May 8, 2025

ASPEN AEROGELS

Q1 2025 FINANCIAL RESULTS CALL

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Q1 2025 Developments and Highlights

Accelerating commercial traction while taking proactive actions to drive long-term financial performance

Q1 2025 Highlights[1]:

- Delivered 29% gross margins
- $5.6 million of operating cash flow
- Cash and equivalents balance of $192 million
- Record levels of PyroThin quoting activity

New PyroThin award for LFP platform:

general motors

Continued Focus on Driving Performance

Optimizing Cost Structure
Lowered fixed costs by $35M in February; goal of further reducing fixed costs to 2022 levels

Building Resilient & Flexible Supply Chain
Sourcing optimization between Rhode Island and EMF[2] aerogel production; diversified raw material supply chain

Reducing CAPEX Investments
Maximizing Rhode Island capacity; EMF[2] capable of increasing capacity in a modular manner

Driving Incremental Profitable Growth
Exploring adjacent markets for Energy Industrial growth; Securing additional PyroThin awards to drive growth in moderate EV market

1- Unaudited financials for 2025
2- External manufacturing facility

Q1 2025 Financial Highlights

Continuing to optimize our fixed cost structure to enable operating leverage and protect near-term profitability

$ in millions except EPS	Q1 2024	Q1 2025[1]
Revenues	$94.5	$78.7
Net Inc. (Loss) *Adj. Net Inc. (Loss)*[4]	$(1.8)	$(301.2)[3] *$(4.8)*
Adj. EBITDA[2]	$12.9	$4.9
EPS (Loss) *Adj. EPS (Loss)*[4]	$(0.02)	$(3.67)[3] *$(0.06)*
Cap Ex	$25.9	$13.0
Operating Cash Flow	$(17.7)	$5.6

Commentary

- $48.9M of Thermal Barrier revenues in Q1 25 reflects moderated production schedules for OEM's as they match demand
- Energy Industrial revenues of $29.8M in Q1 25 increased by 3% YoY

- Favorable material cost spend YoY driven by product mix, yield improvements, and improved BOM pricing through supply chain diversification
- Softer gross profit driven by reduced fixed cost leverage on lower volume, however, actions taken in 2025 will lead to long-term improvements on future volumes
- Continuing to protect profitability through cost structure optimization, OPEX spend now comparable to 2023 with line of sight to 2022 run-rate levels

- Reduced CAPEX spend in Q1 25 by 50% YoY, driven by demobilizing Plant II and EV Thermal Barrier assembly equipment for new OEM program launches

- Generated positive operating cash flow amidst lower revenues, further demonstrating our cash flow potential after 2025 cost reductions fully materialize

1- Unaudited interim financials for 2025
2- See slide 10 herein for a reconciliation of net income (loss), the most directly comparable GAAP measure, to Adjusted EBITDA
3- Included a $286.6 million impairment charge for Plant II and $9.8 million of restructuring and demobilization costs
4- See slide 10 herein for a reconciliation of net income (loss), the most directly comparable GAAP measure, to Adjusted Net Income

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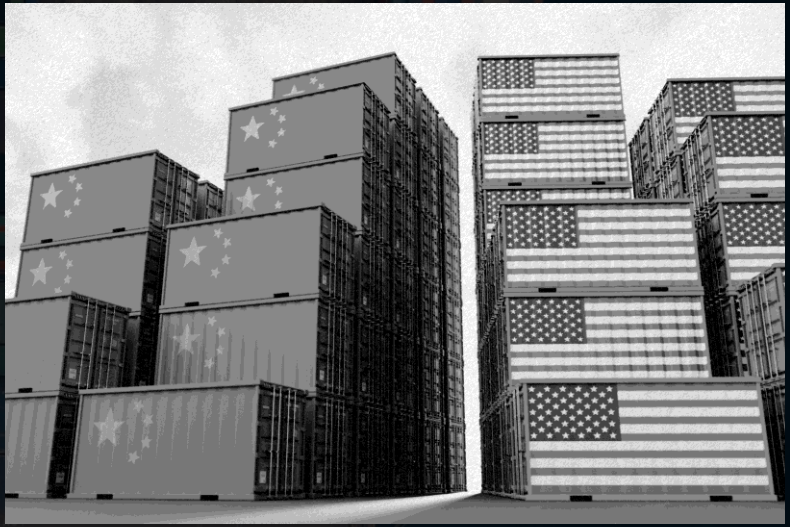
Mitigating Tariff Impacts

Production on either side of the China / US trade block, Annex II exceptions, and USMCA minimize direct impact

Value Chain Benefits

- Supply on both sides of the China / US trade blocks
- Diversified raw material supply chain across US, EU, and China
- In region for region manufacturing



Energy Industrial

- **50-60% of revenue is outside of the US**
- **Sourcing optimization** between United States and China
- Imports from EMF **currently exempt under Annex II** – subject to lower tariffs

Thermal Barrier

- Finished parts are **USMCA compliant** and currently exempt from tariffs
- **Customers are importer of record** - pickup product from Mexico and would be liable for any potential tariffs

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2025 Q2 Outlook and Historical Trends

Well positioned to deliver breakeven Adjusted EBITDA in Q2 despite lower potential revenue run rates

Q2 2025 Outlook[2]

$ in millions, except per share figures

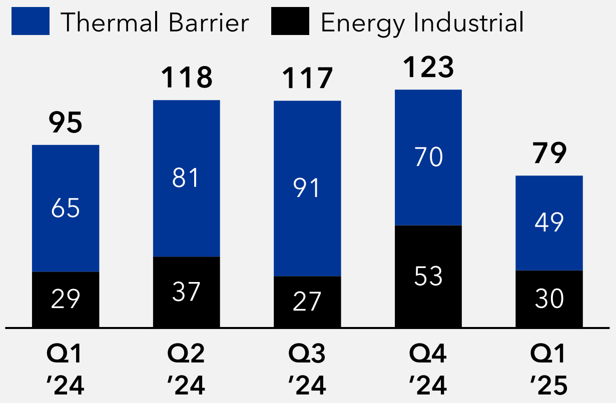
Revenues	$70 - $80
Net Income (Loss)	$(11) - $(4)
Adj. EBITDA[2]	$0 - $7
EPS (Loss)[3]	$(0.13) - $(0.05)
Cap Ex (excl. Plant II)	<$10

1- Unaudited interim financials for 2025
2- See slide 10 herein for a reconciliation of net income (loss), the most directly comparable GAAP measure, to Adjusted EBITDA for the presented period
3- Current outlook assumes diluted weighted average shares outstanding of 82.0 million for the quarter

Historical Financial Trajectory[1]

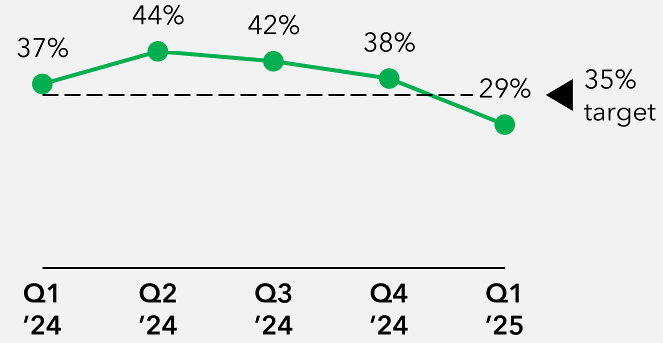
Revenues

$ in millions



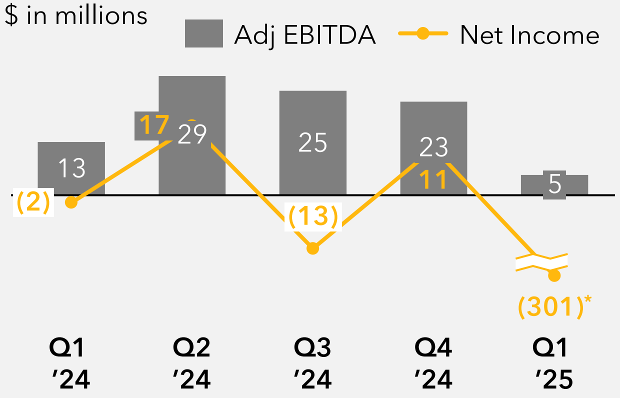
Gross Profit Margin

%



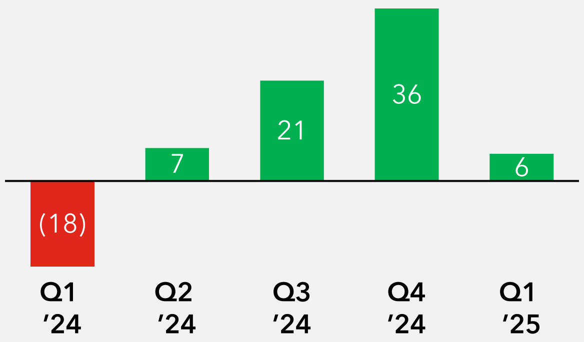
Adj. EBITDA[2] and Net Income

$ in millions



Operating Cash Flow

$ in millions



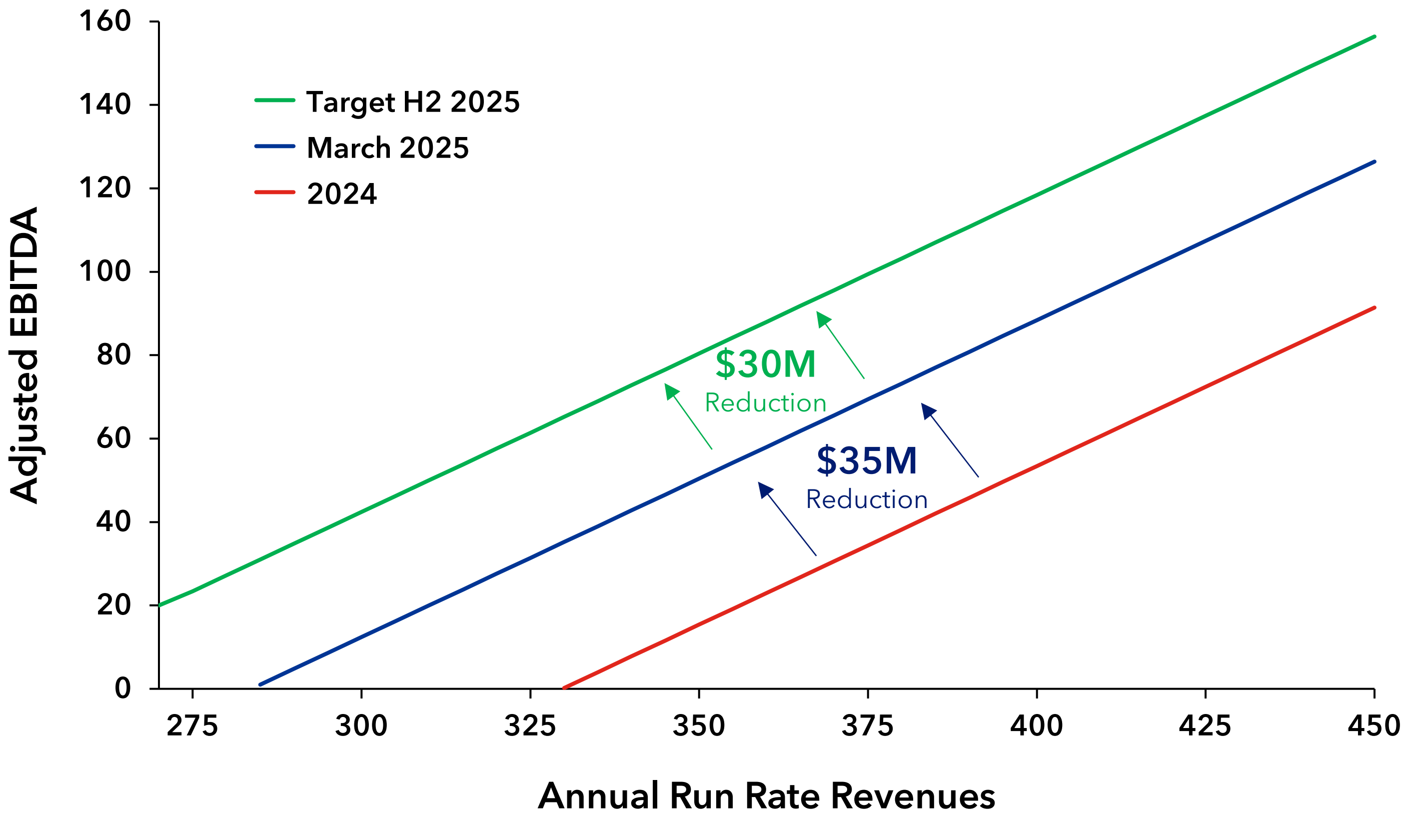
*Q1 2025 Net Income included a $286.6 million impairment charge in connection with the demobilization of the Company's previously planned second aerogel manufacturing plant in Statesboro, Georgia and $9.8 million of associated restructuring costs

Optimizing the Fixed Cost Structure

By reducing our fixed costs, we're prepared to continue improving performance without relying on revenue growth

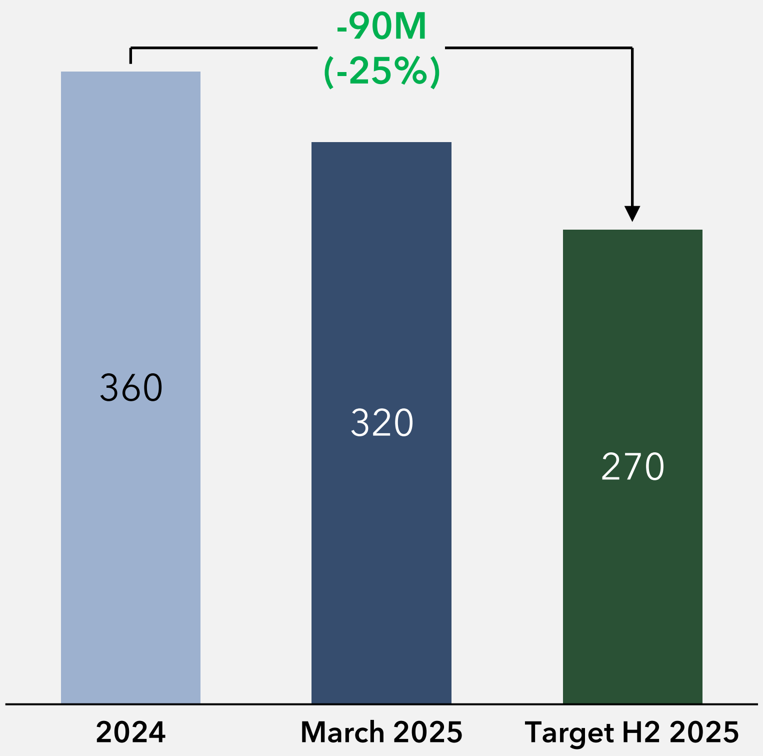
Target fixed cost structure ensures a minimum level of financial performance at lower revenues…

Historical and Target Fixed Cost Structure Framework
Estimated Annualized Adjusted EBITDA at Various Potential Revenue Levels and Fixed Cost Structures
$ in millions



…and lowers the required revenues for breakeven EBIT to $270M

Annual Estimated Revenues Required for Breakeven Operating Income (EBIT)
$ in millions



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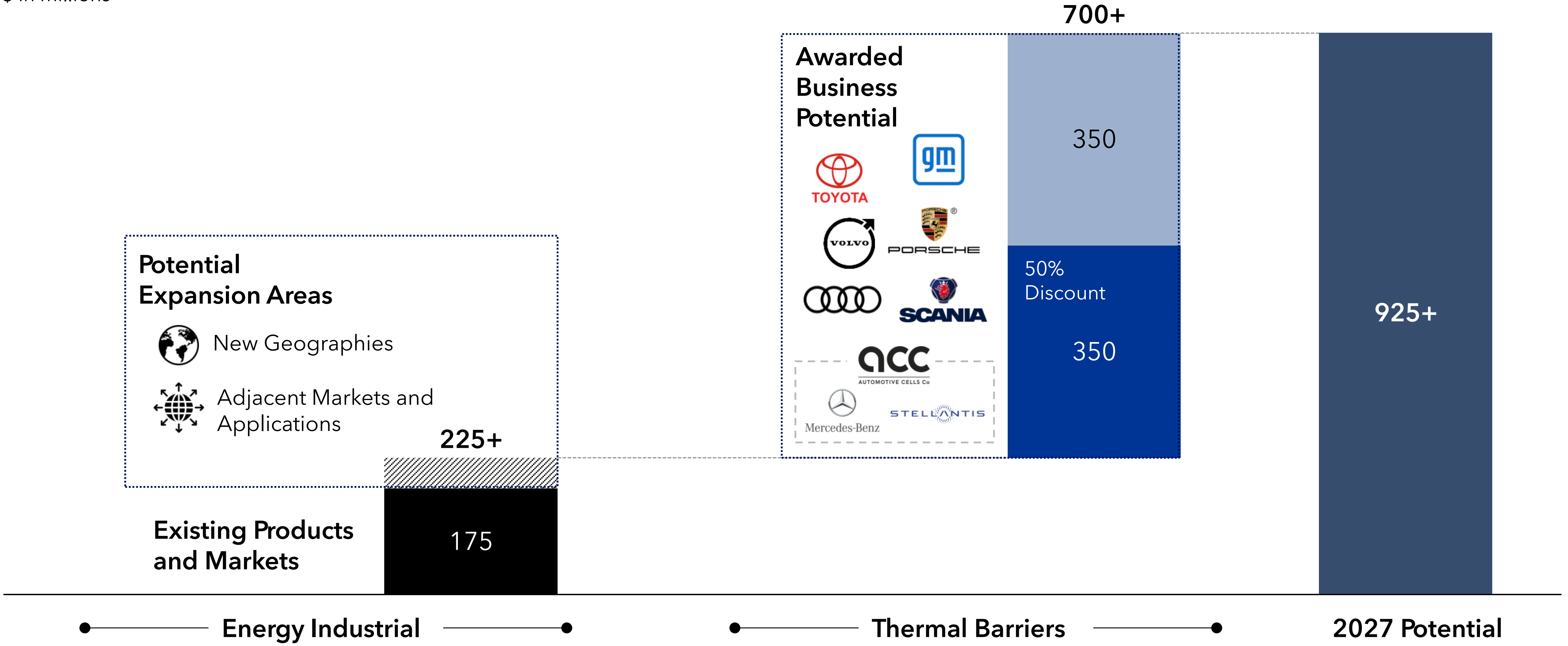
Path to Grow and Utilize Our Assets in 2027

Executing our strategy has the potential to deliver meaningful growth by leveraging our existing assets and relationships

Potential 2027 Revenue Buildup

$ in millions



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Summary

Earning our right to win by leveraging the Aerogel Technology Platform®, executing, and investing to grow profitably

DEMONSTRATED OPERATING EXECUTION

Delivered 29% gross margins in Q1; continuing to take actions to reduce fixed cost base

INCREASING FLEXIBILITY TO MEET DEMAND

Sourcing optimization between Rhode Island and EMF; diversified raw material supply chain

SECURING MORE PYROTHIN® CONTRACTS

PyroThin® award for next-gen General Motors program; record-level Thermal Barrier quoting activity

IMPROVING CAPITAL EFFICIENCY OF OUR MODEL

Significantly reduced capital expenditure plans provide path to positive free cash flow

The Road to Creating Near Term Value

- Flexible and Modular Supply
- Execute EV Thermal Barrier Demand Ramp
- Optimize the Fixed Cost Structure
- Secure additional EV Thermal Barrier awards
- Minimize and Right Time Capital Projects
- Reduce our Total Cost of Capital

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Appendix

GAAP to Non-GAAP Reconciliations

Adjusted Net Income (Loss) & EPS Reconciliation

($ in millions)		2025 Q1
Net Income (Loss)		(301.2)
Impairment of PP&E		286.6
Restructuring and Demobilization Costs		9.8
Adjusted Net Income (Loss)		**(4.8)**
Weighted Avg. Shares Outstanding		82.1
Reported EPS (Loss)	$	(3.67)
Adjusted EPS (Loss)	**$**	**(0.06)**

Adjusted EBITDA Reconciliation

	2025	2024				Q2-25 Outlook	
($ in millions)	Q1	Q1	Q2	Q3	Q4	Low	High
Net Income (Loss)	(301.2)	(1.8)	16.8	(13.0)	11.4	(11.0)	(4.0)
Depreciation and Amortization	5.8	5.8	6.0	5.3	5.4	6.0	6.0
Stock-based Compensation	2.1	4.7	3.0	2.6	2.5	3.0	3.0
Loss on Extinguishment of Debt	-	-	-	27.5	-	-	-
Other (Income) Expense & Income Tax Expense	1.9	4.3	3.2	2.9	3.4	2.0	2.0
Impairment of PP&E	286.6	-	-	-	-	-	-
Restructuring and Demobilization Costs	9.8	-	-	-	-	-	-
Adjusted EBITDA	**4.9**	**12.9**	**28.9**	**25.4**	**22.7**	**-**	**7.0**

Note: Figures may not total due to rounding

US EV Market Update – New Entrants Gaining Share

GM and Honda were ~16.6% of all electric vehicles sold in the United States in YTD in 2025

GM Ultium and Honda are continuing to capture their fair share; while Tesla continues to lose market share

US EV Sales Top Gainers/Losers[1]
(US YTD 2024 vs YTD 2025 change in EV sales in thousands)

	Change in EV sales (k)	YTD 2025 Sales (k)	YTD % Change	YTD '24 EV Mkt Share %	YTD '23 EV Mkt Share %	YTD Mkt Share Change	C2C Thermal Barrier?[3]
GM ultium cells	33	47.0	227%	11.9%	4.1%	7.8%	PyroThin
HONDA	18	18.6	>10,000%	4.7%	0.0%	4.7%	PyroThin
STELLANTIS	7	7.6	2,331%	1.9%	0.1%	1.8%	Future
BMW	4	20.1	24%	5.1%	4.6%	0.5%	None
VOLVO	4	6.0	146%	1.5%	0.7%	0.8%	None
TOYOTA	-1	8.8	-11%	2.2%	2.8%	-0.6%	PyroThin
Mercedes-Benz	-1	8.4	-14%	2.1%	2.8%	-0.6%	Future
RIVIAN	-2	13.5	-11%	3.4%	4.3%	-0.9%	None
HYUNDAI KIA	-6	29.6	-18%	7.5%	10.2%	-2.7%	None
TESLA	-14	168.5	-8%	42.6%	51.9%	-9.2%	None
Others[2]	1	67.1	2%	17.0%	18.6%	-1.6%	
Total	43	395.3	12%	100%	100%	-	

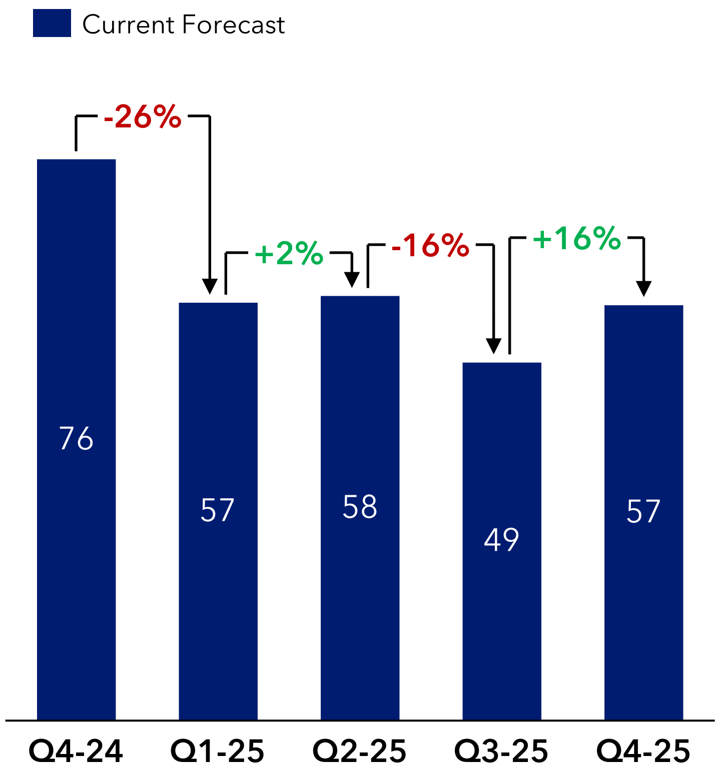
1- Wards Intelligence April 2025 Sales Data – YTD defined as January-April
2- Others include Porsche, Volkswagen, Nissan, Subaru, Lucid, Audi, JLR, Ford, GM Bolt
3- Munro & Associates Battery Teardowns, A2MAC and Commercial Discussions

Demand Overview - GM IHS EV Forecast

18% projected volume reduction in 2025 to more closely resemble sales rates; growth still expected in 2026/2027

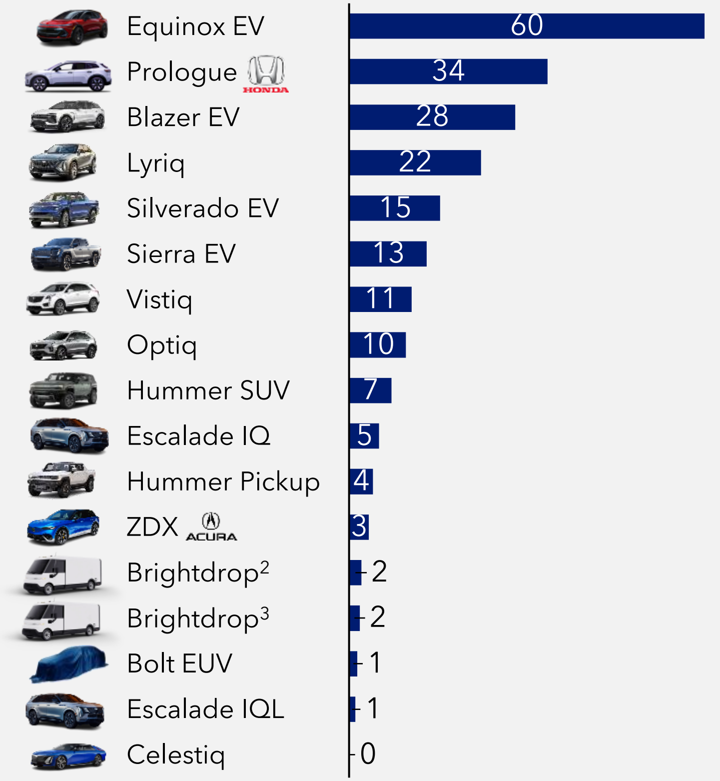
Future production to more closely follow vehicle sales

GM NA EV Production Forecast[1]
(Vehicles in thousands)



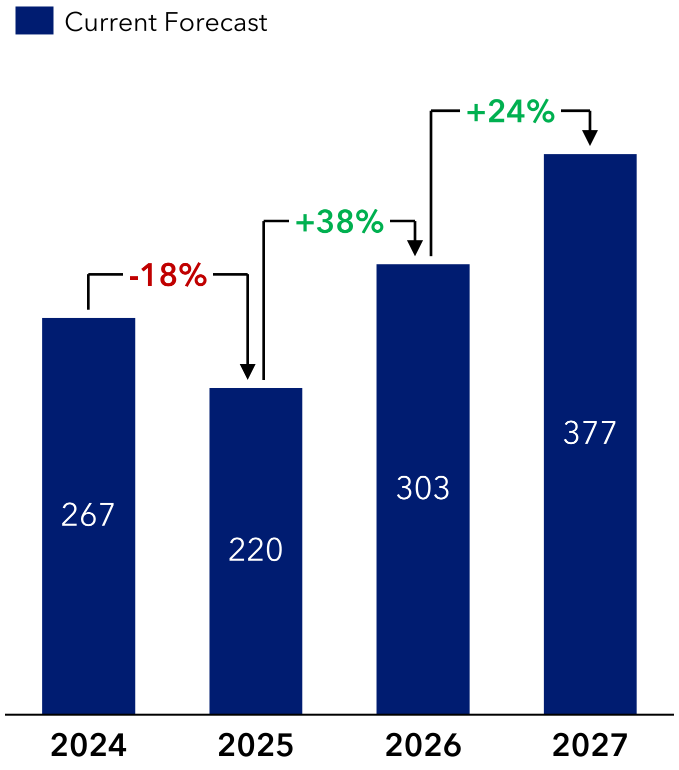
2025 volumes supported by 17 unique nameplates

2025 GM NA EV Production Forecast[1]
(Vehicles in thousands)



Growth expected to continue in 2026/2027 after 2025 pull back

GM NA EV Production Forecast[1]
(Vehicles in thousands)



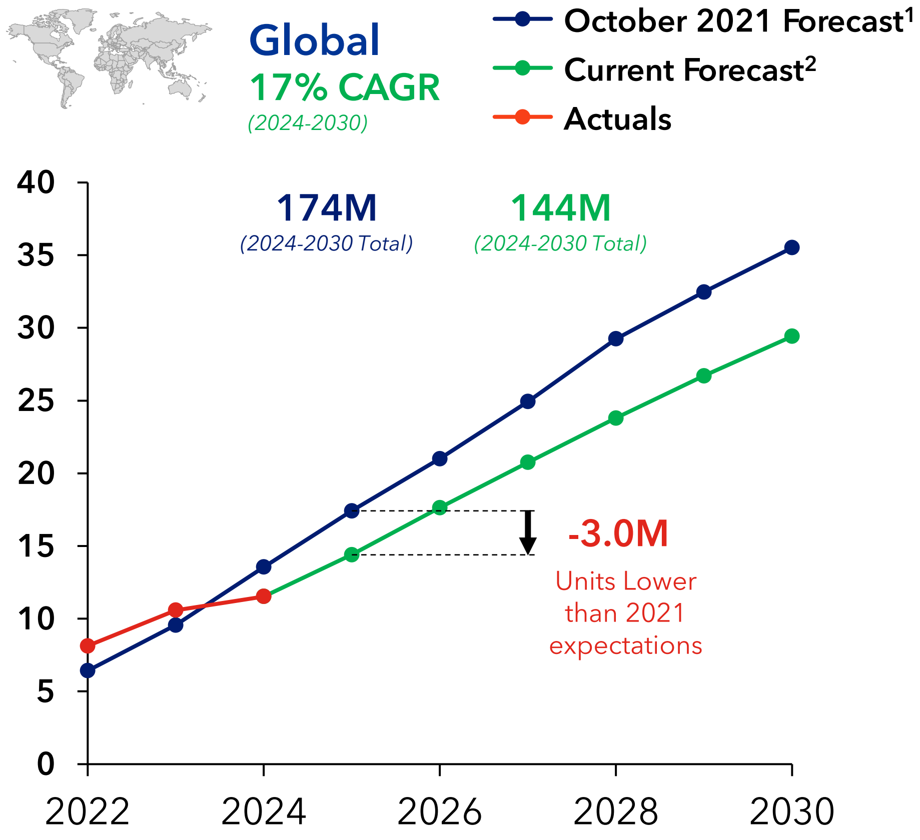
1- IHS April 2025 vehicle production forecast; 2025-2027 includes reintroduced Chevy Bolt with volumes of 1k, 43k, and 74k respectively
2. Brightdrop Zevo 400
3. Brightdrop Zevo 600

Long-term EV Production Trends

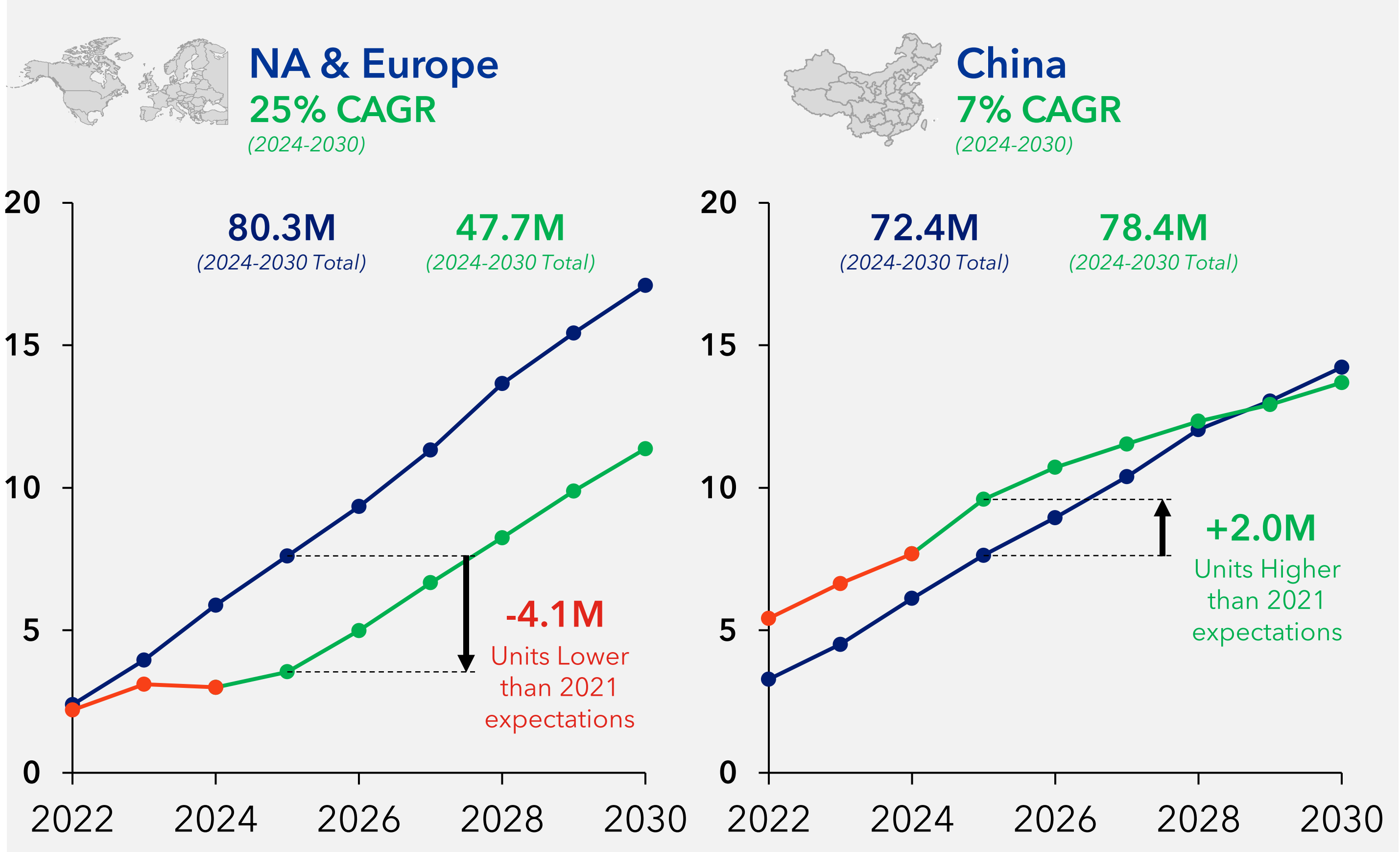
Global EV production is still projected to increase at a 17% CAGR through 2030; 25% CAGR in North America & Europe

Global EV production outlook expected to increase at 17% CAGR through 2030

Electric Vehicle (EV) light vehicle production forecast
Vehicles in Millions



…Europe and North America expecting modest 2025 volume growth, while China market significantly ahead of 2021 expectations



1- IHS October 2021 vehicle production forecast
2 - IHS April 2025 vehicle production forecast

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