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Clean Vehicle Tax Credits

The federal government currently offers three tax credits that reduce clean vehicle purchase prices and thus may increase demand for clean vehicles (e.g., electric vehicles, plug-in hybrid vehicles, and fuel cell vehicles). Each clean vehicle credit was created in the Energy Improvement and Extension Act of 2008 (Division B of P.L. 110-343) and subsequently modified by P.L. 117-169 (commonly referred to as the Inflation Reduction Act or IRA). This In Focus summarizes each clean vehicle credit and provides a brief discussion of relevant economic policy considerations.

Clean Vehicle Credit (IRC §30D)

Taxpayers purchasing a qualifying new clean vehicle may claim a nonrefundable tax credit of up to \$7,500 for vehicles placed in service through the end of 2032. The maximum potential credit (\$7,500) is the sum of two amounts: the critical mineral amount (\$3,750) and the battery component amount (\$3,750), which went into effect for vehicles placed in service on or after April 18, 2023. (For vehicles placed in service in 2023 prior to April 18, 2023, the critical mineral and battery components were not applicable.)

- To claim the critical mineral portion of the credit, a car's battery must have at least a certain threshold percentage of its critical minerals that were extracted or processed in the United States or in a country with which the United States has a free trade agreement, or that were recycled in North America. The threshold percentage is 40% in 2023, 50% in 2024, 60% in 2025, 70% in 2026, and 80% thereafter. For vehicles placed in service after 2024, no applicable critical minerals in the vehicle's battery may come from a "foreign entity of concern."
- To claim the battery component portion of the credit, at least a certain percentage of an electric vehicle battery's component parts must be manufactured or assembled in North America. The threshold percentage is 50% in 2023, 60% in 2024 and 2025, 70% in 2026, 80% in 2027, 90% in 2028, and 100% thereafter. In addition, vehicles placed in service after 2023 cannot use battery components manufactured or assembled by a "foreign entity of concern."

In addition to the critical minerals and battery component requirements, qualifying clean vehicles must meet other criteria. These additional criteria include a manufacturer's suggested retail price (MSRP) cap (\$80,000 for vans, SUVs, and pickup trucks; \$55,000 for other vehicles); a gross vehicle weight rating (GVWR) of less than 14,000 pounds; and a battery capacity of at least 7 kilowatt hours. Additionally, all qualified vehicles must undergo final assembly in North America.

To claim the credit, taxpayers' modified adjusted gross incomes (MAGIs) for either the current or previous year must be at or below certain thresholds: \$300,000 for married couples, \$150,000 for single filers, and \$225,000 for heads of household. The clean vehicle credit is nonrefundable, meaning taxpayers may not claim credits in excess of their tax liabilities.

Starting in 2024, taxpayers may elect to transfer the clean vehicle credit to the vehicle dealer. The transferred credit may exceed the taxpayer's income tax liability, effectively making transferred credits fully refundable. Taxpayers who transfer the credit but later exceed the MAGI limits must pay back the credit (to the IRS) when filing their taxes.

Credit for Previously Owned Clean Vehicles (IRC §25E)

Taxpayers purchasing a qualifying previously owned clean vehicle may claim a nonrefundable tax credit equal to 30% of the vehicle's sales price, up to a maximum credit of \$4,000. This credit is commonly referred to as the "used clean vehicle credit." Qualifying used vehicles must be acquired before 2033.

The credit can only be claimed once per vehicle, and the vehicle must satisfy other criteria. The vehicle must be purchased from a licensed dealer for \$25,000 or less, have a GVWR rating of less than 14,000 pounds, and have a battery capacity of at least 7 kilowatt hours. In addition, the vehicle's model year must be at least two years before the year of purchase, and the dealer must produce a report of the transaction for both the buyer and the IRS.

Only taxpayers with MAGIs at or below \$150,000 for married couples, \$75,000 for single filers, and \$112,500 for heads of household in either the current or previous year qualify for this tax credit. Taxpayers can claim the credit at most once every three years. Rules for credit transfers under the used clean vehicle credit are similar to those under the clean vehicle credit.

Credit for Qualified Commercial Clean Vehicles (IRC §45W)

By purchasing a qualified clean vehicle, businesses and tax-exempt organizations can qualify for a tax credit of up to \$40,000. For hybrid vehicles, the credit equals the lesser of the incremental cost of the vehicle (the difference between its price and the price of a gas- or diesel-powered vehicle of similar size and use) or 15% of the vehicle's cost basis. For electric vehicles and fuel cell vehicles, the credit equals the lesser of the incremental cost of the vehicle or 30% of the vehicle's cost basis. The credit may not exceed \$7,500 for vehicles with a GVWR of less than 14,000 pounds.

The credit for qualified commercial clean vehicles can only be claimed once per vehicle and must satisfy multiple other criteria. The vehicle must be used for business purposes, be used primarily in the United States, have a battery capacity of at least 7 kilowatt hours if the GVWR is less than 14,000 pounds or 15 kilowatt hours otherwise, and be produced by a qualified manufacturer. In addition, the vehicle must be either mobile machinery as defined in IRC §4053(8) or a motor vehicle for use on public roads for purposes of Title II of the Clean Air Act. Mobile machinery is defined to include vehicles such as electric tractors while excluding vehicles such as electric golf carts.

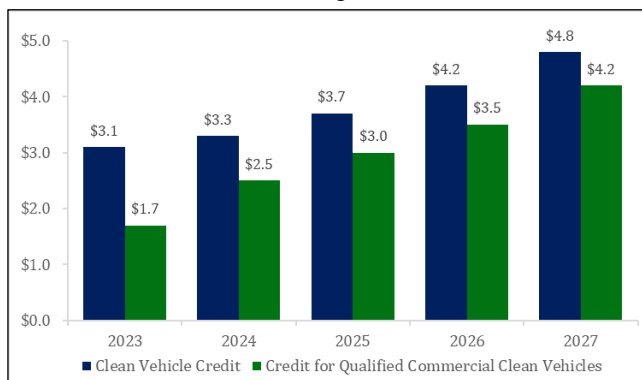
The commercial clean vehicle credit is nonrefundable, meaning that businesses may not claim tax credits in excess of their tax liabilities. Any unused credits may be carried back 1 year or carried forward up to 20 years to offset other years' tax liabilities, however. Tax-exempt organizations are eligible to receive the credit as a direct cash payment instead of as a nonrefundable tax credit.

How Much Do the Tax Credits Cost and Who Claims Them?

According to the Joint Committee on Taxation (JCT), the IRC §30D and §45W clean vehicle tax credits will reduce revenue by an estimated \$34 billion over the FY2023-FY2027 budget window. This total is split with corporations claiming an estimated \$15 billion for the credit for qualifying commercial clean vehicles and individuals claiming an estimated \$19 billion for the clean vehicle credit. The used clean vehicle credit has a *de minimis* cost projection, meaning that its estimated cost over the next five years is less than \$250 million.

Figure 1. Tax Expenditure Estimates for Federal Clean Vehicle Tax Credits

Billions of dollars, FY2023 through FY2027



Source: Joint Committee on Taxation, JCX-59-23.

The pre-IRA tax credit for plug-in electric vehicles (the precursor to the clean vehicle credit) was disproportionately

claimed by high-income taxpayers. For vehicles purchased in 2021, taxpayers with adjusted gross income (AGI) greater than \$100,000 represented 22% of all filers and received 84% of the credit benefits.

The previous tax credit's nonrefundable nature likely contributed to the relatively smaller benefits accruing to low-income taxpayers. For vehicles purchased in 2021, taxpayers with AGIs between \$25,000 and \$50,000 who claimed the credit received roughly \$1,750 per tax return compared with roughly \$6,900 for taxpayers with AGIs between \$100,000 and \$500,000. This may change as more taxpayers transfer fully refundable credits to car dealers. Initial Treasury data for January 1-February 6, 2024, indicate that roughly 19,500 taxpayers transferred the clean vehicle credit or the used clean vehicle credit to car dealers. Over the same period, 5,500 vehicle sales were reported for purposes of traditional nonrefundable credits.

Complementary Provisions to the Clean Vehicle Tax Credits

Federal tax policy also contains a provision that indirectly promotes the adoption of clean vehicles. The Alternative Fuel Vehicle Refueling Property Credit (IRC §30C) can be claimed by individuals and businesses that install property used to store or dispense clean-burning fuel or to recharge electric motor vehicles in qualifying census tracts. Qualifying census tracts are those designated as low income for the New Markets Tax Credit (generally having a poverty rate greater than 20% or median family income less than 80% of the statewide or metropolitan area family income) or those located in nonurban areas.

The credit for individuals is equal to 30% of the cost of the property with a maximum credit of \$1,000. For businesses the credit is equal to 30% of the cost of the property if prevailing wage and qualified apprenticeship requirements are met (6% otherwise) with a maximum credit of \$100,000 per piece of property.

Federal tax incentives may complement the clean vehicle market in other ways as well. For example, the clean hydrogen production credit (IRC §45V) subsidizes the production of hydrogen fuel which may be used in fuel cell vehicles, and the advanced manufacturing production credit (IRC §45X) subsidizes production of battery components which may be used in clean vehicles. Federal tax support for clean vehicles is by no means limited to the clean vehicle credits themselves.

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