TESLA

Inflation Reduction Act & Battery Supply Chain Impacts

Enabling Stronger Federal Light Duty Vehicle GHG & CAFE Standards

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February 7, 2023

Setting Stronger MY 2027+ Federal GHG & CAFE Standards

Current Policy Landscape

Biden GHG & Fuel Economy (CAFE) Standards for MY 2023/24-2026

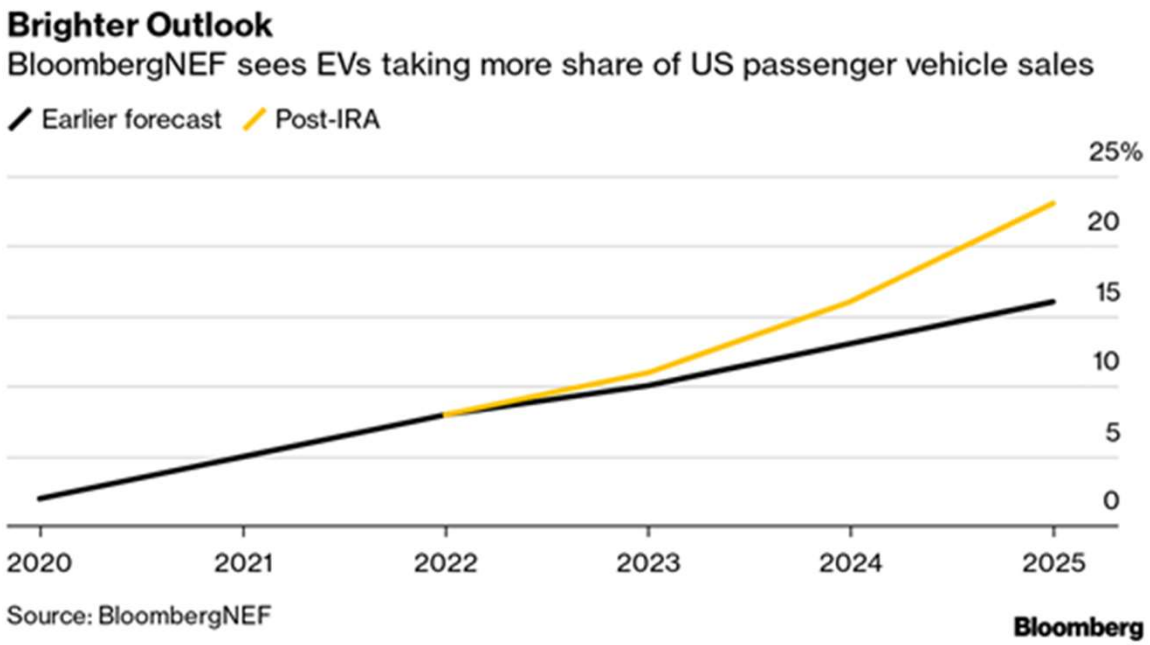
- Projected to achieve 17% ZEV sales annually by 2026
- Current 12.6% ZEV sales in Q2 2022 (EVs 5.6% with almost 67% YoY growth)

Biden E.O. 14037 - Strengthening American Leadership in Clean Cars and Trucks (Aug. 2021)

- Calls for 50% ZEV sales by 2030 but prior to . . .
  - Bipartisan Infrastructure Law (IIJA)
    - NEVI and charging infrastructure, DOE battery supply chain funding
  - Inflation Reduction Act (IRA)
    - Battery manufacturing PTC, consumer incentive, charging ITC, DPA battery supply chain funding
  - CA Advanced Clean Cars II (ACC II) and 177 State Adoption
    - 2026 - 35% ZEV Sales
    - 2030 – 68% ZEV Sales
    - 2035 – 100% ZEV Sales
  - RFS e-RINS Proposal
    - Starting MY 2024 provides annual eRIN generation per EV manufactured and in U.S. fleet

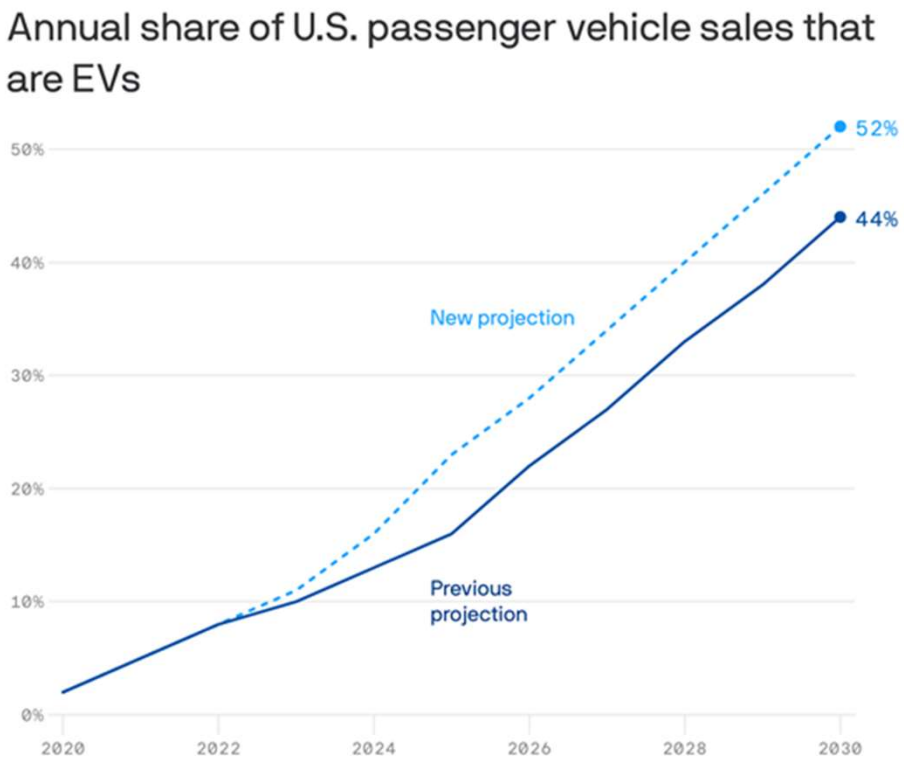
BNEF Post-IRA Baseline for Electrification Has Shifted Significantly

Chart: BNEF/Bloomberg Hyperdrive (Nov. 8, 2022)



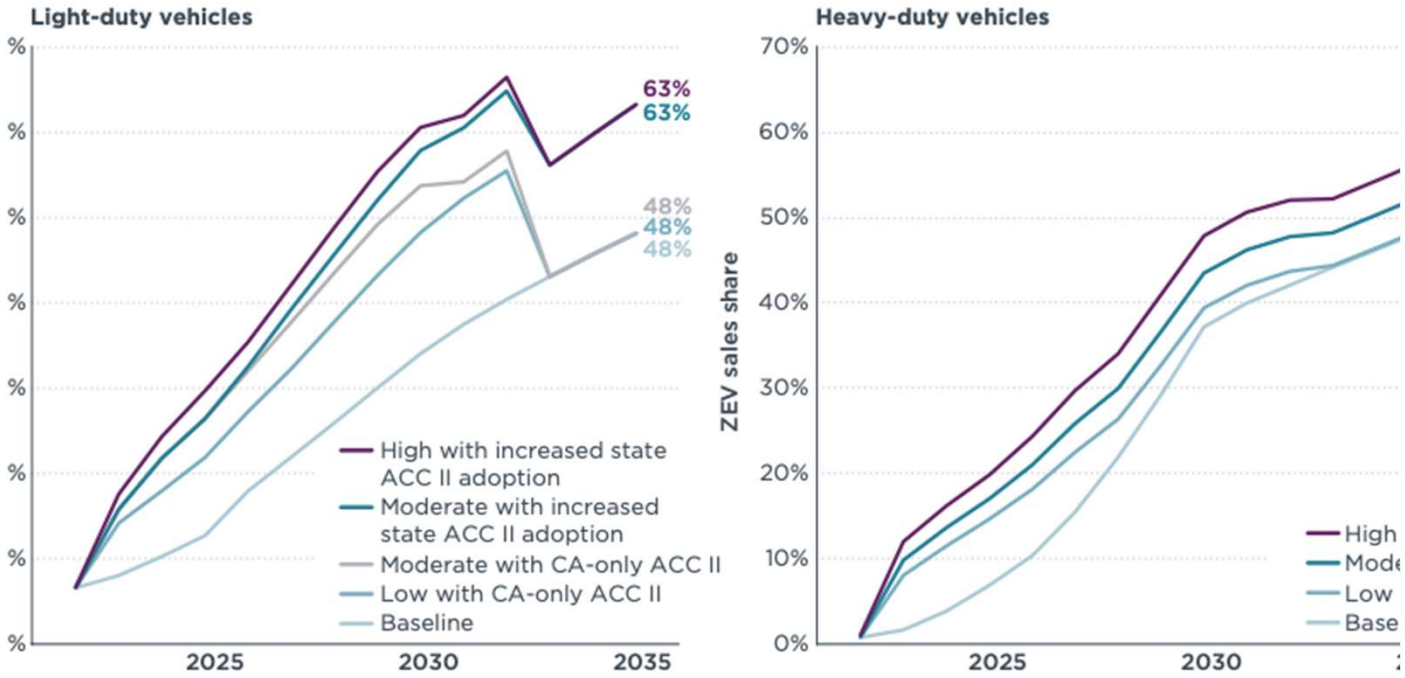
BNEF Projects IRA Leads to Greater Than 50% EVs by 2030

Data: BloombergNEF; Chart: Thomas Oide/Axios (Sept. 22, 2022)



ICCT Post-IRA Analysis

By 2030, 48%–61% EV sales share in the light-duty sector, increasing to 56%–67% by 2032



ES-1: Baseline, Low, Moderate, and High projections of EV sales share for light-duty ...s, considering ACC II adoption in only California versus increased states (left), and ZEV ...hare for heavy-duty vehicles with the IRA incentives, 2023-2035 (right)

Inflation Reduction Act Economics – Light-Duty Vehicles

Theoretical Vehicle Economics with IRA Impact

Comments

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Other Analyses of IRA Impact on Battery Costs

Projects IRA Domestic Battery Production Tax Credit Reduces Costs ~$4000

EXHIBIT 5 : **Battery credits for manufacturers in the IRA**

Battery Credits for Manufacturers in the IRA	
Component / Materials	Credit ammount
Battery module	$10 per battery module capacity kWh
Battery cell	$35 per battery cell capacity kWh
Critical mineral	10% of costs incurred
Timeline	100% credit through 2029, 75% in 2030, 50% in 2031, 25% in 2032.

Source: IRA, Bernstein analysis

EXHIBIT 6 : **Manufacturing credits for sample NMC/NCA batteries and comparison with LFP costs**

Battery type	kWh	Cost per kWh	Total cost	% of Cost that is critical minerals	10% Credit on critical minerlas	$45/ kWh credit for modules and cell	Total credit
NCM/NCA	75	$140	$10,500	60%	$630	$3,375	**$4,005**
LFP	75	$115	**$8,625**				

Source: IRA, Bernstein estimates and analysis

EXHIBIT 7 : **EV battery plants planned in NA over the next 5-years**

Manufacturer	Auto OEM that benefits the most	Location	Expected opening	Capacity	# of vehicles (70 kwh / per car)
Ford & SK Innovation	Ford	Tennessee	2025	43 GWh	614,286
Ford & SK Innovation	Ford	Kentucky	2025	86 GWh	1,228,571
Ford & SK Innovation	Ford	Kentucky	2026		
General Motors and LG	GM	Ohio	2022	35 GWh	500,000
General Motors and LG	GM	Tennessee	2023	35 GWh	500,000
General Motors and LG	GM	Michigan	2024	50 GWh	714,286
SK Innovation	Ford, VW	Georgia	2022	22 GWh	314,286
SK Innovation	Ford, VW	Georgia	2023	12 GWh	171,429
Panasonic	TSLA	Kansas	2024-2025	100 GWh	1,428,571
Stellantis & LG	Stellantis	Ontario	2024	45 GWh	642,857
Stellantis & Samsung SDI	Stellantis	Indiana	2025	23-33 GWh	400,000
Toyota	Toyota	North Carolina	2025	56 Gwh	800,000
Volkwagen	Volkwagen	Tennessee	TBD		
Pre-2022 existing capacity	TSLA			47 GWh	
Total				**559 GWh**	**7,314,286**

Source: US Department of Energy, Company website, Bernstein estimates and analysis

Data: Bernstein report, 24th August 2022

Tesla Actual/Projected U.S. Light Duty Vehicle Manufacturing & Deliveries

Model Years 2017- 2030e

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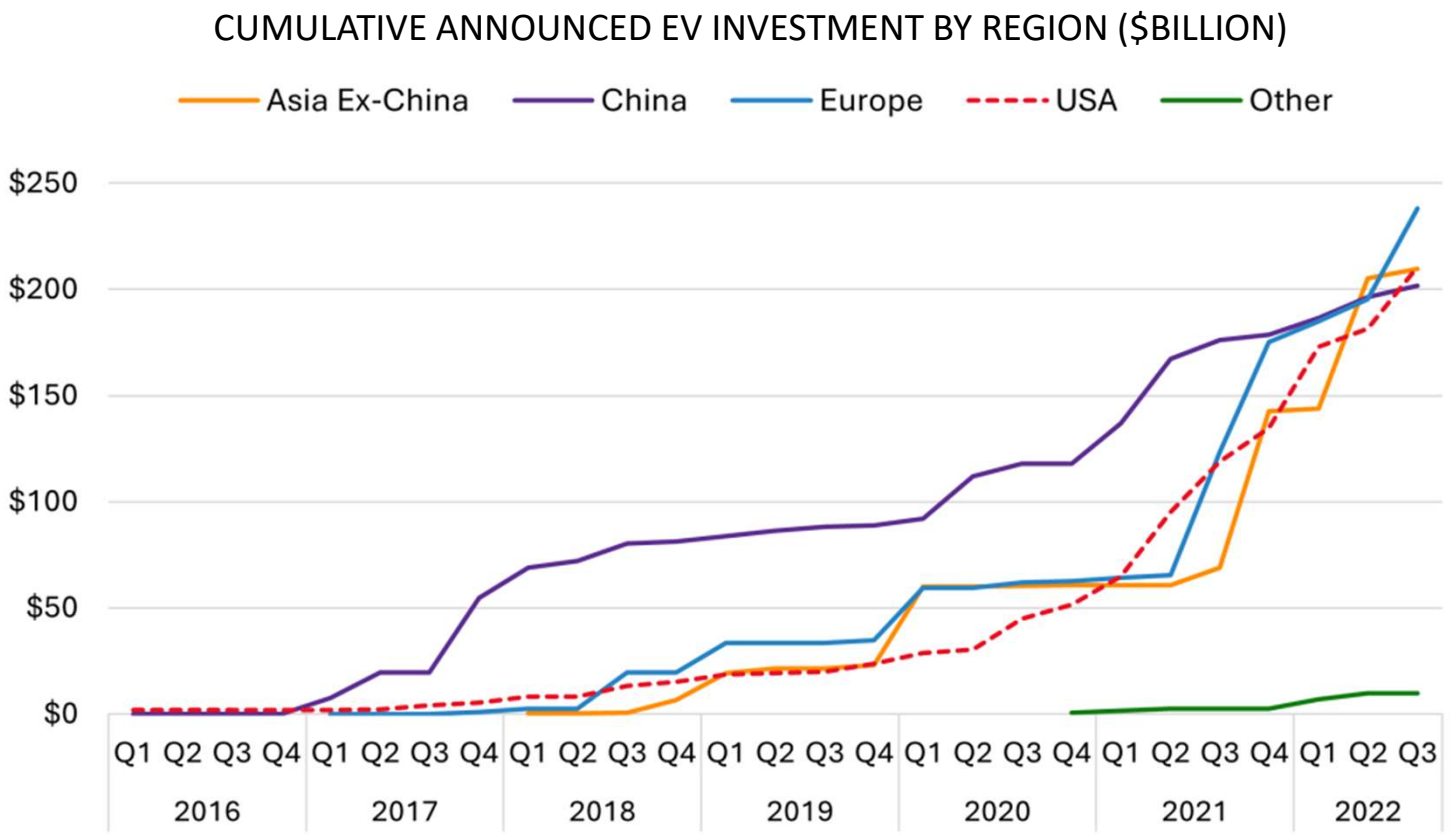
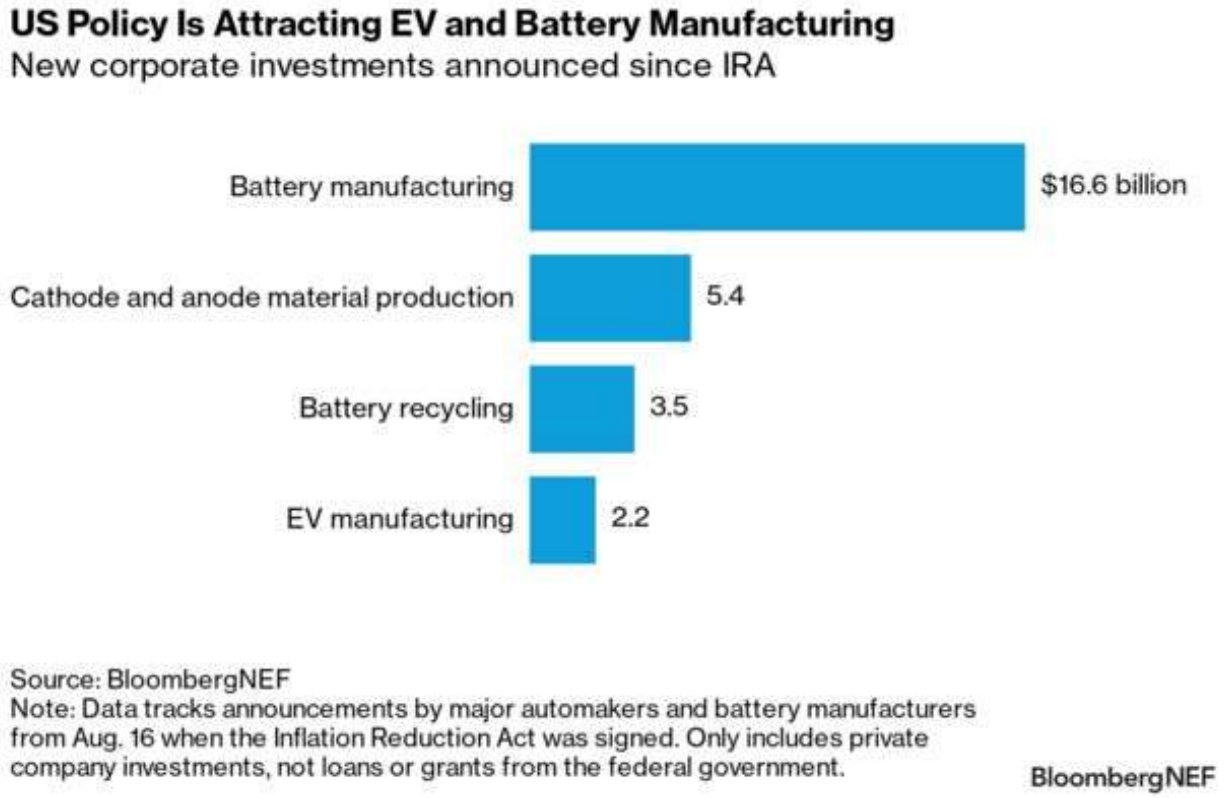
$210 Billion of Announced Investments in Electric Vehicle Manufacturing in U.S. by 2030

Chart: Atlas EV Hub (Jan.12, 2023)



$16.6B Investment in Battery Raw Material and Manufacturing Since IRA Passage

Chart: BNEF/Bloomberg Hyperdive (Jan. 13, 2023)



Other Analyses of IRA Impact on Battery Supply Chain

Projects Domestic Battery Production Capacity to Support 50% of Fleet Prior to MY 2027

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Tesla's Battery Manufacturing Expansions

New 4680 Cell Capacity Coming On-line

Fremont 4680 Cell Facility

- Producing at 1,000 cars/week capacity

Gigafactory Nevada - January 2023

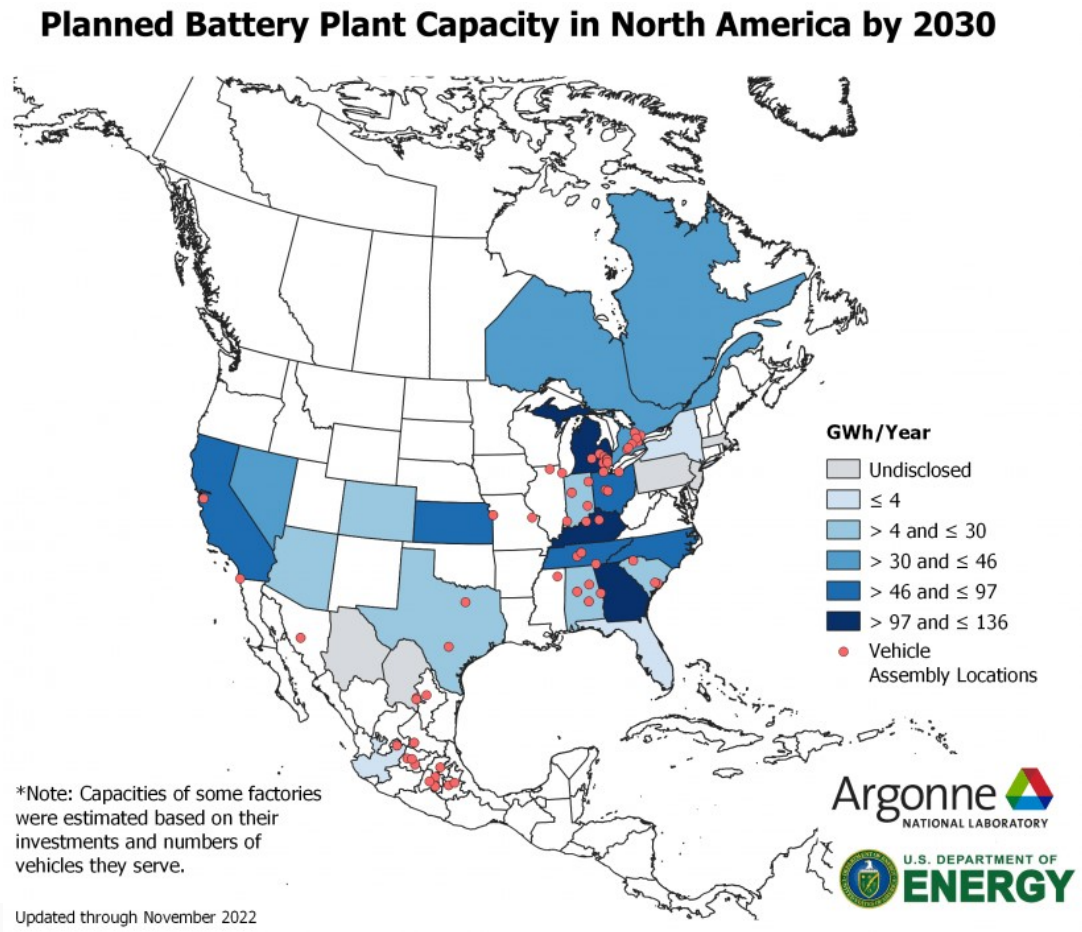
- Investing over $3.6 billion expansion including new 100 GWh 4680 cell factory (with capacity to produce enough batteries for 1.5 million light duty vehicles annually)

Gigafactory Texas – January 2023

- $717 million expansion to include cathode and 4680 cell factory

DOE - 2030 North American Battery Capacity Will Support 10 - 13M EVs/Year

2022 U.S. Auto Sales at 13.4M



DOE Investment of $3B in Battery Supply Chain

Tesla Letters of Support for Funding

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Tesla Recent Actions on Battery Supply Chain

All Prior to Inflation Reduction Act

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