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The Plug-In Electric Vehicle Tax Credit

Buyers of qualifying plug-in electric vehicles (EVs) may be able to claim a federal income tax credit of up to \$7,500. The tax credit phases out once a vehicle manufacturer has sold 200,000 qualifying vehicles. Tesla has reached this threshold and credits for Tesla vehicles are to begin phasing out in 2019. General Motors (GM) is expected to cross the phase-out threshold before the end of 2018.

In the 115th Congress, legislation has been introduced that would expand tax credits for EVs. Legislation has also been introduced to repeal the provision. This In Focus provides an overview of the plug-in EV tax credit and briefly discusses relevant economic policy considerations.

Tax Credit for Plug-In Electric Vehicles

The primary federal tax incentive for plug-in electric vehicles is the Internal Revenue Code (IRC) Section 30D credit. The credit ranges from \$2,500 to \$7,500 per vehicle, depending on the vehicle's battery capacity (and subject to the per manufacturer limit).

For individuals, the credit can only be used to offset a taxpayer's tax liability in the current tax year (i.e., there is no carryback or carry forward). The credit is nonrefundable, meaning the amount of the credit cannot exceed a taxpayer's tax liability.

For businesses, the tax credit attributable to depreciable property used for business or investment purposes is treated as part of the general business credit. The general business credit can be carried back one year or carried forward for up to 20 years.

Credits are generally claimed by the taxpayer purchasing the vehicle for use. If the vehicle is purchased or leased by a tax-exempt organization, the seller of the vehicle may be able to claim the credit so long as the seller discloses the credit amount to the purchaser.



The plug-in EV credit phases out once a vehicle manufacturer has sold 200,000 qualifying vehicles for use in the United States. The credit begins to phase out in the second quarter after the quarter in which the manufacturer reaches the limit. For the first two quarters of the phase-out period, the credit is 50% of the full credit amount. For the second two quarters of the phase-out period, the credit is 25% of the full credit amount. The credit is fully phased out in the sixth quarter after the manufacturer reaches the limit.

Legislative Background

The credit for plug-in EVs was established by the Energy Improvement and Extension Act of 2008, enacted as Division B of P.L. 110-343. As first enacted, the credit was to phase out once 250,000 credit-eligible vehicles were sold. The plug-in EV phase-out threshold was changed from a 250,000 vehicle limit to a 200,000 vehicle per manufacturer limit in the American Recovery and Reinvestment Act of 2009 (P.L. 111-5).

When Congress passed legislation introducing tax credits for plug-in EVs, these vehicles were believed to be the "next generation" of alternative-fuel vehicles. Providing incentives for these vehicles was consistent with the broader goal of transforming the transportation system to be cleaner, more fuel efficient, and less reliant on petroleum. It was believed that tax credits for consumers would encourage acceptance of this emerging technology by making it more price competitive with conventional vehicles. With more consumers wanting plug-in EVs, more manufacturers would make these vehicles commercially available, and plug-in EVs would become fully integrated in the vehicles market.

The EV credits followed credits for other alternative technology vehicles that had been enacted in the Energy Policy Act of 2005 (P.L. 109-58). This legislation had included tax credits for hybrid vehicles, along with other types of alternative fuel vehicles. Credits for hybrid automobiles were not available after December 31, 2010. Additionally, phaseout of hybrid vehicle tax credits was triggered once manufacturer sales reached 60,000 vehicles. Toyota reached this threshold in the second quarter of 2006. Honda reached the threshold in the third quarter of 2007.

Economic Considerations

To evaluate the effectiveness of the credit for plug-in electric vehicles, policymakers may consider (1) if the credit has been successful in increasing the number of EVs in use; (2) who benefits from the credit; and (3) the cost of the credit relative to the credit's benefits.

Does the Tax Credit Lead to More EVs?

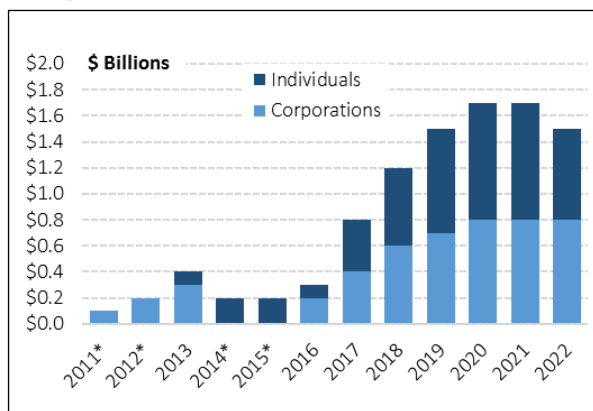
Some empirical evidence suggests that federal tax credits are among the factors associated with higher plug-in EV sales. Other factors that have been found to be associated with higher plug-in EV sales include access to charging infrastructure and high-occupancy vehicle (HOV) lane exemptions.

The effectiveness of a tax credit depends on how many taxpayers buy a plug-in EV because of the tax credit. Purchases that are motivated for other reasons, such as HOV-lane access or general desire for a high-end vehicle that happens to be electric, might still qualify for federal tax credits. For taxpayers who purchase for other reasons, tax credits are a windfall gain. They reduce federal revenue but do not increase plug-in EV sales.

Who Claims the Tax Credit?

According to Joint Committee on Taxation (JCT) estimates, between FY2018 and FY2022, about half of the forgone revenue associated with the plug-in EV tax credit will be for corporations claiming the credit (**Figure 1**). This could be businesses purchasing EVs. This also could be instances where sellers are claiming the credit for vehicles sold or leased to tax-exempt entities.

Figure 1. Tax Expenditures for Plug-In EV Tax Credits, FY2011–FY2022



Source: Joint Committee on Taxation (JCT).

Notes: * JCT estimated tax expenditures of less than \$50 million for individuals in 2011 and 2012 and for corporations in 2014 and 2015. All tax expenditure figures are projections, and do not reflect the actual amount of tax credits claimed.

In 2016, 57,066 individual taxpayers claimed \$375 million in plug-in EV tax credits. EV tax credits are disproportionately claimed by higher-income taxpayers. Most of the tax credits (78%) are claimed by filers with adjusted gross income (AGI) of \$100,000 or more, and those filers receive an even higher proportion (83%) of the amount of credits claimed. About 7% of credits claimed, and 8% of the total amount of credits, were on returns where the taxpayer's AGI exceeded \$1 million. Across all taxpayers, about 17% of returns filed have an AGI of \$100,000 or more. About 0.3% have an AGI of \$1 million or more.

How Much Does the Tax Credit Cost?

The JCT estimates that under current law tax expenditures, or forgone revenue, for the plug-in EV tax credit will be \$7.5 billion between FY2018 and FY2022 (**Figure 1**). From FY2011 through FY2017, tax expenditures for the credit totaled \$2.2 billion. Eliminating the per-manufacturer cap or otherwise expanding the credit would increase the tax expenditure estimate. Repealing the credit would reduce the tax expenditure.

Legislation in the 115th Congress

In the 115th Congress, there have been proposals to extend, as well as proposals to repeal, the plug-in EV tax credit. The Electric CARS Act of 2018 (S. 3449) would extend the credit through December 31, 2028, repealing the per-manufacturer cap. The bill also proposes allowing the tax credit to be carried forward, or assigned by the taxpayer to the person who financed the purchase. This legislation also proposes extending the tax credits for alternative fuel infrastructure. Similar legislation has been introduced in the House (H.R. 6274), albeit without the carry forward for individuals claiming the credit.

Extending the credit for 10 years would benefit domestic manufacturers whose tax credits have either begun or will soon start to phase out. The legislation has also been supported by some electric utilities, who view EVs as a way to address slow growth in electricity demand. The Senate bill (S. 3449) would address limits on individuals' ability to claim the credit by allowing a carry forward, while both proposals would allow the credit to be assigned to entities financing purchases. A long-term extension of the plug-in EV tax credit would increase the tax expenditure associated with this provision.

Others have proposed eliminating the per-manufacturer limit, having the tax credit phase out after a certain date instead. H.R. 7065/S. 3582 would repeal the per-manufacturer limit, instead phasing out the credit in 2022. Removing the per manufacturer cap would likely benefit manufacturers of plug-in electric vehicles that would otherwise have tax credits for their vehicles phase out in the near term. However, with no credits available after 2022, the provision would not provide a longer-term incentive to enter the plug-in electric vehicle market for manufacturers with a small or nonexistent presence. The increased cost of tax credits in the near term would, to some degree, be offset by savings from not providing credits in the longer term.

The Fairness for Every Driver Act (S. 3559) would repeal the plug-in EV credit. Additionally, this bill proposes imposing an annual fee on alternative fuel vehicles that would contribute to the Highway Trust Fund (HTF). This fee might be viewed as a user fee for highway use, and could help shore up the HTF. Imposing a fee on plug-in EVs, however, would increase the cost of owning these vehicles, potentially reducing the number of consumers willing to substitute a plug-in EV for a petroleum fueled vehicle.

The House-passed version of the Tax Cuts and Jobs Act (H.R. 1) included a repeal of the plug-in EV tax credit. The Senate's version of the bill did not include a repeal, and the

provision was not changed in the 2017 tax revision (P.L. 115-97).

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