

Federal, State Policy Key to Inflation Reduction Act's Transportation Electrification Benefits

IRA PROVISIONS CAN ACCELERATE TRANSPORTATION SECTOR ELECTRIFICATION

The Inflation Reduction Act's (IRA) historic climate and clean energy investments will help cut United States greenhouse gas (GHG) emissions roughly 40 percent by 2030. Ground transportation contributes 22 percent of total U.S. GHG emissions and causes harmful air pollution that causes adverse health impacts, especially in frontline communities. The IRA's transportation electrification incentives are an important first step to mitigate the sector's impact on climate and public health. While the provisions can jumpstart GHG emissions reductions, Energy Innovation Policy & Analysis LLC® modeling shows they are insufficient to cut transportation sector GHG emissions at the pace needed to align with the 1.5 degree Celsius scenario required for climate stability.

- **First**, new passenger vehicle incentives are contingent on vehicle manufacturing location and material sourcing requirements, which will curtail the near-term passenger electric vehicle (EV) market as the industry pivots to meet those requirements. Nonetheless, commercial EVs will get a boost as robust incentives expand the medium- and heavy-duty EV market.
- **Second**, used passenger EV incentives and the transferability of all incentives at the point of sale will help more consumers and businesses adopt EVs, including low- to moderate-income individuals and households.
- **Third**, infrastructure incentives will help build out the growing EV charging network in currently underserved areas such as rural areas and low-income communities.
- **Fourth**, incentives for EV supply-chain manufacturing, mining, processing, and recycling will signal to automakers and suppliers that success in the U.S. hinges on their commitments to build new domestic facilities and source their materials and minerals from countries aligned with national security interests.

Policymakers and regulators must adopt stringent vehicle standards to reduce emissions, while implementing equitable EV policies at the state and federal levels to accelerate the transition to clean, all-electric vehicles.

IRA PROVISIONS FOR EVS, CHARGING INFRASTRUCTURE, AND SUPPLY CHAIN

The IRA's clean transportation provisions will support a domestic EV supply chain and deploy more clean vehicles on the road, especially commercial vehicles.

- **Personal tax credits for passenger clean vehicles:** \$7,500 for passenger battery electric, plug-in hybrid electric, or fuel cell vehicles that meet MSRP and buyer income cap requirements. Full credit value is based on the vehicle meeting two separate conditions:
 - \$3,750 for critical mineral sourcing and procurement targets
 - \$3,750 for battery component sourcing and procurement targets

- Vehicles with components originating from “entities of concern” are ineligible for the credit.
- **Used EV tax credits:** 30 percent of sale price up to \$4,000 for used EVs ≤ \$25,000 upon first resale. Eligibility is for consumers with an income ≤ \$75,000 for individuals or ≤ \$150,000 for joint households.
- **Commercial electric vehicle tax credits:** 30 percent, or up to \$7,500 for vehicle classes 1 through 3 or up to \$40,000 for vehicles classes 4 through 8.
- **Personal charger installation tax credit:** 30 percent or up to \$1,000 per charger installed in qualified census tracts that prioritize low-income or high poverty communities.
- **Commercial charger installation tax credit:** 30 percent or up to \$100,000 per charger.
- **Domestic manufacturing incentives:** Funding for the build-out of manufacturing centers and domestic supply chains, including \$10 billion for the [Advanced Energy Project Tax Credit](#) for facilities including EV equipment manufacturers and recyclers; the [Advanced Manufacturing Production Tax Credit](#), which credits producers of critical minerals and battery components; and \$2 billion in DOE grants for EV manufacturing and converting domestic facilities for EV production.

Passenger EV sales are expected to increase modestly by 2030 due to the tax credits, while more significant sales growth is expected for light and medium cargo trucks, heavy-duty trucks, and buses, all of which tend to be more sensitive to total lifetime vehicle cost. However, even with higher sales shares, overall stock shares remain small in 2030. This limited stock increase reflects slow transportation sector turnover rates, whereby only a fraction of the total stock of vehicles is replaced each year, therefore taking years for the stock to reach the same share of EVs as sales. Thus, faster action is needed for the U.S. to reduce transportation emissions.

STATE AND FEDERAL GOVERNMENT SHOULD ACT TO DRIVE EMISSIONS REDUCTIONS

- **The U.S. Environmental Protection Agency (EPA) should swiftly develop and adopt more stringent tailpipe standards** that make EVs the most attractive compliance option for auto manufacturers and support domestic investments in mass production of EVs across all brands and vehicle classes.
- **States should continue adopting clean car and truck standards** to send a strong market signal that EVs are the future of transportation. State leadership on clean transportation, including adopting incentives for vehicles and infrastructure, will help cut emissions faster than IRA incentives alone.
- **The U.S. Treasury Department’s guidance on passenger vehicle incentives should provide clear direction on the new eligibility requirements for consumers.** Treasury should clarify how the critical minerals value will be determined, how the percentage of battery components and minerals will be documented, and how vehicle data will be obtained and shared publicly. All relevant information should be accessible via vehicle identification number, and guidance should help auto dealers and manufacturers deploy a single simple coordinated approach to communicating this to consumers.
- **Policymakers and state transportation authorities should coordinate with fleet operators, truck drivers, gas station owners, and businesses** to make them aware of the commercial EV and charging tax credit and invite input on challenges to inform local strategies to increase commercial EV uptake.
- **States should adopt additional incentives and financing programs for commercial EVs and fast charging** that leverage IRA tax credits and further reduce higher up-front costs of medium- and heavy-duty vehicles (especially small business owners).
- **Policymakers at all levels of government should minimize adverse impacts of manufacturing, mining, and processing facilities on communities and the environment.** All stakeholders should ensure this industrial revolution is grounded in environmental justice, equity, and environmental conservation.
- **Regulators and utilities should prioritize prudent investments in a reliable, clean, and resilient electric grid to support EV growth** while incorporating aggressive EV and charging forecasts into grid planning proceedings, rate design, interconnection standards, and demand management programs.