

## Proposed additional electric vehicle subsidy is wasteful and irresponsible

*Proposal to waste millions on ineffective policies indicates climate policies are more about political symbolism than substance*

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### Key Findings

1. The governor has proposed to spend \$100 million to subsidize electric vehicle purchases.
2. This new subsidy is on top of existing state and federal subsidies for electric vehicles and charging stations.
3. The additional subsidies add nothing to existing state subsidies and requirements since the state is already committed to virtually eliminating CO2 emissions from gasoline by 2050.
4. Since the additional funding yields no CO2 emissions reductions that would not already happen, the subsidy is pure waste.
5. The previous EV sales tax break did little to incentivize sales, with EV purchases staying at the same rate even after the tax break expired.
6. The governor hopes that switching from a tax break to a tax credit will incentivize EV sales, but by driving up the cost of the program, the subsidy simply becomes more wasteful.
7. Assuming the EV subsidies do reduce CO2 emissions above existing laws (which they almost certainly do not), they are an extremely expensive and ineffective climate policy.
8. Using the state's own "social cost of carbon," the EV subsidy spends twice as much to reduce CO2 as the environmental benefits from reducing emissions. The subsidy does more harm than good.
9. Using market prices to reduce CO2 emissions, the calculus is even worse, spending \$18 for every \$1 worth of environmental benefit.
10. The duplicative nature of the subsidy and the extremely high cost for small or nonexistent environmental benefits make additional EV subsidies an irresponsible approach to cutting CO2 emissions.

### Introduction

State lawmakers will soon consider the governor's proposal to spend \$100 million more to subsidize the purchase of electric vehicles (EV). The proposed subsidy is \$7,500 per vehicle, with an additional \$5,000 for car buyers with incomes less than \$61,000 per year.

Based on the objective metrics used by the State of Washington, the Biden Administration, and other states with carbon prices, these proposed subsidies would be remarkably wasteful and ineffective. They would cost taxpayers more than 20 times as much as alternative ways to reduce CO2 emissions. By the state's own standard, the governor's proposed subsidy policy would do more harm than good.

These types of ineffective projects have typified the policies Washington's elected officials have emphasized during the last decade and are a major reason state leaders have repeatedly missed their own CO2-reduction targets. The legislature should consider other, more effective ways to cut emissions.

### The proposed subsidies would add nothing to CO2 reduction

The most remarkable thing about the proposed subsidies is that they would not add

anything to the state's CO2 reduction strategy. In 2021, the governor signed legislation to create an economy-wide CO2 cap that mandates a reduction in emissions. It will increase the price of gasoline by an estimated 20 cents per gallon when implemented and will spend money raised by the tax to pay for EV charging stations, among other state projects.

The governor also signed legislation in 2021 to mandate a reduction in transportation fuels called the low-carbon fuel standard. That also subsidizes EV charging stations.

The new proposed subsidies for electric vehicles would simply duplicate the programs that already exist and will not reduce CO2 emissions. If legislators choose not to spend the additional \$100 million, Washington's mandated CO2 cap would still be the same and Washington's emissions would hit the exact same projected targets.

There is an argument that more EV subsidies would accelerate CO2 emission reductions, meaning the state would reach targets more quickly which would, on net, reduce emissions over time. This is unlikely under the state's CO2 cap. If CO2 reductions occur more quickly than anticipated, there will be more CO2 permits available for sale and the price will decline. If one economic sector reduces more than its share, the program allows others to reduce less than they would have otherwise.

The only thing the proposed EV subsidy would do is restrict *how* Washington residents meet those mandated targets. As a result, the environmental value of the EV subsidies being proposed by the governor is zero.

### **State's own metrics indicate EV subsidies do more harm than good**

Even if we were to assume the proposed EV subsidies would reduce CO2 emissions (more than what would have occurred anyway), the subsidies would still spend far more than the benefit they would supposedly create and would do more harm to people and the environment than any estimated benefit.

To assess the value of the subsidies, we can use several metrics, including Washington's own official estimate of the value of reducing CO2.

The Social Cost of Carbon (SCC) is a value that is designed to estimate the harm done by each metric ton of CO2. The value includes, among other things, "changes in net agricultural productivity, human health, property damages from increased flood risk, and the value of ecosystem services due to climate change."<sup>1</sup> There are several ways to calculate the SCC, so values vary.

The Washington Utilities and Transportation Commission adopted a value of about \$80 per metric ton (MT) of CO2.<sup>2</sup> In other words, each MT of CO2 emitted by individuals or businesses does \$80 worth of damage to people and the environment. This is relatively high. The Biden

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1 United States Interagency Working Group on Social Cost of Greenhouse Gases, "Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866," August 2016, <https://www.utc.wa.gov/sites/default/files/2021-02/Technical%20Support%20Document%20Social%20Cost%20of%20Carbon%20August%202016.pdf>.

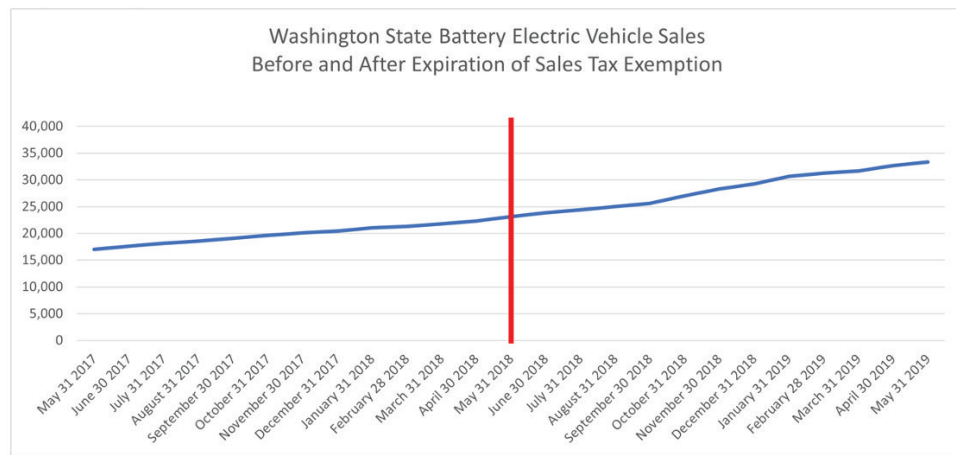
2 Washington State Utilities and Transportation Commission, "Social Cost of Carbon," <https://www.utc.wa.gov/regulated-industries/utilities/energy/conservation-and-renewable-energy-overview/clean-energy-transformation-act/social-cost-carbon>.

Administration uses \$51 per MT CO<sub>2</sub>, which is a third lower. There are other estimates as well, many of which are lower.<sup>3</sup>

The SCC is a useful metric to determine how worthwhile a policy is. If taxpayers pay \$10 to reduce an MT of CO<sub>2</sub>, they are receiving \$80 or \$51 of value for only ten dollars. A deal. If, on the other hand, they spend \$100 to get that same value, taxpayers are getting less than they paid for.

The fact that these subsidies would spend far more than the benefit they would supposedly create and would do more harm to people and the environment than any estimated benefit is true even if we make some very generous assumptions.

First, our analysis assumes that none of the electric vehicles purchased using this added subsidy would have been purchased otherwise. This is extremely unlikely. When Washington's sales tax exemption for EVs expired at the end of May 2018, there was only a slight decline in purchases in the months after expiration, but the number of sales for the final three months of 2018 were identical to those of 2017.<sup>4</sup> As the chart below demonstrates, the removal of the tax break had very little impact on EV sales.



This is because electric vehicle buyers tend to be upper income, and their buying decisions are less affected by state subsidy policies.

Second, using official EPA estimates we can assume each EV avoids an average of 4.6 MT of CO<sub>2</sub> annually.<sup>5</sup> We can also assume a lifespan of 15 years per electric vehicle. That would amount to about 70 MT avoided over the lifespan of a newly purchased EV.

Using the two subsidy levels - \$7,500 for buyers making over \$61,000 a year and \$12,500 for buyers making less than that - we can estimate the value of the CO<sub>2</sub> reduced using this policy. For the larger subsidy, the cost per MT of CO<sub>2</sub> would be \$178.57. This is extremely high and 2.2 times as much as the state's Social Cost of Carbon. It is 3.5 times higher than the federal SCC. By the state's own metrics this subsidy would do more harm than good.

The lower subsidy level of \$7,500 would fare better, with an estimated cost of \$107.14 per metric ton reduced. That is still higher than either the state or federal SCC. These numbers are misleading, however, because they assume none of the EVs would have been purchased without

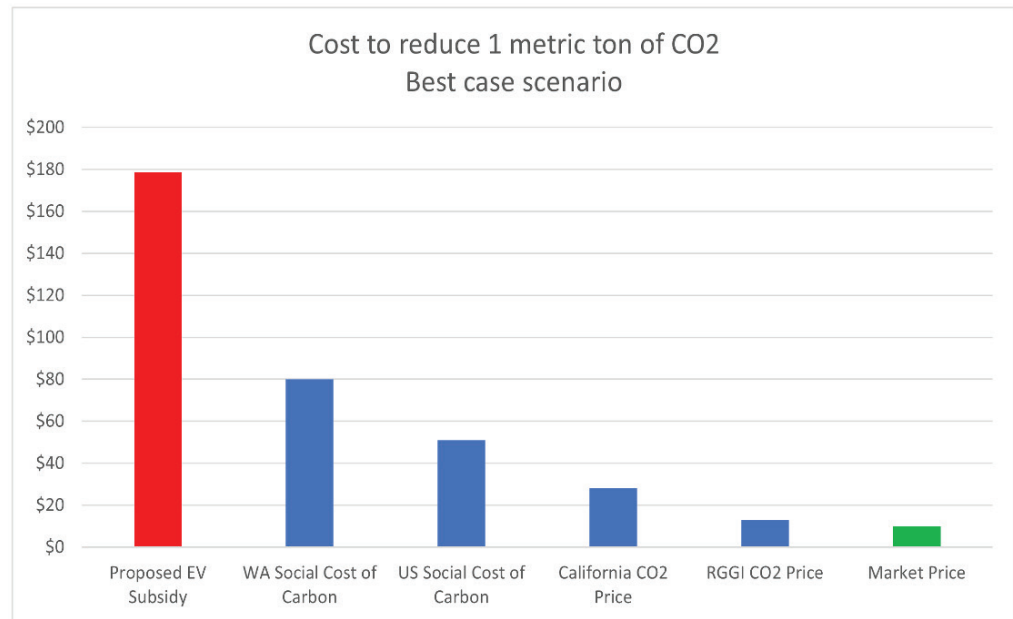
3 Nordhaus, William D., "Revisiting the social cost of carbon," PNAS February 14, 2017 114 (7) 1518-1523; first published January 31, 2017; <https://doi.org/10.1073/pnas.1609244114>.  
4 Data.WA.gov, "Current and Historical Electric Vehicle Population Chart," <https://data.wa.gov/Transportation/Electric-Vehicle-Population-Counts/qi6z-wzah>.  
5 U.S. Environmental Protection Agency, "Greenhouse Gas Emissions from a Typical Passenger Vehicle," <https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle>.

the subsidy. The reason the amount is smaller is that wealthier people are less influenced by the incentive, as the state's experience with the sales tax break demonstrated. If we assume the subsidy accounts for 60 percent of EV sales (a very generous assumption), the values are identical to the \$12,500 subsidy.

So, even if we assume that the proposed new EV subsidies would reduce CO2 emissions beyond existing policy and they are the catalyst for all or most of future EV sales, the subsidies would do more harm than good by spending more than they would generate in value for people and for the environment.

### Proposed EV subsidy is irresponsibly wasteful

When comparing the EV subsidies to other available strategies for reducing CO2 emissions, the numbers get even worse – far worse.



There are three useful metrics by which to judge the cost of alternative strategies. Both California and a group of states in the Northeast have carbon markets. The prices there reflect the relative cost of reducing CO2 emissions in those states. Additionally, there is a market for CO2 emission-reduction projects. These projects are recognized in the state's cap-and-trade system, although they are limited. Each of these carbon prices provides a useful guide to calculating the opportunity cost of bad policy. Spending \$78 for what can be achieved for less is wasteful and harmful to the environment. Using these metrics, the proposed EV subsidies are incredibly wasteful.

After the most recent CO2 auction, the carbon price in California is \$28.26.<sup>6</sup> The EV subsidy is more than six times as expensive as California's carbon price. The price in the Northeast states, known as the Regional Greenhouse Gas Initiative (RGGI), is \$13, making the governor's proposed EV subsidy nearly 14 times as expensive.<sup>7</sup> Finally, the price on the market for CO2-

6 California Air Resources Board, "California Cap-and-Trade Program: SUMMARY OF CALIFORNIA-QUEBEC JOINT AUCTION SETTLEMENT PRICES AND RESULTS," November 2021, [https://ww2.arb.ca.gov/sites/default/files/2020-08/results\\_summary.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-08/results_summary.pdf).

7 The Regional Greenhouse Gas Initiative, "Auction Results," <https://www.rggi.org/auctions/auction-results>.

reduction projects is \$10 (or less for bulk purchasers). By the standard of the open market, the proposed EV subsidies are nearly 18 times as expensive.

By any of those metrics, the proposed EV subsidy is simply irresponsible. Claiming that climate change is a crisis while wasting money on ineffective policies is indefensible.

### **Conclusion – electric vehicle subsidies do nothing to reduce CO2 emissions**

When announcing the proposed subsidies, Governor Inslee noted that Washington state's existing policies under his administration will fall short of meeting the 2030 state emissions target by six million MT of CO2. His proposed EV subsidies would do nothing to close that gap. As noted above, the policy would duplicate what has already been done, adding nothing to reduce total CO2 emissions. In the best-case scenario, the proposed EV subsidies are incredibly wasteful and would do more harm than good by providing only three dollars of benefit for every \$10 spent on the subsidies.

In contrast, spending the money on projects in the CO2-reduction open market would not only reduce global emissions but would more than close the gap of six million metric tons. And it would do so immediately, rather than waiting until 2030.

The response to the proposed EV subsidies will be a key indicator of whether Washington state legislators are serious about reducing the risk from climate change, or whether the issue of EV subsidies is simply a symbolic political tool.

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