

**Electric Vehicle
Product Commission**

Appendix C

September 27, 2023

Major Federal EV Subsidy for Automakers & Battery Manufacturers

Federal	Indiana
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Federal			Website
45X Advanced Manufacturing Production Tax Credit (PTC)	Program	<ul style="list-style-type: none"> Per-unit tax credit for production of battery cells & modules in U.S. Runs from 2023 to 2032, with the value of credits phasing down starting in 2030. Also provides 10% credit for production of key battery inputs – such as critical minerals and electrode active materials. 	IRA Update: Section 45X & Section 48C Mintz
	Value	<ul style="list-style-type: none"> \$35/kwh for battery cells production and \$10/kwh for battery module. It represents around one-third of current battery costs. Will be an even greater share of costs as battery prices decline. BEV battery capacity is typically around 50-200 kWh per vehicle. For a BEV with 100 kwh battery, the PTC is worth \$4,500 per vehicle. Major battery cell plants are typically 30 to 40 GWH of annual capacity. If a plant produces 30 GWH of battery cells annually, it can generate over \$1 billion in battery cell PTC credits annually. J.P. Morgan estimated 45X battery cell & module PTC could generate over \$150 billion in tax credits through 2032 for battery makers and JV partners.¹ Ford CEO Jim Farley: “From '23 to '26, we estimate a combined available tax credit for Ford and our battery partners could total more than \$7 billion with large step-up in annual credits in '27 as our JV battery plants ramp up to full production.”² GM CFO Paul Jacobson: “We expect that clean energy tax credits will be a material tailwind...For 2023, we anticipate at least \$300 million in EBIT-adjusted benefit and expect this tailwind to increase significantly over the next few years as our cell production ramps”³ 	
	Notable Conditions	<ul style="list-style-type: none"> Production must occur in the U.S. 	
	Beneficiaries	<ul style="list-style-type: none"> Battery manufacturers and OEM partners. Largest battery manufacturers are LG, SK, Samsung, Panasonic, Envision & CATL. Most major auto OEMs are planning battery production in U.S. with major battery makers. Big Three JV plants will be major beneficiaries: GM-LG-Ultium (3), GM-Samsung (1), Ford-SK (2), Ford-CATL (1), and Stellantis-Samsung (1) 	
30D Consumer Tax Credit	Program	<ul style="list-style-type: none"> Revised under IRA, 30D provides consumer tax credit of up to \$7,500 for the purchase of BEV or PHEV that meets content and price cap requirements. IRA also lifted the manufacturer sales cap on accessing the credit, which GM and Tesla has already hit. 	Credits for New Electric Vehicles Purchased in 2022 or Before Internal Revenue Service (irs.gov)
	Value	<ul style="list-style-type: none"> Consumers can receive \$3,750 or \$7,500 in tax credits for qualifying BEVs or PHEVs. Precise value to OEMs is unknown. Credits can be used to increase EV sales through lower prices or help EV profitability by padding higher prices. 	
	Notable Conditions	<ul style="list-style-type: none"> Final assembly in North America required to qualify for credit. Credit of \$3,750 if vehicle meets critical mineral content requirements (North America or Free Trade Agreement countries) Credit of \$3,750 if vehicle meeting battery component content requirements (North America) Previously owned clean vehicles (also known as “used vehicles”) are eligible for a tax credit of up to \$4,000 The minimum battery capacity must be 7 kilowatt hours Starting in 2024-2025, vehicle with battery & mineral content from “Foreign Entities of Concern” will be disqualified. Details remain TBD. Vehicle price cap: \$55k for cars, \$80k for pickup/SUV/Van Income Cap: \$150k individual, \$300k for couples 	

	Beneficiaries	<ul style="list-style-type: none"> Any OEM producing EVs in North America. For now, biggest beneficiaries are GM, Ford, Stellantis, and Tesla. Big Three expect most of their EVs to qualify for some or all of the credit. Major battery makers with North American footprint will see increased demand from OEM customers/partners. Most major OEMs plan to build at least some EVs in North America and eventually qualify for credit. 	
45W Commercial Vehicle Tax Credit ("Lease Loophole")	Program	<ul style="list-style-type: none"> For heavy duty vehicles (over 14,000 lbs.), program provides credit up to \$40,000 for purchase of EV. For light-duty vehicles, credits provide up to \$7,500 for "commercial" light duty vehicles Definition of "commercial" includes any vehicle that can be claimed as a depreciating asset for tax purposes. This includes vehicle leased to consumers. 	Commercial Clean Vehicle Credit Internal Revenue Service (irs.gov)
	Value	<ul style="list-style-type: none"> For light-duty, consumers can receive up to \$7,500 discount on leased or commercial EVs Precise value to OEMs is unknown. Credit will contribute to EV profitability – either by increasing sales or profitability. Credit value is based on incremental cost difference of EV vs ICE. Over time, the value of credit may decline, but it is currently set at full \$7,500. 	
	Notable Conditions	<ul style="list-style-type: none"> Unlike 30D, 45W commercial vehicle credit does not require North American assembly, regional battery or mineral content, price caps, or income caps. "Lease Loophole": Treasury has determined that any leased vehicle is considered "commercial" for tax purposes. Leases create loophole for OEMs to get around 30D requirements. Leased vehicles are eligible for full \$7,500 even if they are used for personal use by individual consumers, imported from outside North America, have no regional battery content, exceed the price caps, or are purchased by wealthy consumers. 	
	Beneficiaries	<ul style="list-style-type: none"> All OEMs & heavy truck OEMs, but particularly OEMs that import EVs, source batteries from Asia or Europe, or sell luxury brands to wealthy consumers. 	
Advanced Technology Vehicle Manufacturing (ATVM) Loan Program	Program	<ul style="list-style-type: none"> Loan from the government, administered by the Dept of Energy, for investments in manufacturing of fuel-efficient vehicles & components. Program now has around \$55 billion in total loan authority.⁴ ATVM was dormant for years. Frequent target for cuts, UAW has been a supporter of program for its potential to subsidize domestic auto investment. 	Advanced Technology Vehicles Manufacturing Loan Program Department of Energy
	Value	<ul style="list-style-type: none"> ATVM significantly reduces borrowing costs for projects versus market rates.⁵ Precise value of borrowing savings is unknown. 	
	Notable Conditions	<ul style="list-style-type: none"> Investment must be in the U.S. 	
	Beneficiaries	<ul style="list-style-type: none"> Ultium Cells (GM-LG) received a \$2.5 billion loan for investments in Lordstown (UAW), Spring Hill, and Lansing cell plants.⁶ Past recipients in 2009-2010 were Ford (\$5.9 billion), Tesla (\$465 million), and Nissan (\$1.45 billion). All three loans were repaid.⁷ Ultium is largest current loan. Other recent loans are in other parts of EV supply chain: Syrah (\$102M for graphite plant in LA), Ioneer (\$700M for lithium project in NV),⁸ Redwood Materials (\$2B for battery recycling in NV),⁹ and Li-Cycle (\$375M for battery recycling in NY).¹⁰ Ioneer, Redwood, and Li-Cycle loans are conditional and not yet finalized. 	
Domestic Manufacturing Conversion Grant	Program	<ul style="list-style-type: none"> \$2 billion grant program, administered by DOE, for production of EVs, PHEVs, hybrids, and FCEVs, including components. Old program, funded for first time through IRA. 	Domestic Manufacturing Conversion Grants Department of Energy
	Value	<ul style="list-style-type: none"> Program has \$2 billion in total. Award sizes unknown. 	
	Notable Conditions	<ul style="list-style-type: none"> Production in U.S. Priority given to retooling existing manufacturing facilities that have recently ceased or will cease operation. 50% cost share. UAW called for labor standards in recent DOE RFI on grant program. 	
	Beneficiaries	<ul style="list-style-type: none"> TBD. Major OEMs & suppliers, including potentially Big Three. 	
	Program	<ul style="list-style-type: none"> \$10 billion in investment tax credits for "advanced energy projects", including manufacturing of EV and components. 48C originally created in 2009. IRA provides new round of funding. 	

48C Advanced Energy Project Credit	Value	<ul style="list-style-type: none"> Production in U.S. TBD. Award sizes unknown. Credits can be up to 30% of value of investment.¹¹ The 1st round of awards is expected to be worth around \$4 billion.¹² 	Qualifying Advanced Energy Project Credit (48C) Program Department of Energy
	Notable Conditions	<ul style="list-style-type: none"> At least \$4 billion of credits must go to “energy communities” (census tracts with fossil fuel production or coal mine closures) Bonuses for prevailing wage & apprenticeships in building trades Facility cannot get both 48C investment credit and 45X production credit.¹³ 	
	Beneficiaries	<p>TBD. Could include OEMs or battery makers – likely for components not covered by 45X PTC (ex: cells, modules, electrode materials, or minerals).</p> <ul style="list-style-type: none"> Notice for 1st round of funding expected on May 31, 2023.¹⁴ In prior rounds of 48C tax credits in 2013, Ford received \$30 million to re-tool Michigan Assembly for hybrids and GM received \$20 million to re-tool Detroit-Hamtramck for the Chevy Volt and Cadillac ELR PHEVs.¹⁵ 	
Bipartisan Infrastructure Bill Battery Supply Chain Grants	Program	<ul style="list-style-type: none"> \$6 billion in grants for domestic production in battery supply chain. Dept of Energy announced \$2.8 billion in awards to 21 companies in Oct 2022.¹⁶ 	Federal Funding Programs US Department of Transportation
	Value	<ul style="list-style-type: none"> 1st Round: \$50 - \$300 million grants per project. 	
	Notable Conditions	<ul style="list-style-type: none"> Production in U.S. Application included questions about labor organization partnership and “good-paying jobs with a free and fair choice to join or form a union”. However, impact is unclear, few recipients of first funding round had agreements with labor unions. 	
	Beneficiaries	<ul style="list-style-type: none"> Microvast, in technology partnership with GM, to receive \$200 million to build a battery separator plant.¹⁷ Originally planned for Clarksville, TN, the plant is now planned for Hopkinsville, KY.¹⁸ The “bulk” of the private investment in the plant is expected to come from Microvast, not GM.¹⁹ 	
Domestic Manufacturing Conversion Grant Program	Program	<ul style="list-style-type: none"> prioritizes projects maintaining collective bargaining agreements and high-wage hourly production workforces. It offers cost-shared grants to promote the domestic production of various electrified vehicles, including hybrid, plug-in electric hybrid, plug-in electric drive, and hydrogen fuel cell electric vehicles. The program aims to expand the manufacturing of light, medium, and heavy-duty electrified vehicles and components, supporting vehicle assembly, component assembly, and related part manufacturing facilities. 	Biden-Harris Administration Announces \$15.5 Billion to Support a Strong and Just Transition to Electric Vehicles, Retooling Existing Plants, and Rehiring Existing Workers Department of Energy CLEAN ENERGY INFRASTRUCTURE FUNDING OPPORTUNITY ANNOUNCEMENTS
	Value	<ul style="list-style-type: none"> \$2 billion 	
	Notable Conditions	<ul style="list-style-type: none"> Concept papers are due by October 2, 2023, with full applications due by December 7, 2023. 	
	Beneficiaries	<ul style="list-style-type: none"> Projects selected for this funding must also contribute to the President’s Justice40 Initiative, which aims to advance diversity, equity, inclusion, and accessibility in America’s workforce Preference will also be given to projects that commit to pay high wages for production workers and maintain collective bargaining agreements. 	
Advanced Technology Vehicles Manufacturing Loan Program	Program	<ul style="list-style-type: none"> The DOE will evaluate the anticipated economic impacts of converting or directly replacing an existing factory with high-quality jobs, considering factors such as contributions to the local economy, employment history, projected employment, and the duration of its existence. 	Biden-Harris Administration Announces \$15.5 Billion to Support a Strong and Just Transition to Electric Vehicles, Retooling Existing Plants, and Rehiring Existing Workers Department of Energy
	Value	<ul style="list-style-type: none"> The DOE offers up to \$10 billion in loan authority 	
	Notable Conditions	<ul style="list-style-type: none"> Eligible projects include those that retain high wages, benefits, workplace rights, and other commitments, such as maintaining the existing facility until a new one is complete in the case of facility replacement projects. 	
	Beneficiaries	<ul style="list-style-type: none"> This initiative is aimed at applications from automotive manufacturing conversion projects that preserve high-quality jobs in communities currently hosting manufacturing facilities. 	

			DOE Announces Availability 10 Billion Loan Authority Automotive Manufacturing
Battery Materials Processing and Battery Manufacturing Grants Round II	Program	<ul style="list-style-type: none"> to expand domestic battery manufacturing and materials that are crucial for the growing clean energy sectors, such as electric vehicles and energy storage. 	Biden-Harris Administration Announces \$15.5 Billion to Support a Strong and Just Transition to Electric Vehicles, Retooling Existing Plants, and Rehiring Existing Workers Department of Energy CLEAN ENERGY INFRASTRUCTURE FUNDING OPPORTUNITY ANNOUNCEMENTS
	Value	<ul style="list-style-type: none"> 3.5 billion 	
	Notable Conditions	<ul style="list-style-type: none"> The goal is to aid the establishment of new, retrofitted, and expanded domestic commercial facilities dedicated to battery materials, components, and cell manufacturing. This initiative focuses on supporting the growth of the domestic industry, benefiting manufacturing workers, and promoting equity and environmental justice. 	
	Beneficiaries	<ul style="list-style-type: none"> The program will specifically assist communities with experienced auto workers and a history of vehicle production, applicants with strong workforce practices, and those aiming to create high-quality jobs. 	
Indiana			
INDOT National Electric Vehicle Infrastructure (NEVI)	Program	<ul style="list-style-type: none"> A national initiative to create a network of at least 500,000 reliable chargers across the U.S. to support the growing adoption of electric vehicles. Charging stations locations will be determined by federal guidance and using a data-driven approach considering EV miles traveled, EV adoption rates and growth models, existing and planned stations, and electric grid capacity among other factors. INDOT will contract with partners to build Level 3 DC Fast Charge charging stations along Indiana's federally designated alternative fuel corridors (AFC's). 	INDOT: Electric Vehicle Charging Infrastructure Network
	Value	<ul style="list-style-type: none"> INDOT is investing nearly \$100 million to build an electric vehicle (EV) charging network at strategic locations across Indiana. 	
	Notable Conditions	<ul style="list-style-type: none"> Selected locations must ensure convenient, equitable access for users in rural and urban areas and station capacity, design and location will promote usage by passenger EV's and medium- and heavy-duty EV's. EV charging infrastructure must be located every 50 miles along State's interstate highway system, within 1 mile of the Interstate. EV charging infrastructure must include at least four 150KW Direct Current (DC) Fast Chargers. 	
	Beneficiaries	<ul style="list-style-type: none"> Additional Locations Support Consumers of EVs. This then indirectly encourages an increase in EV sales through less range anxiety or helps EV profitability by padding higher prices. 	
I&M's Charge at Work in Indiana Small Commercial	Program	<ul style="list-style-type: none"> Managers of commercial businesses and multi-unit dwellings are increasingly providing plug-in electric vehicle (PEV) charging stations to take advantage of the convenience and affordability of electric vehicles and to demonstrate their commitment to the environment. I&M has incentive programs to support Level 2 (240V) PEV charging in each of the sectors discussed below. 	Charge at Work in Indiana (indianamichiganpower.com)
	Value	<ul style="list-style-type: none"> Existing small-commercial customers who average less than 4,500 kWh per month of electricity are eligible for \$500 incentive and a discounted off-peak rate up to a 40% reduction from our standard rate. There is no fee to sign up. I&M will provide more information and detailed steps on the process once you apply. 	
	Notable Conditions	<ul style="list-style-type: none"> Needs a submeter from I&M between your electrical panel and PEV Level 2 (240V) charger An Indiana-registered employee-owned or company PEV. (Public Level 2 PEV chargers not tied to an Indiana-registered PEV are not eligible.) 	
	Beneficiaries	<ul style="list-style-type: none"> Small Commercial Businesses. 	
	Program	<ul style="list-style-type: none"> Managers of commercial businesses and multi-unit dwellings are increasingly providing plug-in electric vehicle (PEV) charging stations to take advantage of the convenience and affordability of electric vehicles and to demonstrate their commitment to the environment. I&M has incentive programs to support Level 2 (240V) PEV charging in each of the sectors discussed below. 	Charge at Work in Indiana (indianamichiganpower.com)

I&M's Charge at Work in Indiana Commercial and Industrial Properties (Multi-Unit Dwellings)	Value	<ul style="list-style-type: none"> Under this program, I&M pays \$250 per charging port if you can provide power to eligible Level 2 PEV chargers from behind their own electrical panels. There is no fee to sign up. I&M will provide more information and detailed steps on the process once you apply. 	
	Notable Conditions	<ul style="list-style-type: none"> Needs a submeter from I&M between your electrical panel and PEV Level 2 (240V) charger. Must provide this independently, but if a customer needs new electrical service from I&M for Level 2 PEV charging, I&M still can pay the customer \$250 per charging port if I&M's anticipated revenue from the charging meets I&M's state approved criteria for adding new service without customer investment. An Indiana-registered employee-owned or company PEV. (Public Level 2 PEV chargers not tied to an Indiana-registered PEV are not eligible.) 	
	Beneficiaries	<ul style="list-style-type: none"> Commercial and industrial properties and multi-unit dwellings earn these incentives 	
Indiana HB1148	Program	<ul style="list-style-type: none"> Electric vehicle charging station tax credits. Establishes a tax credit for a taxpayer who places a qualified electric vehicle charging station in service during the taxable year. 	HB1148 Indiana 2021 Electric vehicle charging station tax credits. TrackBill
	Value	<ul style="list-style-type: none"> Provides that the amount of the tax credit is equal to 75% of the purchase cost. Provides that the total amount of tax credits awarded in a state fiscal year may not exceed \$25,000,000. 	
	Notable Conditions	<ul style="list-style-type: none"> Requires a taxpayer who claims the tax credit to provide a report to the office of energy development with information concerning the qualified electric vehicle charging station. 	
	Beneficiaries	<ul style="list-style-type: none"> Taxpayers who place an EV charging station. 	
Indiana State Entity Clean Vehicle Acquisition Requirements	Program	<ul style="list-style-type: none"> Requires that each state entity must purchase or lease a clean energy vehicle 	Alternative Fuels Data Center: Clean Vehicle Acquisition Requirements (energy.gov)
	Value	<ul style="list-style-type: none"> The additional cost of purchasing the EV over an ICE vehicle. 	
	Notable Conditions	<ul style="list-style-type: none"> Unless the Indiana Department of Administration (Department) determines that the purchase or lease of the vehicle is inappropriate for its intended use. Or the purchase or lease would cost 20% more than a comparable non-clean energy vehicle. Additional exemptions apply. A clean energy vehicle is defined as a vehicle that operates on one or more alternative energy sources, including the following: a rechargeable energy storage system, hydrogen, natural gas, and propane. Each state entity must annually submit to the Department information regarding its use of clean energy vehicles. 	
	Beneficiaries	<ul style="list-style-type: none"> Indiana State Treasury, the environment, EV companies that produce economical vehicles for commercial purchase. 	
Duke Energy Rebate	Program	<ul style="list-style-type: none"> Duke Energy is offering rebates for qualifying public or private entities, apartment dwelling units, and government or workplace fleet operators. 	Alternative Fuels Data Center: Commercial Electric Vehicle (EV) Charging Station Rebate - Duke Energy
	Value	<ul style="list-style-type: none"> Public Level 2 – \$500 rebate per charger MUD Level 2 – \$500 rebate per charger Workplace Level 2 – \$500 rebate per charger Fleet Level 2 – \$500 rebate per charger 	
	Notable Conditions	<ul style="list-style-type: none"> J1772 Level 2 charger equipped to charge at a dedicated capacity of 7.2kW and above and located in a location permitting 24/7 public access. J1772 Level 2 charger equipped to charge at a dedicated capacity of 7.2kW and above and located at an apartment building or retirement community. J1772 Level 2 charger equipped to charge at a dedicated capacity of 7.2kW and above and located in an area where it is available for use by applicant's employees. J1772 Level 2 charger equipped to charge at a dedicated capacity of 7.2kW and above and is utilized by applicant for charging one or more EVs as part of normal business operations 	
	Beneficiaries	<ul style="list-style-type: none"> Qualifying public or private entities, apartment dwelling units, and government or workplace fleet operators. 	

Duke Energy School Bus Electrification	Program	<ul style="list-style-type: none"> Duke Energy is seeking interested school districts to participate in a forthcoming EV School Bus program. Under this program, Duke Energy will provide charging infrastructure for EV school buses and partial funding for bus deployment. 	Alternative Fuels Data Center: Electric School Bus and Infrastructure Rebate – Duke Energy
	Value	<ul style="list-style-type: none"> Up to \$197K of funding for each electric school bus and associated infrastructure Allocation of 6 electric school buses in this region. Helps reduce total cost of ownership for school bus Enhances visibility of your school’s sustainability efforts Pushes energy back to the grid using vehicle-to-grid technology 	
	Notable Conditions	<ul style="list-style-type: none"> Duke Energy owns the charger and infrastructure for the program term Bus will participate in a Vehicle-To-Grid technology demonstration and study, which will demonstrate the ability of the bus to dispatch energy to the grid when needed Duke Energy retains right to battery at the end of the bus’s useful life Participation is on a first-come, first-served basis subject to pilot goals Be a public or charter school customer with a bus fleet within Duke Energy's service territory. Agree to participate in the program through December 2024 	
	Beneficiaries	<ul style="list-style-type: none"> School Districts 	
AES EV Managed Charging Program (Peak demand hours optimized charging)	Program	<ul style="list-style-type: none"> The EV Managed Charging Program was created to help us avoid turning to dirty energy sources. On days when energy demand is going to be really high, we schedule Peak Demand Hours. During these hours, our technology works with your JuiceBox charger to reduce your energy use while still ensuring you get the minimum charge you need. This lets you use the cleanest energy possible for your personal charging needs. 	EV Charger DR (aesindianamarketplace.com)
	Value	<ul style="list-style-type: none"> If you sign up for the EV Managed Charging Program when you buy an electric vehicle charger on AES Indiana Marketplace, you’ll get an instant \$250 off your purchase as an enrollment bonus. 	
	Notable Conditions	<ul style="list-style-type: none"> Be an AES Indiana residential or commercial electric or dual-fuel (electric and gas) customer. Install your electric vehicle charger at the home where you receive AES Indiana services. Have an always-on Wi-Fi network installed in your home. Have full control over your garage or parking space at your home. Agree to AES Indiana terms and conditions for the EV Managed Charging Program. You can enroll a maximum of two Enel X Juicebox chargers in the EV Managed Charging Program when you purchase electric vehicle chargers through the AES Indiana Marketplace 	
	Beneficiaries	<ul style="list-style-type: none"> Environment, Consumers’ receiving the \$250 discount. 	

Electric Vehicle Product Commission

