



Insight

Proposed Tax Credits Would Make Electric Vehicles More Expensive

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Executive Summary

- Provisions in the Inflation Reduction Act seek to incentivize the purchase of electric vehicles (EVs) by offering consumers a tax credit of \$7,500 for new EVs and \$4,000 for used EVs, with the goal of making these vehicles more affordable.
- Unlike the current EV tax credit system, the proposed credits would require automakers to abide by price ceilings for their EVs, restricting the number of vehicles eligible for the credit and increasing consumer costs.
- The provisions also contain regional sourcing requirements for vehicles to qualify for the credit, which would make EVs more expensive for consumers to buy than under the current tax credit system, and thus, automakers may opt to forgo producing vehicles eligible for the credit entirely.

Introduction

The Inflation Reduction Act, the latest version of the Senate reconciliation bill, contains provisions intended to incentivize purchases of electric vehicles (EVs) as part of the Biden Administration's climate agenda. To accomplish this goal, the bill would create a new \$7,500 tax credit for "clean vehicles." Those who purchase EVs would be the main beneficiaries of these credits.

Generally, the purpose of EV tax credits is to make these vehicles more affordable for consumers. The barriers for qualifying for the existing EV tax credit are relatively low, allowing many consumers to benefit from the credit. The tax credit system proposed in the Inflation Reduction Act is much more restrictive and would impose a vehicle price ceiling and regional content rules, which would place limits on the countries from which automakers could source critical materials and components. These provisions would make it more difficult and more costly for automakers to produce vehicles that qualify for the credit because the materials to produce EV batteries are scarce or non-existent within the permitted countries.

Because these restrictions would make EVs more expensive to manufacture, these vehicles would in turn become more expensive for consumers, as well – producing the opposite of the bill's intended effect. If the cost for automakers to comply with the provisions in this bill exceeds the value of the credit, manufacturers may choose to forgo the credits entirely to produce a more affordable EV. Congress and the Biden Administration should instead pursue market-based solutions and allow for manufacturers to utilize supply chains and set prices according to market incentives to help more Americans access "clean vehicles."

Inflation Reduction Act's Clean Vehicle Tax Credits

Clean vehicle tax credits – primarily for EVs – are ostensibly meant to increase access to and affordability of these vehicles for individuals. EVs are already [more expensive](#) than gas-powered vehicles, so it stands to reason that affordability would play a major role in a consumer’s purchasing decision. According to a [2022 consumer survey](#) conducted by Deloitte, more than half of U.S. respondents were unwilling to pay \$500 more for vehicles powered by alternative energies than a comparable vehicle with a gas-powered engine. Despite existing federal and local tax credits for EVs, nearly 70 percent of Americans surveyed still prefer their next vehicle to run on a traditional gas-powered engine.

EVs are generally eligible for a federal tax credit of \$7,500 if they are powered significantly by an electric motor, which also includes hybrids.^[1] Nevertheless, these tax credits are unlikely to increase purchases of EVs. In fact, they are more likely to make it even more expensive for participating automakers to produce these vehicles, thereby making the cars less affordable for consumers. Additionally, vehicles produced by automakers that do not meet the requirements for the credits will likely result in consumers paying more for an EV than they would under the current tax credit system. It is not the tax credits themselves that would have the largest impact on price – though subsidies and tax credits can distort prices – but rather the many strings attached to the credits for a vehicle to qualify. Some clean energy organizations are supportive of the credits, but others such as the Zero Emission Transportation Association suggest that “if you limit the credit, you limit the public benefits of the credit.”^[2] Jennifer Safavian, the CEO of Autos Drive America, an automotive trade association, called them a “[sourcing credit](#)” that is “not about pushing electric vehicles and helping consumers purchase these vehicles.”

Price Ceilings

The Inflation Reduction Act contains tax credits for both new and used EVs. For new EVs to qualify for the credits, the suggested retail price of a car must not exceed \$55,000 and the price of vans and trucks cannot exceed \$80,000. The average price of an electric or hybrid car is already higher than that of a solely gas-powered car. New gas-powered vehicles cost an average of \$56,000,^[3] while new EVs cost an average of \$67,000. The automotive sector has also experienced some of the highest levels of inflation in recent months, with the latest year-over-year [inflation rate](#) at 11.4 percent in June. Used EVs must also have a sale price of less than \$25,000 and be at least two years old to receive a tax credit of up to \$4,000. In short, the bill imposes price ceilings for the sale of new and used EVs. The existence of a price ceiling limits the ability of consumers to save money on their EV purchases. For example, if an EV is priced at \$56,000, it will not qualify for the credit. So, the consumer would be left paying the full amount of \$56,000. If a price ceiling were left out of the bill, the tax credit would drop the price of the same car to \$48,500 for the consumer. Under current law, a \$56,000 EV would benefit from a \$7,500 tax credit, again dropping the cost to \$48,500.

Regional Content Requirements

In addition, the bill adds production requirements for automakers to have their vehicles qualify for the tax credits. For a vehicle to qualify, it must undergo final assembly in North America. This provision is less restrictive than a previous version of the policy, which required American production and favored unionized factories to manufacture these vehicles. Because of the integrated automotive supply chains in North America, neighboring countries were very concerned with the original proposal. Canada even suggested that the previous version would violate the United States Mexico Canada Agreement. The Inflation Reduction Act avoids that issue, but it could still be viewed as discriminatory against other foreign automakers, namely those based in the United Kingdom, the European Union, Japan, and South Korea. Automakers have diverse global supply chains, and some may not be as present in North America.

Starting in 2024, under the Inflation Reduction Act, EVs would need to have at least 40 percent of their critical

minerals sourced for batteries from countries with which the United States has a free trade agreement (FTA).[4] Critical minerals can also be made from materials recycled in North America. The required percentage of content for critical minerals would then increase over the following two years and by 2026 the regional content for critical minerals would rise to 80 percent.

The bill also specifies that no vehicle produced after 2024 can have a battery with critical minerals that were “extracted, processed, or recycled by a foreign entity of concern.” A “foreign entity of concern” is defined very broadly and could feasibly apply to China.[5] That China performs an estimated 80 percent of global mineral processing and refining makes this particular provision problematic.[6]

Under the bill, the battery of an EV would be required to have at least 50 percent North American content by 2024 and be of 100 percent North American origin by 2028. In 2020, the United States was home to 70 percent of battery cell capacity, meaning an overwhelming portion of the end process to make a battery takes place domestically. The raw materials in a lithium-ion battery, however, represent most of the total cost of the battery. The cost of cathodes and anodes, the positive and negative electrodes in a battery, alone are estimated to represent 40 percent of the total cost of a lithium-ion battery.

The regional requirements in the Inflation Reduction Act are likely impossible for automakers to fulfill because they severely reduce the sourcing options for inputs. For example, Argentina is responsible for roughly 10 percent of lithium production, but the United States does not have a free trade agreement with Argentina. Moreover, virtually all cathode and anode production is concentrated in China, Japan, and South Korea. South Korea is the only country with which the United States has a free trade agreement, and it represents only 15 percent of cathode production.[7]

Potential Effects on EV Prices

The United States has a slew of content restrictions in statute, the most well-known of which are in the [Buy American Act](#). Generally, these content restrictions apply to government procurement, but trade agreements have also historically included rules of origin chapters dictating the benchmarks for receiving tariff-free treatment. These policies have proven to restrict trade flows and lead to more expensive goods than if the producers were able to create the product without content sourcing rules. In the case of the rules of origin in the United States Mexico Canada Agreement (USMCA),[8] automakers debated whether the cost of compliance was worth the tariff-free treatment or if it was more cost effective to pay the tariff (which is 2.5 percent for cars and parts).

Current federal EV tax credits do not have content requirements for the vehicles to qualify. Vehicles must have a certain battery capacity and producers are subject to a quantity cap of 200,000 vehicles.[9] Given the severely limited production locations for battery inputs, restricting EVs sold in the United States to a subset of those options (and not the countries with the largest production) would rapidly increase demand for those sources and make these resources more expensive. The same can be said for South Korean cathodes. Some materials like anodes, however, are not available from FTA countries.

Finally, automakers do not plan supply chains and contracts a year or two in advance. Generally, those decisions are made five to seven years ahead of time.[10] This means that contracts for battery production for 2024 have likely already been signed. Similarly, given the extended lead time for automakers, the phase-in years for compliance may not offer the help they were intended to provide. Automakers seeking to comply will likely try to retool their supply chains to the highest requirement end to prevent rapid supply chain changes. Those

processes take time, however, and the content requirements reach their peak in just six years.

The cost of complying with the many strings attached to these proposed EV tax credits could result in EVs qualifying for the credit costing consumers more than those not in compliance. Similar to the decision that automakers faced during USMCA negotiations, it could be more cost effective to forgo producing EVs that qualify for the tax credits.

Conclusion

The electric vehicle tax credits in the Inflation Reduction Act differ from previous credits because they tie eligibility to specific sourcing requirements, rather than simply and broadly subsidizing electric vehicle purchases. The provisions in this bill would be incredibly difficult for automakers to meet and moving into compliance would come at a significant cost. EVs are already more expensive than gas-powered vehicles and the strings attached to these credits are likely to make EVs even more expensive. At the end of the day, automakers may find that they can more affordably meet consumer demand without the credits.

[1] <https://www.fueleconomy.gov/feg/taxevb.shtml>

[2] <https://www.eenews.net/articles/climate-bill-would-create-roadblock-for-full-ev-tax-credit/>

[3] Author calculations based on: <https://mediaroom.kbb.com/2022-07-12-New-Vehicle-Prices-Set-a-Record-in-June,-According-to-Kelley-Blue-Book,-as-Luxury-Share-Hits-New-High>

[4] The United States has 14 trade agreements covering trade with 20 countries. Those countries are Australia, Bahrain, Canada, Chile, Colombia, Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Israel, Jordan, South Korea, Mexico, Morocco, Nicaragua, Oman, Panama, Peru, and Singapore.
<https://ustr.gov/trade-agreements/free-trade-agreements>

[5] 42 U.S.C. 18741(a)(5))

[6] <https://about.bnef.com/blog/china-dominates-the-lithium-ion-battery-supply-chain-but-europe-is-on-the-rise/>

[7] <https://iea.blob.core.windows.net/assets/ffd2a83b-8c30-4e9d-980a-52b6d9a86fdc/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf>; and
<https://iea.blob.core.windows.net/assets/4eb8c252-76b1-4710-8f5e-867e751c8dda/GlobalSupplyChainsofEVBatteries.pdf>

[8] <https://www.heritage.org/trade/report/analysis-the-united-states-mexico-canada-agreement>

[9] <https://www.fueleconomy.gov/feg/taxevb.shtml>

[10] <https://www.cargroup.org/automotive-product-development-cycles-and-the-need-for-balance-with-the-regulatory-environment/>