherwise:

(i) to file and prove a claim for the whole amount of principal, premium, if any, and interest, if any, owing and unpaid in respect of the Bonds and to file such other papers or documents as may be necessary or advisable in order to have the claims of the Trustee (including any claim for amounts due to the Trustee under Section 11.07) and of the Holders allowed in such judicial proceeding; and

(ii) to collect and receive any moneys or other property payable or deliverable on any such claims and to distribute the same;

and any custodian, receiver, assignee, trustee, liquidator, sequestrator or other similar official in any such judicial proceeding is hereby authorized by each Holder to make such payments to the Trustee and, in the event that the Trustee shall consent to the making of such payments directly to the Holders, to pay to the Trustee any amounts due it under Section 11.07.

(b) Nothing herein contained shall be deemed to authorize the Trustee to authorize or consent to or accept or adopt on behalf of any Holder any plan of reorganization, arrangement, adjustment or composition affecting the Bonds or the rights of any Holder thereof or to authorize the Trustee to vote in respect of the claim of any Holder in any such proceeding; provided, however, that the Trustee may, on behalf of the Holders, vote for the election of a trustee in bankruptcy or similar official and be a member of a creditors or other similar committee.

Section 10.10 Trustee May Enforce Claims Without Possession of Bonds

.

All rights of action and claims under this Indenture or on the Bonds may be prosecuted and enforced by the Trustee without the possession of any of the Bonds or the production thereof in any proceeding relating thereto, and any such proceeding instituted by the Trustee shall be brought in its own name as trustee of an express trust, and any recovery of judgment shall, after provision for the payment of the reasonable compensation, expenses, disbursements and advances of the Trustee, its agents and counsel, be for the ratable benefit of the Holders in respect of which such judgment has been recovered.

Section 10.11 Limitation on Suits

.

No Holder shall have any right to institute any proceeding, judicial or otherwise, with respect to this Indenture, or for the appointment of a receiver or trustee, or for any other remedy hereunder, unless:

(a) such Holder shall have previously given written notice to the Trustee of a continuing Event of Default;

(b) the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding shall have made written request to the Trustee to institute proceedings in respect of such Event of Default in its own name as Trustee hereunder;

(c) such Holder or Holders shall have offered to the Trustee reasonable indemnity against the costs, expenses and liabilities to be incurred in compliance with such request;

(d) the Trustee for sixty (60) days after its receipt of such notice, request and offer of indemnity shall have failed to institute any such proceeding; and

(e) no direction inconsistent with such written request shall have been given to the Trustee during such 60-day period by the Holders of a majority in aggregate principal amount of the Bonds then Outstanding;

it being understood and intended that no one or more of such Holders shall have any right in any manner whatever by virtue of, or by availing of any provision of this Indenture to affect, disturb or prejudice the rights of any other of such Holders or to obtain or to seek to obtain priority or preference over any other of such Holders or to enforce any right under this Indenture, except in the manner herein provided and for the equal and ratable benefit of all of such Holders.

Section 10.12 Unconditional Right of Holders to Receive Principal, Premium and Interest

.

Notwithstanding any other provision in this Indenture, the Holder of any Bond shall have the right, which is absolute and unconditional, to receive payment of the principal of and premium if any, and (subject to Section 3.07) interest, if any, on such Bond on the Stated Maturity or Maturities expressed in such Bond (or, in the case of redemption, on the Redemption Date) and to institute suit for the enforcement of any such payment, and such rights shall not be impaired without the consent of such Holder.

Section 10.13 Restoration of Rights and Remedies

.

If the Trustee or any Holder has instituted any proceeding to enforce any right or remedy under this Indenture and such proceeding shall have been discontinued or abandoned for any reason, or shall have been determined adversely to the Trustee or to such Holder, then and in every such case, subject to any determination in such proceeding, the Company, and Trustee and such Holder shall be restored severally and respectively to their former positions hereunder

and thereafter all rights and remedies of the Trustee and such Holder shall continue as though no such proceeding had been instituted.

Section 10.14 Rights and Remedies Cumulative

.

Except as otherwise provided in Section 3.06(f), no right or remedy herein conferred upon or reserved to the Trustee or to the Holders is intended to be exclusive of any other right or remedy, and, subject to Section 10.11, every right and remedy shall, to the extent permitted by law, be cumulative and in addition to every other right and remedy given hereunder or now or hereafter existing at law or in equity or otherwise. The assertion or employment of any right or remedy hereunder, or otherwise, shall not prevent the concurrent assertion or employment of any other appropriate right or remedy.

Section 10.15 Delay or Omission Not Waiver

.

No delay or omission of the Trustee or of any Holder to exercise any right or remedy accruing upon any Event of Default shall impair any such right or remedy or constitute a waiver of any such Event of Default or an acquiescence therein. Every right and remedy given by this Article or by law to the Trustee or to the Holders may be exercised from time to time, and as often as may be deemed expedient, by the Trustee or by the Holders, as the case may be.

Section 10.16 Control by Majority Holders of Bonds

.

If an Event of Default shall have occurred and be continuing, the Holders of a majority in aggregate principal amount of the Bonds then Outstanding shall have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee, or exercising any trust or power conferred on the Trustee herein, provided, however, that

(a) such direction shall not be in conflict with any rule of law or with this Indenture, and could not involve the Trustee in personal liability in circumstances where indemnity would not, in the Trustee's sole discretion, be adequate;

(b) such direction shall not be unduly prejudicial to the rights of the nonassenting Holders; and

(c) the Trustee may take any other action deemed proper by the Trustee which is not inconsistent with such direction.

Section 10.17 Waiver of Past Defaults

.

(a) Before any sale of any of the Mortgaged Property, and before a judgment or decree for payment of the money due shall have been obtained by the Trustee, as in this Article provided, the Holders of not less than a majority in aggregate principal amount of the Bonds then Outstanding may, by an Act of such Holders delivered to the Trustee and the Company, on behalf of the Holders of all the Bonds then Outstanding waive any past default hereunder and its consequences, except a default:

(i) in the payment of the principal of or premium, if any, or interest, if any, on any Bond Outstanding, or

(ii) in respect of a covenant or provision hereof which under Section 14.02(a) cannot be modified or amended without the consent of the Holder of each Outstanding Bond of any series or Tranche affected.

(b) Upon any such waiver, such default shall cease to exist, and any and all Events of Default arising therefrom shall be deemed to have been cured, for every purpose of this Indenture; but no such waiver shall extend to any subsequent or other default or impair any right consequent thereon. A waiver of any past default and its consequences given by or on behalf of any Holder of the Bonds in connection with a purchase of, or tender or exchange offer for, such Holder's Bonds will not be rendered invalid by such purchase, tender or exchange.

Section 10.18 Undertaking for Costs

.

The Company and the Trustee agree, and each Holder of Bonds by its acceptance thereof shall be deemed to have agreed, that any court may in its discretion require, in any suit for the enforcement of any right or remedy under this Indenture, or in any suit against the Trustee for any action taken, suffered or omitted by it as Trustee, the filing by any party litigant in such suit of an undertaking to pay the costs of such suit, and that such court may in its discretion assess reasonable costs, including reasonable attorneys' fees, against any party litigant in such suit, having due regard to the merits and good faith of the claims or defenses made by such party litigant; but the provisions of this Section shall not apply to any suit instituted by the Company, to any suit instituted by the Trustee, to any suit instituted by any Holder, or group of Holders, holding in the aggregate more than 10% in aggregate principal amount of the Bonds then Outstanding, or to any suit instituted by any Holder for the enforcement of the payment of the principal of or premium, if any, or interest, if any, on any Bond on or after the Stated Maturity or Maturities expressed in such Bond (or, in the case of redemption, on or after the Redemption Date).

Section 10.19 Waiver of Appraisement and Other Laws

.

To the full extent that it may lawfully so agree, the Company shall not at any time set up, claim or otherwise seek to take the benefit or advantage of any appraisement, valuation, stay, extension or redemption law now or hereafter in effect, in order to prevent or hinder the enforcement of this Indenture or the absolute sale of the Mortgaged Property, or any part thereof, or the possession thereof, or any part thereof, by any purchaser at any sale under this Article; and the Company, for itself and all who may claim under it, so far as it or they now or hereafter may lawfully do so, hereby waives the benefit of all such laws. The Company, for itself and all who may claim under it, waives, to the extent that it may lawfully do so, all right to have the Mortgaged Property marshalled upon any foreclosure of the Lien hereof, and agrees that any court having jurisdiction to foreclose the Lien of this Indenture may order the sale of the Mortgaged Property as an entirety.

Section 10.20 Defaults under Class “A” Mortgages

.

In addition to every other right and remedy provided herein, the Trustee may exercise any right or remedy available to the Trustee in its capacity as owner and holder of Pledged Bonds which arises as a result of a default or Matured Event of Default under any Class “A” Mortgage, whether or not an Event of Default shall then have occurred and be continuing.

ARTICLE XI

THE TRUSTEE

Section 11.01 Certain Duties and Responsibilities

.

(a) The Trustee shall have and be subject to all the duties and responsibilities and all of the protections, exculpations and limitations on liability specified with respect to an indenture trustee in the Trust Indenture Act, including those deemed by the Trust Indenture Act to be included herein, and no implied covenants or obligations shall be read into this Indenture against the Trustee. For purposes of Sections 315(a) and 315(c) of the Trust Indenture Act, the term “default” is hereby defined as an Event of Default which has occurred and is continuing.

(b) No provision of this Indenture shall require the Trustee to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties hereunder, or in the exercise of any of its rights or powers, if it shall have reasonable grounds for believing that repayment of such funds or adequate indemnity against such risk or liability is not reasonably assured to it.

(c) Whether or not therein expressly so provided, every provision of this Indenture relating to the conduct or affecting the liability of or affording protection to the Trustee shall be subject to the provisions of this Section.

Section 11.02 Notice of Defaults

.

(a) The Trustee shall give the Holders notice of any default hereunder known to the Trustee in the manner and to the extent required to do so by the Trust Indenture Act, unless such default shall have been cured or waived, provided, however, that in the case of any default of the character specified in Section 10.01(c), no such notice to Holders shall be given until at least forty-five (45) days after the occurrence thereof. For the purpose of this Section, the term “default” means any event which is, or after notice or lapse of time, or both, would become, an Event of Default.

(b) The Trustee shall give to the trustee under each Class “A” Mortgage a copy of each notice of default given to the Holders pursuant to this Section. In addition, the Trustee shall give to the Holders copies of each notice of default under any Class “A” Mortgage given to the Trustee in its capacity as owner and holder of Pledged Bonds issued and outstanding thereunder.

Section 11.03 Certain Rights of Trustee

.

Subject to the provisions of Section 11.01:

(a) the Trustee may rely and shall be protected in acting or refraining from acting upon any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document believed by it to be genuine and to have been signed or presented by the proper party or parties;

(b) any request or direction of the Company mentioned herein shall be sufficiently evidenced by a Company Request or Company Order, or as otherwise expressly provided herein, and any resolution of the Board of Directors may be sufficiently evidenced by a Board Resolution;

(c) whenever in the administration of this Indenture the Trustee shall deem it desirable that a matter be proved or established prior to taking, suffering or omitting any action hereunder, the Trustee (unless other evidence is specifically prescribed herein) may, in the absence of bad faith on its part, rely upon an Officer's Certificate;

(d) the Trustee may consult with counsel and the written advice of such counsel or any Opinion of Counsel shall be full and complete authorization and protection in respect of any action taken, suffered or omitted by it hereunder in good faith and in reliance thereon;

(e) the Trustee shall be under no obligation to exercise any of the rights or powers vested in it by this Indenture at the request or direction of any Holder pursuant to this Indenture, unless such Holder shall have offered to the Trustee reasonable security or indemnity against the costs, expenses and liabilities which might be incurred by it in compliance with such request or direction;

(f) the Trustee shall not be bound to make any investigation into the facts or matters stated in any resolution, certificate, statement, instrument, opinion, report, notice, request, direction, consent, order, bond, debenture, note, other evidence of indebtedness or other paper or document, but the Trustee, in its discretion, may make such further inquiry or investigation into such facts or matters as it may see fit, and, if the Trustee shall determine to make such further inquiry or investigation, it shall (subject to applicable legal requirements) be entitled to examine, during normal business hours, the relevant books, records and premises of the Company, personally or by agent or attorney;

(g) the Trustee may execute any of the trusts or powers hereunder or perform any duties hereunder either directly or by or through agents or attorneys and the Trustee shall not be responsible for any misconduct or negligence on the part of any agent or attorney appointed with due care by it hereunder;

(h) except as otherwise provided in Section 10.01(c), the Trustee shall not be charged with knowledge of any Event of Default unless either (i) a Responsible Officer of the Trustee assigned to the Corporate Trust Administration Division of the Trustee (or any successor

division or department of the Trustee) shall have actual knowledge of the Event of Default, or (ii) written notice of such Event of Default shall have been given to the Trustee by the Company, any other obligor on the Bonds or by any Holder of such Bonds or, in the case of an Event of Default described in Section 10.01(f), by the trustee under the related Class "A" Mortgage, and

(i) the Trustee shall not be personally liable, in the case of entry by it upon the Mortgaged Property, for debts contracted or damages incurred in the management or operation of the Mortgaged Property.

Section 11.04 Not Responsible for Recitals or Issuance of Bonds

.

The recitals contained herein and in the Bonds (except the Trustee's certificates of authentication) shall be taken as the statements of the Company and neither the Trustee nor any Authenticating Agent assumes any responsibility for their correctness. The Trustee makes no representations as to the validity or sufficiency of this Indenture or of the Bonds, as to the value or condition of the Mortgaged Property or any part thereof; or as to the title of the Company thereto or as to the security afforded thereby or hereby, or as to the validity of any Class "A" Bonds or other securities at any time pledged or deposited with the Trustee hereunder. Neither the Trustee nor any Authenticating Agent shall be accountable for the use or application by the Company of Bonds or the proceeds thereof or of any moneys paid to the Company or upon Company Order under any provision hereof.

Section 11.05 May Hold Bonds

.

Each of the Trustee, any Authenticating Agent, any Paying Agent, any Bond Registrar or any other agent of the Company, in its individual or any other capacity, may become the owner or pledgee of Bonds and, subject to Sections 11.08 and 11.13, may otherwise deal with the Company with the same rights it would have if it were not such Trustee, Authenticating Agent, Paying Agent, Bond Registrar or other agent.

Section 11.06 Money Held in Trust

.

Money held by the Trustee in trust hereunder need not be segregated from other funds, except to the extent required by law. The Trustee shall be under no liability for interest on any money received by it hereunder except as otherwise agreed with the Company.

Section 11.07 Compensation and Reimbursement.

(a) The Company shall:

(i) pay to the Trustee from time to time reasonable compensation for all services rendered by it hereunder (which compensation shall not be limited by any provision of law in regard to the compensation of a trustee of an express trust);

(ii) except as otherwise expressly provided herein, reimburse the Trustee upon its request for all reasonable expenses, disbursements and advances reasonably incurred or made by the Trustee in accordance with any provision of

this Indenture (including the reasonable compensation and the expenses and disbursements of its agents and counsel), except any such expense, disbursement or advance as may be attributable to its negligence or bad faith; and

(iii) indemnify the Trustee and hold it harmless from and against any loss, liability or expense incurred without negligence or bad faith on its part, arising out of or in connection with the acceptance or administration of the trust or trusts hereunder, including the reasonable costs and expenses of defending itself against any claim or liability in connection with the exercise or performance of any of its powers or duties hereunder,

(b) As security for the performance of the obligations of the Company under this Section, the Trustee shall have a Lien prior to the Bonds upon the Mortgaged Property and any money collected by the Trustee as proceeds of the Mortgaged Property, other than property and funds held in trust under Section 9.03 (except as otherwise provided in Section 9.03).

(c) In addition to the rights provided to the Trustee in Section 11.07(b), whenever the Trustee incurs any loss, liability or expense without negligence or bad faith on its part, including the costs and expenses of defending itself against any claim or liability in connection with the exercise or performance of any of its powers or duties hereunder, or renders services, after an Event of Default specified in Section 10.01(d) or (e) occurs, any such loss, liability, expense (including the reasonable charges and expenses of its counsel) or compensation for services is intended to constitute expenses of administration under any applicable federal or state bankruptcy, insolvency or other similar law.

(d) “Trustee” for purposes of this Section 11.07 shall include any predecessor Trustee;provided, however, that the negligence or bad faith of any Trustee hereunder shall not affect the rights of any other Trustee hereunder.

(e) The provisions of Section 11.07(a) and (c) shall survive the termination of this Indenture.

Section 11.08 Disqualification; Conflicting Interests

.

If the Trustee shall have or acquire any conflicting interest within the meaning of the Trust Indenture Act, it shall either eliminate such conflicting interest or resign to the extent, in the manner and with the effect, and subject to the conditions, provided in the Trust Indenture Act and this Indenture.

Section 11.09 Corporate Trustee Required; Eligibility

.

There shall at all times be a Trustee hereunder which shall be:

(a) a corporation organized and doing business under the laws of the United States of America, any state or territory thereof or the District of Columbia, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least $50,000,000 and subject to supervision or examination by federal or state authority, or

(b) if and to the extent permitted by the Commission by rule, regulation or order upon application, a corporation or other Person and doing business under the laws of a foreign government, authorized under such laws to exercise corporate trust powers, having a combined capital and surplus of at least $50,000,000 or the Dollar equivalent of the applicable foreign currency and subject to supervision or examination by authority of such foreign government or a political subdivision thereof substantially equivalent to supervision or examination applicable to United States institutional trustees,

and, in either case, qualified and eligible under this Article and not otherwise disqualified under Section 310(a)(5) of the Trust Indenture Act. If such corporation publishes reports of condition at least annually, pursuant to law or to the requirements of such supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such corporation shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time the Trustee shall cease to be eligible in accordance with the provisions of this Section, it shall resign immediately in the manner and with the effect hereinafter specified in this Article.

Section 11.10 Resignation and Removal; Appointment of Successor

.

(a) No resignation or removal of the Trustee and no appointment of a successor Trustee pursuant to this Article shall become effective until the acceptance of appointment by the successor Trustee in accordance with the applicable requirements of Section 11.11.

(b) The Trustee may resign at any time by giving written notice thereof to the Company. If the instrument of acceptance by a successor Trustee required by Section 11.11 shall not have been delivered to the Trustee within thirty (30) days after the giving of such notice of resignation, the resigning Trustee may petition any court of competent jurisdiction for the appointment of a successor Trustee.

(c) The Trustee may be removed at any time by Act of the Holders of a majority in principal amount of the Bonds then Outstanding delivered to the Trustee and to the Company.

(d) If at any time:

(i) the Trustee shall fail to comply with Section 11.08 after written request therefor by the Company or by any Holder who has been a bona fide Holder for at least six months, or

(ii) the Trustee shall cease to be eligible under Section 11.09 and shall fail to resign after written request therefor by the Company or by any such Holder, or

(iii) the Trustee shall become incapable of acting or shall be adjudged a bankrupt or insolvent or a receiver of the Trustee or of its property shall be appointed or any public officer shall take charge or control of the Trustee or of its property or affairs for the purpose of rehabilitation, conservation or liquidation,

then, in any such case, (x) the Company by a Board Resolution may remove the Trustee, or (y) subject to Section 10.18, any Holder who has been a bona fide Holder for at least six months may, on behalf of itself and all others similarly situated, petition any court of competent jurisdiction for the removal of the Trustee and the appointment of a successor Trustee or Trustees.

(e) If the Trustee shall resign, be removed or become incapable of acting, or if a vacancy shall occur in the office of Trustee for any cause (other than as contemplated in sub- clause (y) of clause (iii) of subsection (d) of this Section), the Company, by a Board Resolution, shall take prompt steps to appoint a successor Trustee or Trustees and shall comply with the applicable requirements of Section 11.11. In case all or substantially all of the Mortgaged Property shall be in the possession of a receiver or trustee lawfully appointed, such receiver or trustee, by written instrument, may similarly appoint a successor to fill such vacancy until a new Trustee shall be so appointed by the Holders. If, within one year after such resignation, removal or incapability, or the occurrence of such vacancy, a successor Trustee shall be appointed by Act of the Holders of a majority in principal amount of the Bonds then Outstanding delivered to the Company and the retiring Trustee, the successor Trustee so appointed shall, forthwith upon its acceptance of such appointment in accordance with the applicable requirements of Section 11.11, become the successor Trustee and to that extent supersede the successor Trustee appointed by the Company or by such receiver or trustee. If no successor Trustee shall have been so appointed by the Company or the Holders and accepted appointment in the manner required by Section 11.11, any Holder who has been a bona fide Holder of a Bond for at least six months may, on behalf of itself and all others similarly situated, petition any court of competent jurisdiction for the appointment of a successor Trustee.

(f) So long as no event which is, or after notice or lapse of time, or both, would become, an Event of Default shall have occurred and be continuing, if the Company shall have delivered to the Trustee (i) a Board Resolution appointing a successor Trustee, effective as of a date specified therein, and (ii) an instrument of acceptance of such appointment, effective as of such date, by such successor Trustee in accordance with Section 11.11, the Trustee shall be deemed to have resigned as contemplated in subsection (b) of this Section, the successor Trustee shall be deemed to have been appointed pursuant to subsection (d) of this Section and such appointment shall be deemed to have been accepted as contemplated in Section 11.11, all as of such date, and all other provisions of this Section and Section 11.11 shall be applicable to such resignation, appointment and acceptance except to the extent inconsistent with this subsection (f).

(g) The Company shall give notice of each resignation and each removal of the Trustee and each appointment of a successor Trustee by mailing written notice of such event by first class mail, postage prepaid, to all Holders as their names and addresses appear in the Bond Register. Each notice shall include the name of the successor Trustee and the address of its corporate trust office.

Section 11.11 Acceptance of Appointment by Successor

.

(a) In case of the appointment hereunder of a successor Trustee, every such successor Trustee so appointed shall execute, acknowledge and deliver to the Company and to

the retiring Trustee an instrument accepting such appointment, and thereupon the resignation or removal of the retiring Trustee shall become effective and such successor Trustee, without any further act, deed or conveyance, shall become vested with all the rights, powers, trusts and duties of the retiring Trustee; but, on the request of the Company or the successor Trustee, such retiring Trustee shall, upon payment of all sums owed to it, execute and deliver an instrument transferring to such successor Trustee, upon the trusts herein expressed, all the estates, properties, rights, powers and trusts of the retiring Trustee and shall duly assign, transfer and deliver to such successor Trustee all property and money held by such retiring Trustee hereunder subject, nevertheless, to the provisions of Section 11.07(b).

(b) Upon request of any such successor Trustee, the Company shall execute any instruments which fully vest in and confirm to such successor Trustee all such estates, properties, rights, powers and trusts referred to in subsection (a) of this Section.

(c) No successor Trustee shall accept its appointment unless at the time of such acceptance such successor Trustee shall be qualified and eligible under this Article.

Section 11.12 Merger, Conversion, Consolidation or Succession to Business.

Any corporation into which the Trustee may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Trustee shall be a party, or any corporation succeeding to all or substantially all the corporate trust business of the Trustee, shall be the successor of the Trustee hereunder, provided such corporation shall be otherwise qualified and eligible under this Article, without the execution or filing of any paper or any further act on the part of any of the parties hereto. In case any Bonds shall have been authenticated, but not delivered, by the Trustee then in office, any successor by merger, conversion or consolidation to such authenticating Trustee may adopt such authentication and deliver the Bonds so authenticated with the same effect as if such successor Trustee had itself authenticated such Bonds.

Section 11.13 Preferential Collection of Claims Against Company
.

If the Trustee shall be or become a creditor of the Company (or any other obligor upon the Bonds), the Trustee shall be subject to any and all applicable provisions of the Trust Indenture Act regarding the collection of claims against the Company (or such other obligor).

Section 11.14 Co-trustees and Separate Trustees
.

(a) At any time or times, for the purpose of meeting the legal requirements of any jurisdiction in which any of the Mortgaged Property may at the time be located, the Company and the Trustee shall have power to appoint, and, upon the written request of the Trustee or of the Holders of at least a majority in aggregate principal amount of the Bonds then Outstanding, the Company shall for such purpose join with the Trustee in the execution and delivery of all instruments and agreements necessary or proper to appoint, one or more Persons approved by the Trustee either to act as co-trustee, jointly with the Trustee, of all or any part of the Mortgaged Property, or to act as separate trustee of any such property, in either case with such powers as maybe provided in the instrument of appointment, and to vest in such Person, in the capacity aforesaid, any property, title, right or power deemed necessary or desirable, subject

to the other provisions of this Section. If the Company does not join in such appointment within fifteen (15) days after receipt by it of a request to do so, or in case an Event of Default has occurred and is continuing, the Trustee alone shall have the power to make such appointment.

(b) Should any written instrument or instruments from the Company be required by any co-trustee or separate trustee so appointed to more fully confirm to such co-trustee or separate trustee such property, title, right or power, any and all such instruments shall, on request, be executed, acknowledged and delivered by the Company.

(c) Every co-trustee or separate trustee shall, to the extent permitted by law, but to such extent only, be appointed subject to the following conditions:

(i) the Bonds shall be authenticated and delivered, and all rights, powers, duties and obligations hereunder in respect of the custody of securities, cash and other personal property held by, or required to be deposited or pledged with, the Trustee hereunder, shall be exercised solely, by the Trustee,

(ii) the rights, powers, duties and obligations hereby conferred or imposed upon the Trustee in respect of any property covered by such appointment shall be conferred or imposed upon and exercised or performed either by the Trustee or by the Trustee and such co-trustee or separate trustee jointly, as shall be provided in the instrument appointing such co-trustee or separate trustee, except to the extent that under any law of any jurisdiction in which any particular act is to be performed, the Trustee shall be incompetent or unqualified to perform such act, in which event such rights, powers, duties and obligations shall be exercised and performed by such co-trustee or separate trustee;

(iii) the Trustee at any time, by an instrument in writing executed by it, with the concurrence of the Company, may accept the resignation of or remove any co-trustee or separate trustee appointed under this Section, and, if an Event of Default shall have occurred and be continuing, the Trustee shall have power to accept the resignation of, or remove, any such co-trustee or separate trustee without the concurrence of the Company. Upon the written request of the Trustee, the Company shall join with the Trustee in the execution and delivery of all instruments and agreements necessary or proper to effectuate such resignation or removal. A successor to any co-trustee or separate trustee so resigned or removed may be appointed in the manner provided in this Section;

(iv) no co-trustee or separate trustee hereunder shall be personally liable by reason of any act or omission of the Trustee, or any other such trustee hereunder; and

(v) any Act of Holders delivered to the Trustee shall be deemed to have been delivered to each such co-trustee and separate trustee.

Section 11.15 Appointment of Authenticating Agent

.

(a) The Trustee may appoint an Authenticating Agent or Agents with respect to the Bonds of one or more series, or any Tranche thereof, which shall be authorized to act on behalf of the Trustee to authenticate Bonds of such series or Tranche issued upon original issuance, exchange, registration of transfer or partial redemption thereof or pursuant to Section 3.06, and Bonds so authenticated shall be entitled to the benefits of this Indenture and shall be valid and obligatory for all purposes as if authenticated by the Trustee hereunder. Wherever reference is made in this Indenture to the authentication and delivery of Bonds by the Trustee or the Trustee's certificate of authentication, such reference shall be deemed to include authentication and delivery on behalf of the Trustee by an Authenticating Agent and a certificate of authentication executed on behalf of the Trustee by an Authenticating Agent. Each Authenticating Agent shall be acceptable to the Company and shall at all times be a corporation organized and doing business under the laws of the United States of America, any state or territory thereof or the District of Columbia or the Commonwealth of Puerto Rico, authorized under such laws to act as Authenticating Agent, having a combined capital and surplus of not less than $50,000,000 and subject to supervision or examination by federal or state authority. If such Authenticating Agent publishes reports of condition at least annually, pursuant to law or to the requirements of said supervising or examining authority, then for the purposes of this Section, the combined capital and surplus of such Authenticating Agent shall be deemed to be its combined capital and surplus as set forth in its most recent report of condition so published. If at any time an Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, such Authenticating Agent shall resign immediately in the manner and with the effect specified in this Section.

(b) Any corporation into which an Authenticating Agent may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which such Authenticating Agent shall be a party, or any corporation succeeding to the corporate agency or corporate trust business of an Authenticating Agent, shall continue to be an Authenticating Agent, provided that such corporation shall be otherwise eligible under this Section, without the execution or filing of any paper or any further act on the part of the Trustee or the Authenticating Agent.

(c) An Authenticating Agent may resign at any time by giving written notice thereof to the Trustee and to the Company. The Trustee may at any time terminate the agency of an Authenticating Agent by giving written notice thereof to such Authenticating Agent and to the Company. Upon receiving such a notice of resignation or upon such a termination, or in case at any time such Authenticating Agent shall cease to be eligible in accordance with the provisions of this Section, the Trustee may appoint a successor Authenticating Agent which shall be acceptable to the Company. Any successor Authenticating Agent upon acceptance of its appointment hereunder shall become vested with all the rights, powers and duties of its predecessor hereunder, with like effect originally named as an Authenticating Agent. No successor Authenticating Agent shall be appointed unless eligible under the provisions of this Section.

(d) The Company agrees to pay to each Authenticating Agent from time to time reasonable compensation for its services under this Section, and the Trustee shall have no

liability for such payments. The Trustee shall not be responsible for any misconduct, bad faith or negligence on the part of any Authenticating Agent appointed with due care by the Trustee hereunder.

(e) The provisions of Sections 3.08, 11.04 and 11.05 shall be applicable to each Authenticating Agent.

(f) If an appointment with respect to the Bonds of one or more series, or any Tranche thereof, shall be made pursuant to this Section, the Bonds of such series or Tranche may have endorsed thereon, in addition to or in lieu of the Trustee's certificate of authentication substantially in the following form:

This is one of the Bonds of the series designated therein referred to in the within mentioned Indenture.

THE BANK OF NEW YORK TRUST COMPANY, N.A.,

as Trustee

By: _____
As Authenticating Agent

By: _____
Authorized Officer

(g) If all of the Bonds of a series, or any Tranche thereof, may not be originally issued at one time, and if the Trustee does not have an office capable of authenticating Bonds upon original issuance located in a Place of Payment where the Company wishes to have Bonds of such series or such Tranche authenticated upon original issuance, the Trustee, if so requested by the Company in writing (which writing need not comply with Section 1.05 and need not be accompanied by an Opinion of Counsel), shall appoint, in accordance with this Section and in accordance with such procedures as shall be acceptable to the Trustee, an Authenticating Agent having an office in a Place of Payment designated by the Company with respect to such series of Bonds or such Tranche.

ARTICLE XII

LISTS OF HOLDERS; REPORTS BY TRUSTEE AND COMPANY

Section 12.01 Lists of Holders; Preservation of Information
.

Semiannually, not later than June 1 and December 1 in each year, and at such other times as the Trustee may request in writing, the Company shall furnish or cause to be furnished to the Trustee information as to the names and addresses of the Holders, and the Trustee shall preserve such information and similar information received by it in any other

capacity and afford to the Holders access to information so preserved by it, all to such extent, if any, and in such manner as shall be required by the Trust Indenture Act. Every Holder of Bonds, by receiving and holding the same, agrees with the Company and the Trustee that neither the Company nor the Trustee nor any agent of either of them shall be held accountable by reason of the disclosure of any such information as to the names and addresses of the Holders of Bonds in accordance with Section 312 of the Trust Indenture Act, or any successor section of such Act, regardless of the source from which such information was derived, and that the Trustee shall not be held accountable by reason of mailing any material pursuant to a request made under Section 312(b) of the Trust Indenture Act, or any successor section of such Act.

Section 12.02 Reports by Trustee and Company

.

Annually, not later than sixty (60) days after June 1 in each year commencing with the first June 1 following the first issuance of Bonds pursuant to Section 4.01, if required by Section 313(a) of the Trust Indenture Act, or any successor section of such Act, the Trustee shall transmit to the Holders and the Commission a report with respect to any events described in Section 313(a) of the Trust Indenture Act, or any successor section of such Act, in such manner and to the extent required by the Trust Indenture Act. The Trustee shall transmit to the Holders and the Commission, and the Company shall file with the Trustee and transmit to the Holders, such other information, reports and other documents, if any, at such times and in such manner, as shall be required by the Trust Indenture Act. A copy of each report required to be transmitted to the Holders pursuant to Section 313 of the Trust Indenture Act shall, at the time of such transmission to the Holders, be furnished to the Company and be filed by the Trustee with each stock exchange, if any, upon which the Bonds of any series, or any Tranche thereof are listed and also with the Commission. The Company agrees to notify the Trustee when and as the Bonds of such series, or any such Tranche, become admitted to trading on any national securities exchange.

ARTICLE XIII

CONSOLIDATION, MERGER, CONVEYANCE,

TRANSFER OR LEASE

Section 13.01 Company May Consolidate, etc., Only on Certain Terms

.

The Company shall not consolidate with or merge into any other corporation or convey, or otherwise transfer or lease, the Mortgaged Property as or substantially as an entirety to any Person, unless:

(a) such consolidation, merger, conveyance, other transfer or lease shall be on such terms as shall fully preserve in all material respects the Lien and security of this Indenture and the rights and powers of the Trustee and the Holders of the Bonds hereunder;

(b) the corporation formed by such consolidation or into which the Company is merged or the Person which acquires by conveyance or other transfer, or which leases, the Mortgaged Property as or substantially as an entirety shall be a corporation organized and

existing under the laws of the United States of America, any state or territory thereof or the District of Columbia (such corporation being hereinafter sometimes called the “Successor Corporation”) and shall execute and deliver to the Trustee an indenture supplemental hereto, in form recordable and satisfactory to the Trustee, which:

(i) in the case of a consolidation, merger, conveyance or other transfer, or in the case of a lease if the term thereof extends beyond the last Stated Maturity of the Bonds then Outstanding, contains an assumption by the Successor Corporation of the due and punctual payment of the principal of and premium, if any, and interest, if any, on all the Bonds then Outstanding and the performance and observance of every covenant and condition of this Indenture to be performed or observed by the Company, and

(ii) in the case of a consolidation, merger, conveyance or other transfer, contains a grant, conveyance, transfer and mortgage by the Successor Corporation, of the same tenor of the Granting Clauses herein:

(A) confirming the Lien of this Indenture on the Mortgaged Property (as constituted immediately prior to the time such transaction became effective) and subjecting to the Lien of this Indenture all property real, personal and mixed, thereafter acquired by the Successor Corporation which shall constitute an improvement, extension or addition to the Mortgaged Property (as so constituted) or a renewal, replacement or substitution of or for any part thereof, and

(B) at the election of the Successor Corporation, subjecting to the Lien of this Indenture such property, real, personal or mixed, in addition to the property described in subclause (A) above, then owned or thereafter acquired by the Successor Corporation as the Successor Corporation shall, in its sole discretion, specify or describe therein,

and the Lien confirmed or created by such grant, conveyance, transfer and mortgage shall have force, effect and standing similar to those which the Lien of this Indenture would have had if the Company had not been a party to such consolidation, merger, conveyance or other transfer and had itself, after the time such transaction became effective, purchased, constructed or otherwise acquired the property subject to such grant, conveyance, transfer and mortgage;

(c) in the case of a lease, such lease shall be made expressly subject to termination by the Company or by the Trustee at any time during the continuance of an Event of Default, and also by the purchaser of the property so leased at any sale thereof hereunder, whether such sale be made under the power of sale hereby conferred or pursuant to judicial proceedings; and

(d) the Company shall have delivered to the Trustee an Officer’s Certificate and an Opinion of Counsel, each of which shall state that such consolidation, merger, conveyance or other transfer or lease, and such supplemental indenture, comply with this

Article and that all conditions precedent herein provided for relating to such transaction have been complied with.

Section 13.02 Successor Corporation Substituted

.

Upon any consolidation or merger or any conveyance or other transfer, subject to the Lien of this Indenture, of the Mortgaged Property as or substantially as an entirety in accordance with Section 13.01, the Successor Corporation shall succeed to, and be substituted for, and may exercise every power and right of, the Company under this Indenture with the same effect as if such Successor Corporation had been named as the "Company" herein. Without limiting the generality of the foregoing:

(a) all property of the Successor Corporation then subject to the Lien of this Indenture, of the character described in Section 1.04(a), shall constitute Property Additions;

(b) the Successor Corporation may execute and deliver to the Trustee, and thereupon the Trustee shall, subject to the provisions of Article IV, authenticate and deliver, Bonds upon the basis of Property Additions or upon any other basis provided in Article IV; and

(c) the Successor Corporation may, subject to the applicable provisions of this Indenture, cause Property Additions to be applied to any other Authorized Purpose.

All Bonds so executed by the Successor Corporation, and authenticated and delivered by the Trustee, shall in all respects be entitled to the same benefit of the Lien and security of this Indenture as all Bonds executed, authenticated and delivered prior to the time such consolidation, merger, conveyance or other transfer became effective.

Section 13.03 Extent of Lien Hereof on Property of Successor Corporation

.

Unless, in the case of a consolidation, merger, conveyance or other transfer permitted by Section 13.01, the indenture supplemental hereto provided for in clause (ii) of Section 13.01(b), or any other indenture, contains a grant, conveyance, transfer and mortgage by the Successor Corporation as described in subclause (B) thereof, neither this Indenture nor such supplemental indenture shall become or be required to become or be a Lien upon any of the properties then owned or thereafter acquired by the Successor Corporation except properties acquired from the Company in or as a result of such transaction and improvements, extensions and additions to such properties and renewals, replacements and substitutions of or for any part or parts of such properties.

Section 13.04 Release of Company upon Conveyance or Other Transfer

.

In the case of a conveyance or other transfer permitted by Section 13.01, upon the satisfaction of all the conditions specified in Section 13.01, the Company (such term being used in this Section without giving effect to such transaction) shall be released and discharged from all obligations and covenants under this Indenture and on and under all Bonds then Outstanding unless the Company shall have delivered to the Trustee an instrument in which it shall waive such release and discharge.

Section 13.05 Merger into Company; Extent of Lien Hereof

.

(a) Nothing in this Indenture shall be deemed to prevent or restrict any consolidation or merger after the consummation of which the Company would be the surviving or resulting corporation, or any conveyance or other transfer or lease, subject to the Lien of this Indenture, of any part of the Mortgaged Property which does not constitute the entirety, or substantially the entirety, thereof.

(b) Unless, in the case of a consolidation or merger described in subsection (a) of this Section, an indenture supplemental hereto shall otherwise provide, this Indenture shall not become or be, or be required to become or be, a Lien upon any of the properties acquired by the Company in or as a result of such transaction or any improvements, extensions or additions to such properties or any renewals, replacements or substitutions of or for any part or parts of such properties.

ARTICLE XIV

SUPPLEMENTAL INDENTURES

Section 14.01 Supplemental Indentures Without Consent of Holders

.

(a) Without the consent of any Holders, the Company and the Trustee, at any time and from time to time, may enter into one or more indentures supplemental hereto, in form satisfactory to the Trustee, for any of the following purposes:

(i) to evidence the succession of another Person to the Company and the assumption by any such successor of the covenants of the Company herein and in the Bonds, all as provided in Article XIII; or

(ii) to add one or more covenants of the Company or other provisions for the benefit of all Holders or for the benefit of the Holders of, or to remain in effect only so long as there shall be Outstanding Bonds of one or more specified series, or one or more specified Tranches thereof, or to surrender any right or power herein conferred upon the Company; or

(iii) to correct or amplify the description of any property at any time subject to the Lien of this Indenture, or better to assure, convey and confirm unto the Trustee any property subject or required to be subjected to the Lien of this Indenture, or to subject to the Lien of this Indenture additional property; or

(iv) to convey, transfer and assign to the Trustee, and to subject to the Lien of this Indenture with the same force and effect as if included in the Granting Clauses herein, property of subsidiaries of the Company used or to be used for one or more purposes which if owned by the Company would constitute property used or to be used for one or more of the Primary Purposes of the Company's Business, which property shall for all purposes of this Indenture be deemed to be property of the Company, together with such other provisions as may be

appropriate to express the respective rights of the Trustee and the Company in regard thereto;

(v) to change or eliminate any provision of this Indenture or to add any new provision to this Indenture provided, however, that if such change, elimination or addition shall adversely affect the interests of the Holders of Bonds of any series or Tranche in any material respect, such change, elimination or addition shall become effective with respect to such series or Tranche only when no Bond of such series or Tranche remains Outstanding; or

(vi) to establish the form or terms of Bonds of any series or Tranche as contemplated by Sections 2.01 and 3.01; or

(vii) to evidence and provide for the acceptance of appointment hereunder by a successor Trustee or by a co-trustee or separate trustee; or

(viii) to provide, for the procedures required to permit the Company to utilize, at its option, a non-certificated system of registration for all, or any series or Tranche of, the Bonds; or

(ix) to change any place or places where (A) the principal of and premium, if any, and interest, if any, on all or any series of Bonds, or any Tranche thereof, shall be payable, (B) all or any series of Bonds, or any Tranche thereof, may be surrendered for registration of transfer, (C) all or any series of Bonds, or any Tranche thereof, may be surrendered for exchange, and (D) notices and demands to or upon the Company in respect of all or any series of Bonds, or any Tranche thereof, and this Indenture may be served; or

(x) to cure any ambiguity or to correct or supplement any provision herein which may be defective or inconsistent with any other provision herein, or to make any other changes to the provisions hereof or to add other provisions with respect to matters or questions arising under this Indenture, provided that such other changes or additions shall not adversely affect the interests of the Holders of Bonds of any series or Tranche in any material respect; or

(xi) to reflect changes in Generally Accepted Accounting Principles; or

(xii) to provide the terms and conditions of the exchange or conversion, at the option of the Holders of Bonds of any series or otherwise, of the Bonds of such series for or into Bonds of other series or stock or other securities of the Company or any other corporation; or

(xiii) to comply with the rules or regulations of any national securities exchange on which any of the Bonds may be listed; or

(xiv) to modify, eliminate or add to the provisions of this Indenture to such extent as shall be necessary to effect the qualification of this Indenture under the Trust Indenture Act, or under any similar federal statute hereafter enacted, and

to add to this Indenture such other provisions as may be expressly permitted by the Trust Indenture Act, excluding, however the provisions referred to in Section 316(a)(2) of the Trust Indenture Act as in effect at the date of the execution and delivery of this Indenture or any corresponding provision in any similar federal statute hereafter enacted.

(b) Without limiting the generality of the foregoing, if the Trust Indenture Act as in effect at the date of the execution and delivery of this Indenture or at any time thereafter shall be amended and:

(i) if any such amendment shall require one or more changes to any provisions hereof or the inclusion herein of any additional provisions, or shall by operation of law be deemed to effect such changes or incorporate such provisions by reference or otherwise, this Indenture shall be deemed to have been amended so as to conform to such amendment to the Trust Indenture Act, and the Company and the Trustee may, without the consent of any Holders, enter into an indenture supplemental hereto to evidence such amendment hereof; or

(ii) if any such amendment shall permit one or more changes to, or the elimination of any provisions hereof which, at the date of the execution and delivery hereof or at any time thereafter, are required by the Trust Indenture Act to be contained herein or are contained herein to reflect any provisions of the Trust Indenture Act as in effect at such date, the Company and the Trustee may, without the consent of any Holders, enter into an indenture supplemental hereto to effect such changes or elimination.

Section 14.02 Supplemental Indentures With Consent of Holders

.

(a) With the consent of the Holders of not less than a majority in aggregate principal amount of the Bonds of all series then Outstanding under this Indenture, considered as one class, by Act of said Holders delivered to the Company and the Trustee, the Company, when authorized by a Board Resolution, and the Trustee may enter into an indenture or indentures supplemental hereto for the purpose of adding any provisions to, or changing in any manner or eliminating any of the provisions of, this Indenture; provided, however, that if there shall be Bonds of more than one series Outstanding hereunder and if a proposed supplemental indenture shall directly affect the rights of the Holders of Bonds of one or more, but less than all, of such series, then the consent only of the Holders of a majority in aggregate principal amount of the Outstanding Bonds of all series so directly affected, considered as one class, shall be required; and provided, further, that if the Bonds of any series shall have been issued in more than one Tranche and if the proposed supplemental indenture shall directly affect the rights of the Holders of Bonds of one or more, but less than all, of such Tranches, then the consent only of the Holders of a majority in aggregate principal amount of the Outstanding Bonds of all Tranches so directly affected, considered as one class, shall be required; and provided, further, that no such supplemental indenture shall, without the consent of the Holder of each Outstanding Bond of each series or Tranche so directly affected:

(i) change the Stated Maturity of the principal of, or any installment of principal of or interest on, any Bond, or reduce the principal amount thereof or the rate of interest thereon (or the amount of any installment of interest thereon) or change the method of calculating such rate or reduce any premium payable upon the redemption thereof or reduce the amount of the principal of a Discount Bond that would be due and payable upon a declaration of acceleration of the Maturity thereof pursuant to Section 10.02(a), or change the coin or currency (or other property) in which any Bond or any premium or the interest thereon is payable, or impair the right to institute suit for the enforcement of any such payment on or after the Stated Maturity thereof (or, in the case of redemption, on or after the Redemption Date); or

(ii) permit the creation of any Lien ranking prior to the Lien of this Indenture with respect to all or substantially all of the Mortgaged Property or terminate the Lien of this Indenture on all or substantially all of the Mortgaged Property, or deprive such Holder of the benefit of the security of the Lien of this Indenture; or

(iii) reduce the percentage in principal amount of the Outstanding Bonds of such series or Tranche, the consent of whose Holders is required for any such supplemental indenture, or the consent of whose Holders is required for any waiver of compliance with any provision of this Indenture or of any default hereunder and its consequences, or reduce the requirements of Section 15.04(a) for quorum or voting; or

(iv) modify any of the provisions of this Section, Section 6.09 or Section 10.17, except to increase the percentages in principal amount referred to in this Section or such other Sections or to provide that other provisions of this Indenture cannot be modified or waived without the consent of the Holder of each Outstanding Bond affected thereby; provided, however, that this clause shall not be deemed to require the consent of any Holder with respect to changes in the references to “the Trustee” and concomitant changes in this Section and Section 10.17, or the deletion of this proviso, pursuant to Section 11.11 and clause (vii) of Section 14.01(a).

(b) A supplemental indenture which (i) changes or eliminates any covenant or other provision of this Indenture which has expressly been included solely for the benefit of the Holders of, or which is to remain in effect only so long as there shall be Outstanding, Bonds of one or more specified series, or one or more Tranches thereof, or (ii) modifies the rights of the Holders of Bonds of such series or Tranches with respect to such covenant or other provision, shall be deemed not to affect the rights under this Indenture of the Holders of Bonds of any other series or Tranche.

(c) It shall not be necessary for any Act of Holders under this Section to approve the particular form of any proposed supplemental indenture, but it shall be sufficient if such Act shall approve the substance thereof. A consent to any supplemental indenture by or on

behalf of any Holder of the Bonds given in connection with a purchase of, or tender or exchange offer for, such Holder's Bonds will not be rendered invalid by such purchase, tender or exchange.

Section 14.03 Execution of Supplemental Indentures

.

In executing, or accepting the additional trusts created by, any supplemental indenture permitted by this Article or the modifications thereby of the trusts created by this Indenture, the Trustee shall be entitled to receive, and (subject to Section 11.01) shall be fully protected in relying upon, an Opinion of Counsel stating that the execution of such supplemental indenture is authorized or permitted by this Indenture. The Trustee may, but shall not be obligated to, enter into any such supplemental indenture which affects the Trustee's own rights, duties, immunities or liabilities under this Indenture or otherwise.

Section 14.04 Effect of Supplemental Indentures

.

Upon the execution of any supplemental indenture under this Article this Indenture shall be modified in accordance therewith, and such supplemental indenture shall form a part of this Indenture for all purposes; and every Holder of Bonds theretofore or thereafter authenticated and delivered hereunder shall be bound thereby. Any supplemental indenture permitted by this Article may restate this Indenture in its entirety, and, upon the execution and delivery thereof; any such restatement shall supersede this Indenture as theretofore in effect for all purposes.

Section 14.05 Conformity With Trust Indenture Act

.

Every supplemental indenture executed pursuant to this Article shall conform to the requirements of the Trust Indenture Act as then in effect.

Section 14.06 Reference in Bonds to Supplemental Indentures

.

Bonds of any series, or any Tranche thereof, authenticated and delivered after the execution of any supplemental indenture pursuant to this Article may, and shall if required by the Trustee, bear a notation in form approved by the Trustee as to any matter provided for in such supplemental indenture. If the Company shall so determine, new Bonds of any series, or any Tranche thereof, so modified as to conform, in the opinion of the Trustee and the Company, to any such supplemental indenture may be prepared and executed by the Company and authenticated and delivered in exchange for Outstanding Bonds of such series or Tranche.

ARTICLE XV

MEETINGS OF HOLDERS; ACTION WITHOUT MEETING

Section 15.01 Purposes for Which Meetings May be Called

.

A meeting of Holders of Bonds of one or more, or all, series, or any Tranche or Tranches thereof, may be called at any time and from time to time pursuant to this Article to make, give or take any request, demand, authorization, direction, notice, consent, waiver or other

action provided by this Indenture to be made, given or taken by Holders of Bonds of such series or Tranches.

Section 15.02 Call, Notice and Place of Meetings

.

(a) The Trustee may at any time call a meeting of Holders of Bonds of one or more, or all, series, or any Tranche or Tranches thereof, for any purpose specified in Section 15.01, to be held at such time and (except as provided in subsection (b) of this Section) at such place in the County of Cuyahoga, The City of Cleveland, Ohio or the Borough of Manhattan, The City of New York, as the Trustee shall determine, or, with the approval of the Company, at any other place. Notice of every such meeting, setting forth the time and the place of such meeting and in general terms the action proposed to be taken at such meeting, shall be given, in the manner provided in Section 1.09, not less than 21 nor more than one hundred eighty (180) days prior to the date fixed for the meeting.

(b) The Trustee may be asked to call a meeting of the Holders of Outstanding Bonds of one or more, or all, series, or any Tranche or Tranches thereof; by the Company or by the Holders of 25% in aggregate principal amount of all of such series and Tranches, considered as one class, for any purpose specified in Section 15.01, by written request setting forth in reasonable detail the action proposed to be taken at the meeting. If the Trustee shall have been asked by the Company to call such a meeting, the Company shall determine the time and place for such meeting by giving notice thereof in the manner provided in subsection (a) of this Section, or shall direct the Trustee, in the name and at the expense of the Company, to give such notice. If the Trustee shall have been asked to call such a meeting by Holders in accordance with this subsection (b), and the Trustee shall not have given the notice of such meeting within twenty-one (21) days after receipt of such request or shall not thereafter proceed to cause the meeting to be held as provided herein, then the Holders of Bonds of such series and Tranches in the amount above specified may determine the time and the place in the County of Cuyahoga, The City of Cleveland, Ohio or the Borough of Manhattan, The City of New York, or in such other place as shall be determined or approved by the Company, for such meeting and may call such meeting for such purposes by giving notice thereof as provided in subsection (a) of this Section.

(c) Any meeting of Holders of Bonds of one or more, or all, series, or any Tranche or Tranches thereof, shall be valid without notice if the Holders of all Outstanding Bonds of such series or Tranches are present in person or by proxy and if representatives of the Company and the Trustee are present, or if notice is waived in writing before or after the meeting by the Holders of all Outstanding Bonds of such series, or any Tranche or Tranches thereof, or by such of them as are not present at the meeting in person or by proxy, and by the Company and the Trustee.

Section 15.03 Persons Entitled to Vote at Meetings; Record Date

.

To be entitled to vote at any meeting of Holders of Bonds of one or more, or all, series, or any Tranche or Tranches thereof, a Person shall be (a) a Holder of one or more Outstanding Bonds of such series or Tranches on the record date fixed as provided below, or (b) a Person appointed by an instrument in writing by a Holder or Holders of one or more

Outstanding Bonds of such series or Tranches on the record date fixed as provided below as proxy for such Holder or Holders. The only Persons who shall be entitled to attend any meeting of Holders of Bonds of any series or Tranche shall be the Persons entitled to vote at such meeting and their counsel, any representatives of the Trustee and its counsel and any representatives of the Company and its counsel. The Company may fix in advance a record date for the determination of Holders who are entitled to vote at a meeting called pursuant to Section 15.02 and, if the Company does not so fix a record date, the Trustee may do so.

Section 15.04 Quorum; Action

.

(a) The Persons entitled to vote a majority in aggregate principal amount of the Outstanding Bonds of the series and Tranches with respect to which a meeting shall have been called as hereinbefore provided, considered as one class, shall constitute a quorum for a meeting of Holders of Bonds of such series and Tranches; provided, however, that if any action is to be taken at such meeting which this Indenture expressly provides may be taken by the Holders of a specified percentage, which is less than a majority, in principal amount of the Outstanding Bonds of such series and Tranches, considered as one class, the Persons entitled to vote such specified percentage in principal amount of the Outstanding Bonds of such series and Tranches, considered as one class, shall constitute a quorum. In the absence of a quorum within one hour of the time appointed for any such meeting, the meeting shall, if convened at the request of Holders of Bonds of such series and Tranches, be dissolved. In any other case the meeting may be adjourned for such period as may be determined by the chairman of the meeting prior to the adjournment of such meeting. In the absence of a quorum at any such adjourned meeting, such adjourned meeting may be further adjourned for such period as may be determined by the chairman of the meeting prior to the adjournment of such adjourned meeting. Except as provided by Section 15.05(e), notice of the reconvening of any meeting adjourned for more than thirty (30) days shall be given as provided in Section 1.09 not less than ten (10) days prior to the date on which the meeting is scheduled to be reconvened. Notice of the reconvening of an adjourned meeting shall state expressly the percentage, as provided above, of the principal amount of the Outstanding Bonds of such series and Tranches which shall constitute a quorum.

(b) Except as limited by Section 14.02, any resolution presented to a meeting or adjourned meeting duly reconvened at which a quorum is present as aforesaid may be adopted only by the affirmative vote of the Holders of a majority in aggregate principal amount of the Outstanding Bonds of the series and Tranches with respect to which such meeting shall have been called, considered as one class; provided, however, that, except as so limited, any resolution with respect to any action which this Indenture expressly provides may be taken by the Holders of a specified percentage, which is less than a majority, in principal amount of the Outstanding Bonds of such series and Tranches, considered as one class, may be adopted at a meeting or an adjourned meeting duly reconvened and at which a quorum is present as aforesaid by the affirmative vote of the Holders of such specified percentage in principal amount of the Outstanding Bonds of such series and Tranches, considered as one class.

(c) Any resolution passed or decision taken at any meeting of Holders of Bonds duly held in accordance with this Section shall be binding on all the Holders of Bonds of the series and Tranches with respect to which such meeting shall have been held, whether or not present or represented at the meeting.

Section 15.05 Attendance at Meetings; Determination of Voting Rights; Conduct and Adjournment of Meetings

.

(a) Attendance at meetings of Holders of Bonds may be in person or by proxy; and, to the extent permitted by law, any such proxy shall remain in effect and be binding upon any future Holder of the Bonds with respect to which it was given unless and until specifically revoked by the Holder or future Holder of such Bonds before being voted.

(b) Notwithstanding any other provisions of this Indenture, the Trustee may make such reasonable regulations as it may deem advisable for any meeting of Holders of Bonds in regard to proof of the holding of such Bonds and of the appointment of proxies and in regard to the appointment and duties of inspectors of votes, the submission and examination of proxies, certificates and other evidence of the right to vote, and such other matters concerning the conduct of the meeting as it shall deem appropriate. Except as otherwise permitted or required by any such regulations, the holding of Bonds shall be proved in the manner specified in Section 1.07 and the appointment of any proxy shall be proved in the manner specified in Section 1.07. Such regulations may provide that written instruments appointing proxies, regular on their face, may be presumed valid and genuine without the proof specified in Section 1.07 or other proof.

(c) The Trustee shall, by an instrument in writing, appoint a temporary chairman of the meeting, unless the meeting shall have been called by the Company or by Holders as provided in Section 15.02(b), in which case the Company or the Holders of Bonds of the series and Tranches calling the meeting, as the case may be, shall in like manner appoint a temporary chairman. A permanent chairman and a permanent secretary of the meeting shall be elected by vote of the Persons entitled to vote a majority in aggregate principal amount of the Outstanding Bonds of all series and Tranches represented at the meeting, considered as one class.

(d) At any meeting each Holder or proxy shall be entitled to one vote for each $1,000 principal amount of Outstanding Bonds held or represented by him and if there shall have been established in respect of the Bonds of any series, or any Tranche thereof, that such Bonds may be issuable other than in denominations of $1,000 and any integral multiple thereof, a fractional vote equal to (x) the difference (expressed as a positive number) between (u) the aggregate principal amount of Outstanding Bonds held or represented by him and (v) the next lowest integral multiple of $1,000 (or if there is no next lowest integral multiple thereof, zero), divided by (y) 1,000; provided, however, that no vote shall be cast or counted at any meeting in respect of any Bond challenged as not Outstanding and ruled by the chairman of the meeting to be not Outstanding. The chairman of the meeting shall have no right to vote, except as a Holder of a Bond or proxy.

(e) Any meeting duly called pursuant to Section 15.02 at which a quorum is present may be adjourned from time to time by Persons entitled to vote a majority in aggregate principal amount of the Outstanding Bonds of all series and Tranches represented in person or by proxy at the meeting, considered as one class; and the meeting may be held as so adjourned without further notice.

Section 15.06 Counting Votes and Recording Action of Meetings

.

The vote upon any resolution submitted to any meeting of Holders shall be by written ballots on which shall be subscribed the signatures of the Holders or of their representatives by proxy and the principal amounts and serial numbers of the Outstanding Bonds, of the series and Tranches with respect to which the meeting shall have been called, held or represented by them. The permanent chairman of the meeting shall appoint two inspectors of votes who shall count all votes cast at the meeting for or against any resolution and who shall make and file with the secretary of the meeting their verified written reports of all votes cast at the meeting. A record of the proceedings of each meeting of Holders shall be prepared by the secretary of the meeting and there shall be attached to said record the original reports of the inspectors of votes on any vote by ballot taken thereat and affidavits by one or more persons having knowledge of the facts setting forth a copy of the notice of the meeting and showing that said notice was given as provided in Section 15.02 and, if applicable, Section 15.04. Each copy shall be signed and verified by the affidavits of the permanent chairman and secretary of the meeting and one such copy shall be delivered to the Company, and another to the Trustee to be preserved by the Trustee, the latter to have attached thereto the ballots voted at the meeting. Any record so signed and verified shall be conclusive evidence of the matters therein stated.

Section 15.07 Action Without Meeting

.

In lieu of a vote of Holders at a meeting as hereinbefore contemplated in this Article, any request, demand, authorization, direction, notice, consent, waiver or other action may be made, given or taken by Holders by written instruments as provided in Section 1.07.

ARTICLE XVI

IMMUNITY OF INCORPORATORS, STOCKHOLDERS, OFFICERS, AND DIRECTORS

Section 16.01 Liability Solely Corporate

.

No recourse shall be had for the payment of the principal of or premium if any, or interest, if any, on any Bonds, or any part thereof, or for any claim based thereon or otherwise in respect thereof, or of the indebtedness represented thereby, or upon any obligation, covenant or agreement under this Indenture, against any past, present or future incorporator, stockholder, employee, officer or director, as such, past, present or future of the Company or of any predecessor or successor corporation (either directly or through the Company or a predecessor or successor corporation), whether by virtue of any constitutional provision, statute or rule of law, or by the enforcement of any assessment or penalty or otherwise; it being expressly agreed and understood that this Indenture and all the Bonds are solely corporate obligations, and that no personal liability whatsoever shall attach to, or be incurred by, any incorporator, stockholder, employee, officer or director, past, present or future, of the Company or of any predecessor or successor corporation, either directly or indirectly through the Company or any predecessor or successor corporation, because of the indebtedness hereby authorized or under or by reason of any of the obligations, covenants or agreements contained in this Indenture or in any of the

Bonds or to be implied herefrom or therefrom, and that any such personal liability is hereby expressly waived and released as a condition of, and as part of the consideration for, the execution of this Indenture and the issuance of the Bonds.

This instrument may be executed in any number of counterparts, each of which so executed shall be deemed to be an original, but all such counterparts shall together constitute but one and the same instrument. Any such counterpart, as recorded or filed in any jurisdiction, may omit such portions of Exhibits A and B hereto as shall not describe or refer to properties located in such jurisdiction.

[Remainder of page intentionally left blank.]

IN WITNESS WHEREOF, FIRSTENERGY GENERATION CORP., party of the first part hereto, and THE BANK OF NEW YORK TRUST COMPANY, N.A., party of the second part hereto, have caused these presents to be executed in their respective names as of the day and year first above written.

FIRSTENERGY GENERATION CORP.

By: _____

James F. Pearson

Vice President and Treasurer

THE BANK OF NEW YORK TRUST
COMPANY, N.A.. as Trustee

By: _____

Biagio S. Impala

Vice President

STATE OF OHIO)

)ss.:

COUNTY OF SUMMIT)

On the 19th day of June, 2008, personally appeared before me, a Notary Public in and for the said County and State aforesaid, James F. Pearson, to me known and known to me to be the Vice President and Treasurer of FIRSTENERGY GENERATION CORP., the corporation which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President and Treasurer of FIRSTENERGY GENERATION CORP., the same is his free act and deed and the free and corporate act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 1st day of June, 2008.

_____, Notary Public

Commission Expires _____

STATE OF OHIO)

)ss.:

COUNTY OF CUYAHOGA)

On the 19th day of June, 2008, personally appeared before me, a Notary Public in and for the said County and State aforesaid, Biagio S. Impala, to me known and known to me to be a Vice President of THE BANK OF NEW YORK TRUST COMPANY, N.A., the corporation which executed the foregoing instrument, and who severally acknowledged that he did sign such instrument as such Vice President for and on behalf of said corporation and that the same is his free act and deed and the free and corporate act and deed of said corporation.

IN WITNESS WHEREOF, I have hereunto set my hand and seal the 1th day of June, 2008.

_____, Notary Public

Commission Expires _____

The Bank of New York Trust Company, N.A. hereby certifies that its precise name and address as Trustee is:

The Bank of New York Trust Company, N.A.
Global Corporate Trust
1660 West 2nd Street, Suite 830
Cleveland, Ohio 44113

THE BANK OF NEW YORK TRUST
COMPANY, N.A.

By: _____

Biagio S. Impala

Vice President

THIS INSTRUMENT PREPARED BY:

Lucas F. Torres
AKIN GUMP STRAUSS HAUER & FELD LLP
590 Madison Avenue
New York, NY 10022

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO
EXCHANGE ACT RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, James A. Burke, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Vistra Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 9, 2024

/s/ James A. Burke

James A. Burke

President and Chief Executive Officer

(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO
EXCHANGE ACT RULES 13a-14(a) AND 15d-14(a),
AS ADOPTED PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Kristopher E. Moldovan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Vistra Corp.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 9, 2024

/s/ Kristopher E. Moldovan

Kristopher E. Moldovan

Chief Financial Officer

(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Vistra Corp. (the "Company") on Form 10-Q for the period ended March 31, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, James A. Burke, President and Chief Executive Officer of the Company, hereby certify as of the date hereof, solely for the purposes of Title 18, Chapter 63, Section 1350 of the United States Code, that to the best of my knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods indicated.

Date: May 9, 2024

/s/ James A. Burke

James A. Burke
President and Chief Executive Officer
(Principal Executive Officer)

The foregoing certification is not deemed filed with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), and is not to be incorporated by reference into any filing of Vistra Corp. under Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof, regardless of any general incorporation language of such filing.

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER
PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report of Vistra Corp. (the "Company") on Form 10-Q for the period ended March 31, 2024 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Kristopher E. Moldovan, Chief Financial Officer of the Company, hereby certify as of the date hereof, solely for the purposes of Title 18, Chapter 63, Section 1350 of the United States Code, that to the best of my knowledge:

(1) the Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Securities Exchange Act of 1934, and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company at the dates and for the periods indicated.

Date: May 9, 2024

/s/ Kristopher E. Moldovan

Kristopher E. Moldovan
Chief Financial Officer
(Principal Financial Officer)

The foregoing certification is not deemed filed with the Securities and Exchange Commission for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (Exchange Act), and is not to be incorporated by reference into any filing of Vistra Corp. under Securities Act of 1933, as amended, or the Exchange Act, whether made before or after the date hereof, regardless of any general incorporation language of such filing.

Exhibit 95.1

Mine Safety Disclosures

Safety is a top priority in all our businesses, and accordingly, it is a key component of our focus on operational excellence, our employee performance reviews and employee compensation. Our health and safety program objectives are to prevent workplace accidents and ensure that all employees return home safely and comply with all regulations.

Vistra currently owns and operates, or is in the process of reclaiming, 12 surface lignite coal mines in Texas to provide fuel for its electricity generation facilities. Vistra also owns or leases, and is in the process of reclaiming, two waste-to-energy surface facilities in Pennsylvania. These mining operations are regulated by the U.S. Mine Safety and Health Administration (MSHA) under the Federal Mine Safety and Health Act of 1977, as amended (the Mine Act), as well as other regulatory agencies such as the RCT. The MSHA inspects U.S. mines, including Vistra's, on a regular basis and if it believes a violation of the Mine Act or any health or safety standard or other regulation has occurred, it may issue a citation or order, generally accompanied by a proposed fine or assessment. Such citations and orders can be contested and appealed to the Federal Mine Safety and Health Review Commission (FMSHRC), which often results in a reduction of the severity and amount of fines and assessments and sometimes results in dismissal. The number of citations, orders and proposed assessments vary depending on the size of the mine as well as other factors.

Disclosures related to specific mines pursuant to Section 1503 of the Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K sourced from data documented at April 1, 2024 in the MSHA Data Retrieval System for the three months ended March 31, 2024 (except pending legal actions, which are at March 31, 2024), are as follows:

Mine (a)	Section 104 S and S Citations (b)	Section 104(b) Orders	Section 104(d) Citations and Orders	Section 110(b)(2) Violations	Section 107(a) Orders	Total Dollar Value of MSHA Assessments Proposed (c)	Total Number of Mining Related Fatalities	Received Notice of Pattern of Violations Under Section 104	Received Notice of Potential to Have Pattern Under Section 104	Legal Actions Pending at Last Day of Period (d)	Legal Actions Initiated During Period	Legal Actions Resolved During Period
Beckville	—	—	—	—	—	—	—	—	—	—	—	—
Big Brown	—	—	—	—	—	—	—	—	—	—	—	—
Bremond	—	—	—	—	—	—	—	—	—	—	—	—
Honeybrook Refuse Operation	—	—	—	—	—	—	—	—	—	—	—	—
Kosse	—	—	—	—	—	—	—	—	—	2	1	—
Leesburg	—	—	—	—	—	—	—	—	—	—	—	—
Liberty	—	—	—	—	—	—	—	—	—	—	—	—
Northeastern Power Cogeneration Facility	—	—	—	—	—	—	—	—	—	—	—	—
Oak Hill	—	—	—	—	—	—	—	—	—	—	—	—
Sulphur Springs	—	—	—	—	—	—	—	—	—	—	—	—
Tatum	—	—	—	—	—	—	—	—	—	—	—	—
Three Oaks	—	—	—	—	—	—	—	—	—	—	—	—
Winfield North	—	—	—	—	—	—	—	—	—	—	—	—
Winfield South	—	—	—	—	—	—	—	—	—	—	—	—

_____

(a) Excludes mines for which there were no applicable events.

(b) Includes MSHA citations for mandatory health or safety standards that could significantly and substantially contribute to a serious injury if left unabated.

(c) Total value in thousands of dollars for proposed assessments received from MSHA for all citations and orders issued in the three months ended March 31, 2024, including but not limited to Sections 104, 107 and 110 citations and orders that are not required to be reported.

(d) There were two pending actions before the FMSHRC involving a coal or other mine. Both pending legal actions are contests of citations and orders and proposed penalties.