

Mexico in a World of Electric Vehicles

A view from the United States

US-MEXICO CHAMBER OF COMMERCE-MID-AMERICA CHAPTER &
THE CONSULATE GENERAL OF MEXICO IN CHICAGO

19 APRIL 2023

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*The views expressed here do not necessarily reflect the views of the
Federal Reserve Bank of Chicago or the Federal Reserve System.*





INFLATION REDUCTION ACT

The IRA has many aspects



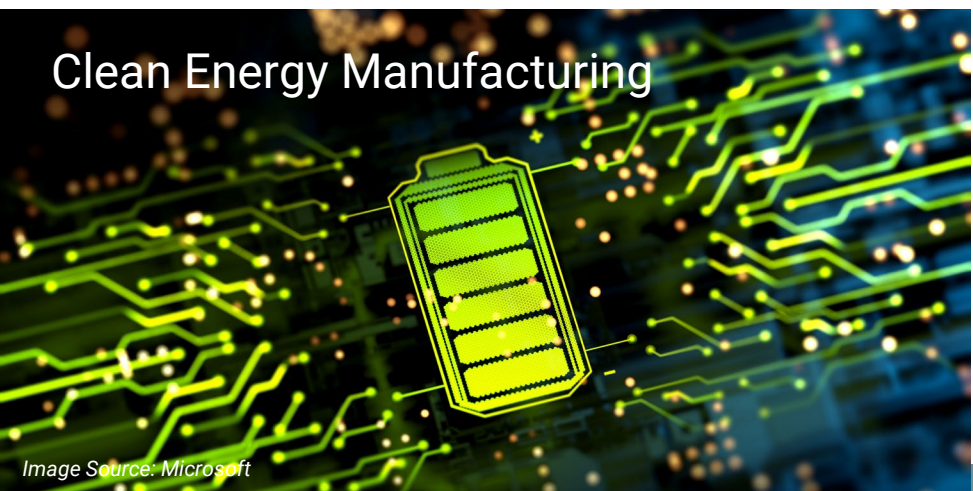
Climate Change



Prescription Drug Prices

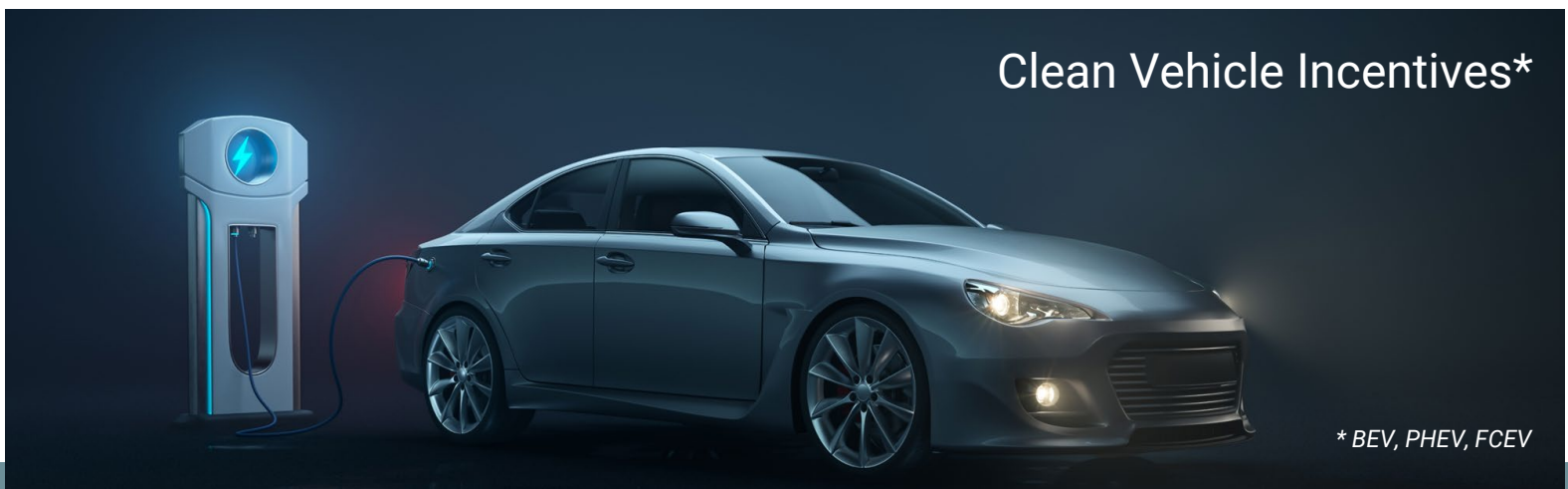


Corporate Taxes & Tax Enforcement



Clean Energy Manufacturing

Image Source: Microsoft



Clean Vehicle Incentives*

* BEV, PHEV, FCEV

INFLATION REDUCTION ACT

IRA incentives are
an alphabet soup of
IRS tax code sections
& government programs

30D

New Retail Clean
Vehicle Tax Credits

45W

Commercial Clean
Vehicle Tax Credits

25E

Used Retail Clean
Vehicle Tax Credits



45X

Manufacturing
Tax Credits

48C

Advanced Energy
Project Credit

ATVM

Advanced Vehicle
Technology Program

DMCG*

Domestic Manufacturing
Conversion Grants

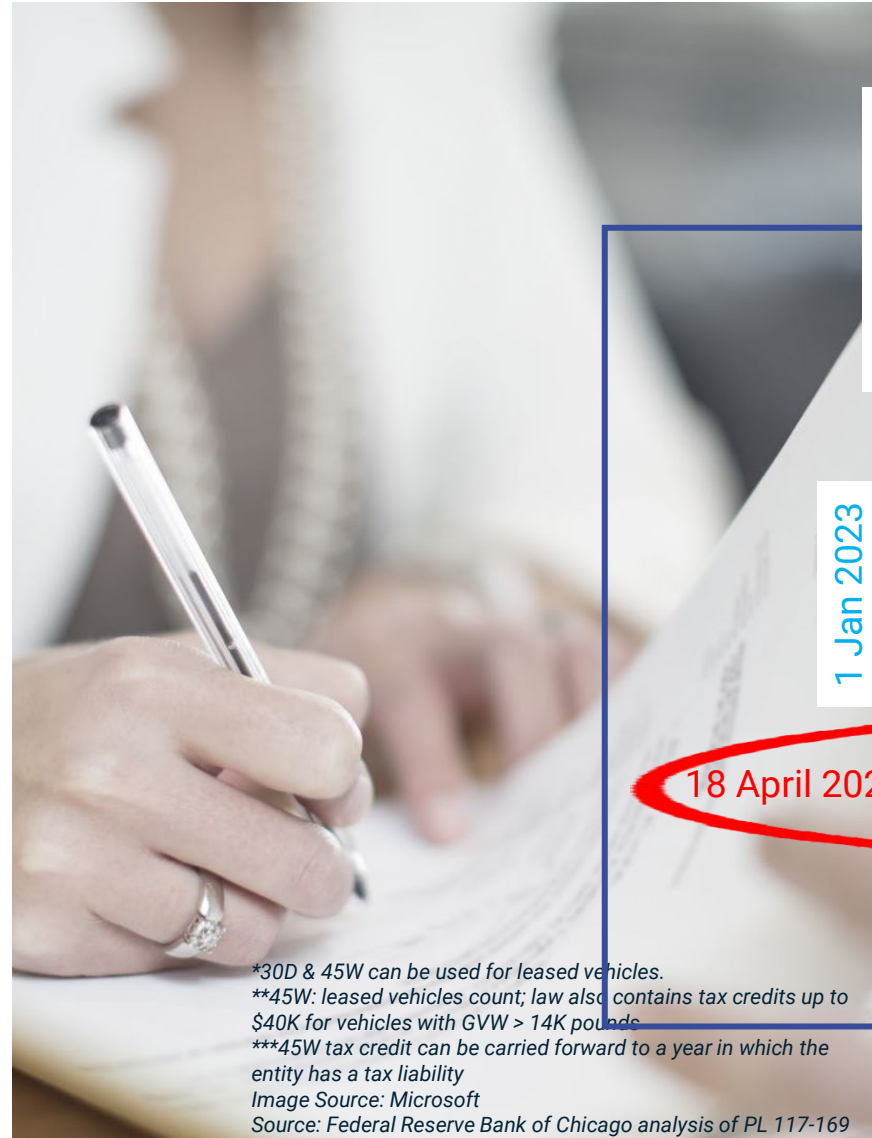


** I don't think anyone uses this acronym*



INFLATION REDUCTION ACT

Comparing 30D, 45W, & 25E



Requirement	30D New Clean Vehicle Credit (up to \$7,500)*	45W Commercial Clean Vehicle Credit (<14K) (up to \$7,500*, **)	25E Used Clean Vehicle Credit (up to \$4,000 or 30% price)
Qualified manufacturer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Clean Air Act compliant vehicle	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
GVW < 14K pounds	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Battery >= 7 kWh	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Purchaser must have tax liability	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> ***	<input checked="" type="checkbox"/>
Vehicle must be sold by a dealer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Not for resale	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Original use	<input checked="" type="checkbox"/>		
Assembled in North America	<input checked="" type="checkbox"/>		
Price caps (30D: MSRP \$55K cars, \$80K others; 25E: Transaction price \$25K)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
Modified Adjusted Gross Income Caps (30D: \$300K Married/\$225K Head of Household/\$150K Single; 25E: half of 30D \$150K/\$112.5K/\$75K)	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
\$3,750 if meet critical mineral content targets	<input checked="" type="checkbox"/>		
\$3,750 if meet battery component content targets	<input checked="" type="checkbox"/>		
? No critical mineral or battery components source from a foreign entity of concern	<input checked="" type="checkbox"/>		
Must be for business use		<input checked="" type="checkbox"/>	
At least 2 years old			<input checked="" type="checkbox"/>
First resale after 16 August 2022			<input checked="" type="checkbox"/>

16 August 2023

1 Jan 2023

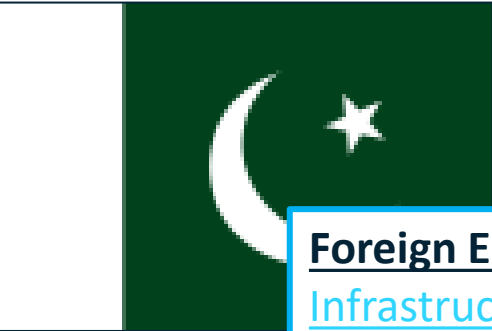
18 April 2023

*30D & 45W can be used for leased vehicles.
 **45W: leased vehicles count; law also contains tax credits up to \$40K for vehicles with GVW > 14K pounds
 ***45W tax credit can be carried forward to a year in which the entity has a tax liability
 Image Source: Microsoft
 Source: Federal Reserve Bank of Chicago analysis of PL 117-169



“These rules will be addressed in future guidance.”

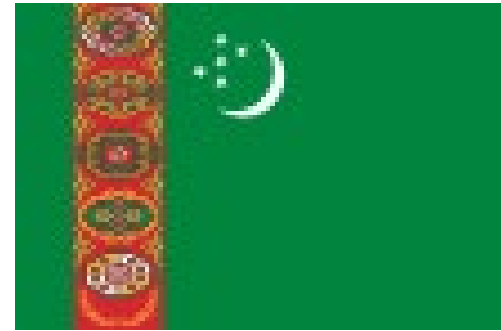
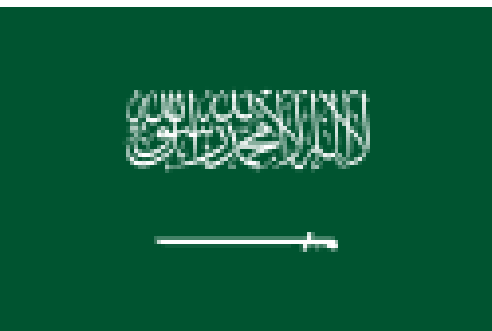
Countries of Particular Concern



Foreign Entity of Concern Definition: Section 40207(a)(5) of the [Infrastructure Investment and Jobs Act](#), “owned by, controlled by, or subject to the jurisdiction or direction of a government of a foreign country that is a “covered nation” (defined in [10 U.S.C. 2533c\(d\)\(2\)](#))”

The most recent Countries of Particular Concern designations were made by the Secretary of State on November 30, 2022:

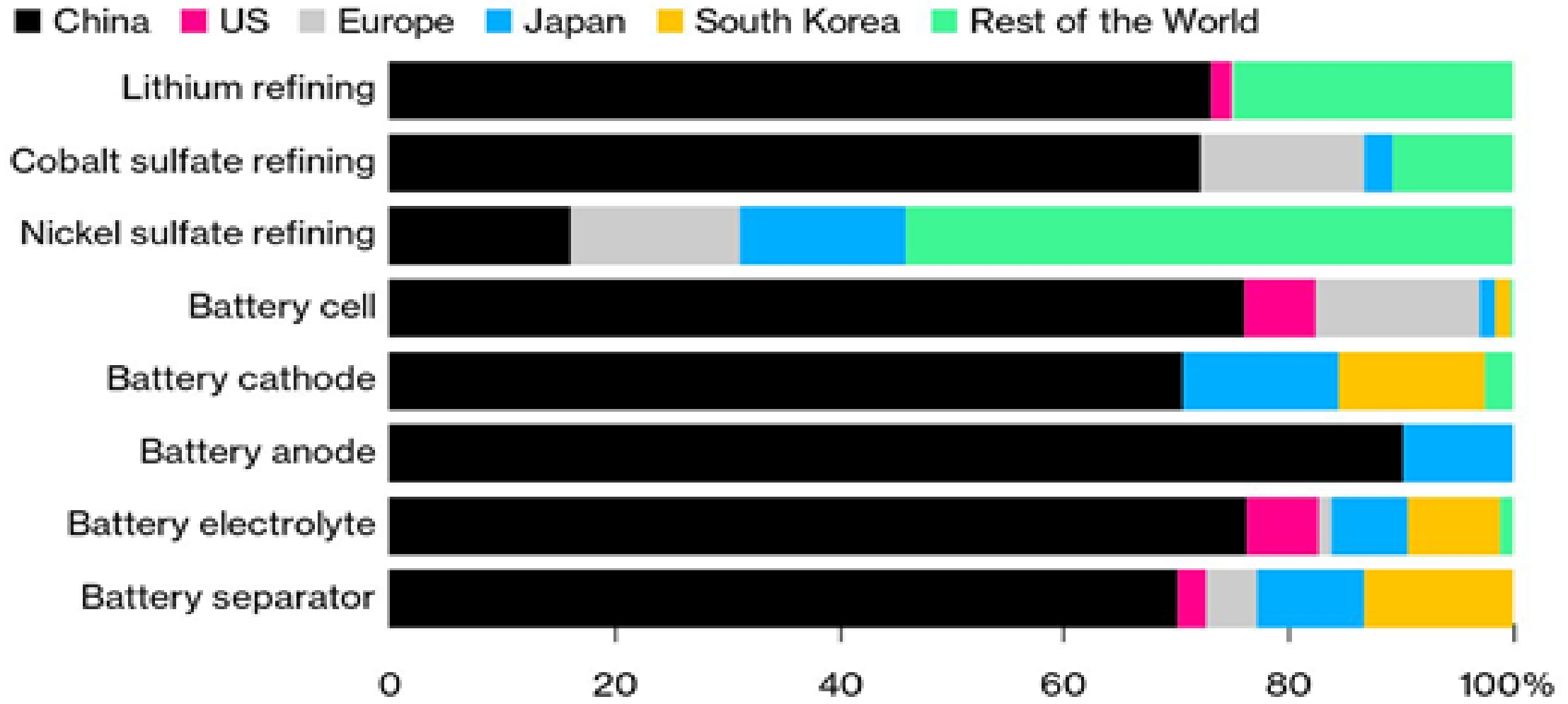
Burma, People’s Republic of China, Cuba, Eritrea, Iran, the Democratic People’s Republic of Korea, Nicaragua, Pakistan, Russia, Saudi Arabia, Tajikistan, and Turkmenistan.



Source: [Countries of Particular Concern, Special Watch List Countries, Entities of Particular Concern - United States Department of State](#)

China's Grip on the EV Supply Chain

The country dominates much of the battery industry



Source: BloombergNEF

Bloomberg

INFLATION REDUCTION ACT: 30D

Critical minerals content requirements

	<2024	2024	2025	2026	2027	2028	2029	2030	2031	2032
Critical Minerals (Sourced from U.S. or free trade agreement countries)	40%	50%	60%	70%				80%		
	↑ Starting 1 January 2025, no <u>critical minerals</u> can be extracted, processed, or recycled by a foreign entity of concern									



INFLATION REDUCTION ACT: 30D

Battery components content requirements

	<2024	2024	2025	2026	2027	2028	2029	2030	2031	2032
Battery Components (North American assembled)	50%	60%	70%	80%	90%			100%		
	↑ Starting 1 January 2024, no <u>battery components</u> can be manufactured or assembled by a foreign entity of concern									



INFLATION REDUCTION ACT

Review of Major Manufacturing Incentive Provisions



45X

Manufacturing Tax Credits

- Production credits for solar, wind, batteries, minerals etc.
- Electrode active materials
- Battery cells (\$35/kWh)
- Battery modules (\$10-45/kWh)
- Applicable critical minerals (10% costs incurred)

48C

Advanced Energy Project Credit

- \$10B in tax credits for qualifying projects
- Establish, expand, or re-equip facilities to produce a wide variety of clean energy products:
 - BEV/PHEV/FCEVs
 - Energy storage
 - Fuel cell equipment

ATVM

Advanced Vehicle Technology Program

- +\$3B to an existing direct loan program
- No longer capped at \$25B
- Establish or expand facilities to produce:
 - Advanced technology vehicles
 - Components with low or zero emissions

DMCG

Domestic Manufacturing Conversion Grants

- Grants for re-equipping, expanding, or establishing a manufacturing facility in the U.S. to produce:
 - HEV
 - PHEV
 - BEV
 - FCEV

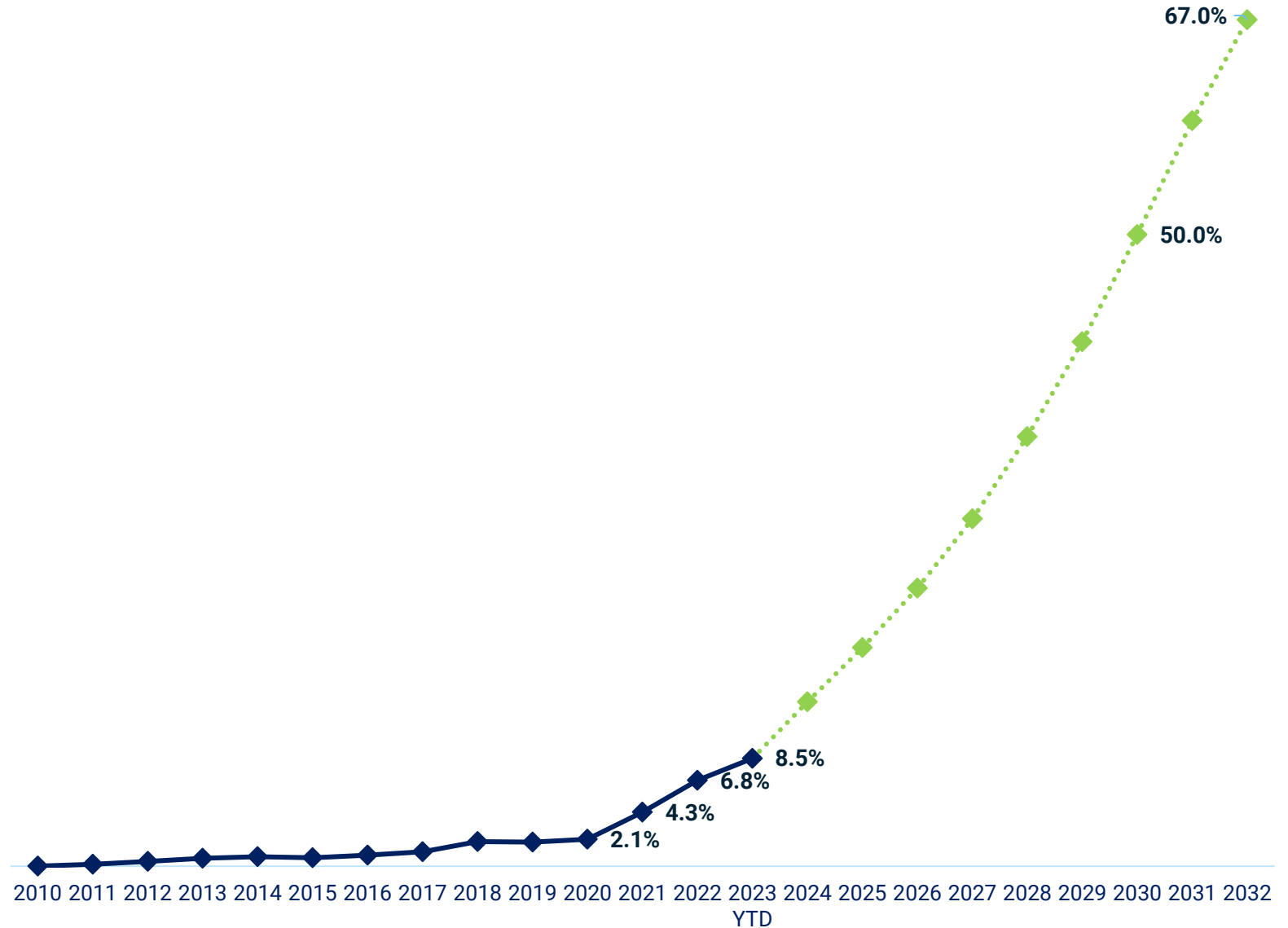


ENVIRONMENTAL PROTECTION AGENCY

Draft Emissions Rules Issued 4/12/2023

- Draft rules would require up to 67% EV market share by 2032
- Biden Administration had previously set an EV goal of 50% of sales by 2030
- Current share (Q1 2023) = 8.5%

U.S. PEV Sales Share
 2010-2023 Q1 (PEV=BEV, PHEV, & FCEV)
 Source: Wards Informa,
[EPA Notice of Proposed Rulemaking](#)





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