

# **POLICY BRIEF**

## **Results of Washington's EV Instant Rebate**

By Todd Myers, Senior Vice President for Research

January 2025

#### **Key Takeaways**

- 1. Washington state's EV rebate program was intended to open the door to EV ownership for people of modest incomes
- 2. Vehicle registration data show the program achieved just over half its promised goals
- 3. The price to cut CO2 using the state's EV rebate is the equivalent of paying \$2,072.14 for a latte.
- 4. Rebates increased new EV sales by an estimated 3,477, used sales by about 1,163 and electric trucks by about 187, for a total of 4,788, well below the Department of Commerce's initial projection of up to 8,767 additional vehicles.
- 5. CO2 reductions are much smaller than expected, reducing lifetime emissions by only 13,030 metric tons equivalent to about 0.03% of Washington's annual transportation-related emissions.
- 6. The cost of the program to reduce emissions is astronomical, costing \$3,453.57 to reduce one metric ton of CO2 nearly 86 times as much as the state's current CO2 price.
- 7. For every \$1 of subsidy, the people of Washington receive just over a penny's worth of environmental benefit.
- 8. During the three months when the rebates were in effect, the average household income of the zip codes where rebate-eligible EVs were sold was \$118,816, only a slight decline from an average household income of \$122,601 in the months before the rebates were available.
- 9. A significant portion of the subsidies go to those who would have purchased an EV anyway.
- 10. The EV mandate does nothing to reduce CO2 emissions on top of existing laws.
- 11. Despite data indicating inefficiency and failure to achieve its goals, the 2025-27 budget proposed by Governor Inslee includes an additional \$62.5 million to extend the program.



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### **Results of Washington's EV Instant Rebate**

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#### **Introduction**

On Earth Day 2024, Governor Jay Inslee highlighted a new program to provide \$45 million in state incentives for middle-income people to buy electric vehicles (EV) and plug-in hybrids (PHEV). The governor <u>claimed</u>, "With these new rebates, we're significantly lowering the entry point, opening the door to EVs for people of modest incomes as we continue paving the way to a clean transportation future for all."

In a statement about the program, Department of Commerce staff wrote that "the program could lead to a reduction of up to 24,000 metric tons of CO2 emissions in the transportation sector, Washington's greatest contributor of greenhouse gas emissions."

The rebates began on August 1, 2024 and were gone in less than three months, with the significant majority being used in August and September. We can now assess the impact of that program by examining vehicle registration data through the end of November.

When the program was announced, <u>we wrote</u> that even if the program achieved its goals, the program was an extremely expensive way to cut CO2 emissions.

Real-world data turned out to be significantly worse than initial projections. Vehicle registration data show the program achieved just over half its promised goals for the same price. Using the state's EV rebate is the equivalent price to cut CO2 of paying \$2,072.14 for a latte.

Despite that record, Governor Inslee's 2025-27 <u>budget proposal</u> includes an additional \$62.5 million to extend the program.

The very poor environmental and purchase results make it clear that this program should not be continued. The program has a negligible impact on transportation-related CO2 emissions in the state and the cost for even that small amount is extremely high. Additionally, although sold as a program to "provide low-income Washingtonians access to electric vehicles," the average income of purchasers was very similar to the high-income households already purchasing EVs.

#### **Overview of Results**

The data offer several findings.

- 1. Based on sales trends, the rebates increased new EV sales by an estimated 3,477, used sales by about 1,163 and electric trucks by about 187, for a total of 4,788. This is well below the Department of Commerce's initial projection of up to 8,767 additional vehicles. Sales of new PHEVs actually fell by an estimated 344 vehicles but used PHEV sales increased by 305 vehicles.
- 2. As a result of the lower sales, the CO2 reductions are much smaller than expected, reducing lifetime emissions by only 13,030 metric tons equivalent to about 0.03% of Washington's annual transportation-related emissions.
- 3. The cost of the program to reduce emissions is astronomical, costing \$3,453.57 to reduce one metric ton of CO2 nearly 86 times as much as the state's current CO2 price. For every \$1 of subsidy, the people of Washington receive just over a penny's worth of environmental benefit.
- 4. During the three months when the rebates were in effect, the average household income of the zip codes where rebate-eligible EVs were sold was \$118,816. That is only a slight decline from an average household income of \$122,601 in the months before the rebates were available.
- 5. The most popular vehicle among those who used the rebate was the Tesla Model 3, which saw sales double, selling 1,191 more vehicles than expected based on sales in 2024 prior to the rebates. The other big winners were the Honda Prologue (583 additional sales), the Subaru Solterra (329 additional sales), and the Nissan Ariya (267 additional sales).
- 6. Through October, EVs and plug-in hybrids accounted for 21.8% of new vehicle sales in Washington, only slightly above the 2023 level of 20.5% and well below the 35% level that will be required in 2026.

The state's EV subsidy is far more expensive than other approaches to cutting CO2 emissions, and a significant portion of the subsidies go to those who would have purchased an EV anyway.

Additionally, the poor results of the program indicate Washington should cancel its participation in the California EV sales requirements which will require 35% of new vehicles be EV or PHEV in 2026. There are several reasons.

First, the California target is arbitrary – there is no reason the 35 percent target is appropriate or necessary. Second, given the very high cost of increasing the percentage of EV sales from 20.5% to 21.8%, pushing Washington to 35 percent in just two years would be incredibly expensive. Finally, the EV mandate does nothing to reduce CO2 emissions on top of existing laws. The Climate Commitment

Act (CCA) already puts a cap on statewide CO2 emissions. That cap will require reductions with or without the EV mandate.

The state's EV subsidy did not achieve its goals and should be cancelled rather than wasting more on this ineffective program.

#### The EV Instant Rebate Program

The stated purpose of the EV instant rebate program is to increase the number of zero-emission vehicles in Washington, reduce CO2 emissions and help the state meet its strict requirement that 35 percent of new passenger vehicles sold in 2026 be either EV or PHEV.

Recognizing that previous EV subsidies <u>heavily favored the wealthy</u>, many of whom would have purchased the vehicles without the subsidy, the instant rebate program was targeted at middle-income families. To qualify, buyers had to make less than \$45,180 if they were single, and less than \$93,600 for a family of four.

The subsidies were also very generous, <u>providing eligible buyers</u> up to \$9,000 on a lease or \$5,000 on the purchase of a new qualifying EV. This was in addition to \$7,500 in federal incentives on certain vehicles. Buyers of a used EV would receive \$2,500.

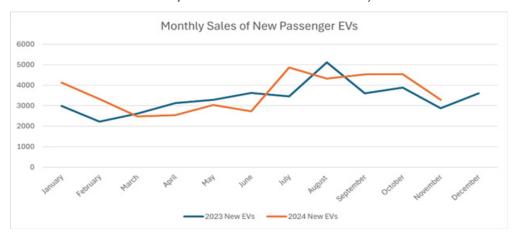
Finally, the rebates were limited to certain vehicles, although the price range was very wide. The program provided rebates for the Audi e-tron S with a starting price of \$88,200, down to the Nissan Leaf with a base price of \$28,140.

This study examines the impact of those rebates, including how much the incentives increased EV sales, the impact on CO2 emissions and how effective the program is at reducing emissions. We used two state databases from the Department of Licensing to analyze the results: the <a href="State of Washington Vehicle">State of Washington Vehicle</a> Title <a href="Transactions">Title Transactions</a> and the <a href="Electric Vehicle Title">Electric Vehicle Title</a> and Registration Activity. The first database provides information about original vehicle registrations for new cars and the second includes sales information, including the sale price of the vehicles.

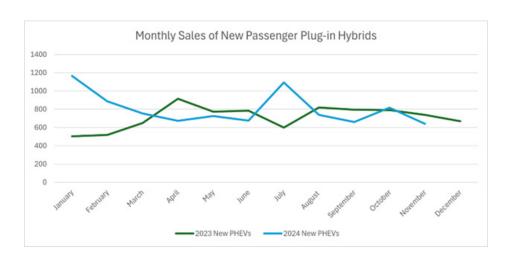
### **Impact of the Rebate on Sales**

Not surprisingly, the rebates increased total sales of new EVs. Between January and July of 2024, there were an average of 3,301 new EVs registered in Washington every month. Once the rebates began in August, that average jumped to 4,461 during August, September and October, an increase of about 35 percent. Compared to average monthly sales in 2024 prior to the rebates, there were an additional 3,477 EVs sold during those three months.

Sales are seasonal and impacted by other rebates and policies, so this estimate has a margin of error. Comparing sales in August, September and October of 2024 to the same months in 2023 yield a much smaller increase of just 778 vehicles.



By way of comparison, original registrations of PHEVs declined during the periods when rebates were available. Compared to the rest of 2024, average monthly sales declined by about 13 percent, reducing the number of new PHEVs sold by about 344. The decline is slightly lower when comparing to the same months in 2023, with a decline of 191 vehicles.

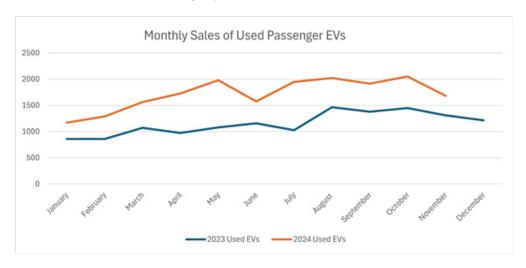


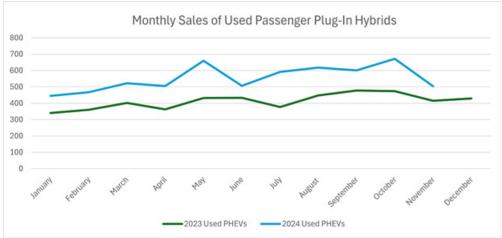
One potential reason PHEV sales may have declined is that people decided to buy a full EV using the rebate money. There is some indication this is the case because the average sale price of PHEVs actually increased while rebates were offered, indicating fewer of the low-cost models were sold, increasing the percentage of sales for the higher-cost models.

Electric trucks are a small portion of the market and only three qualified for the rebates. Among the electric truck models eligible for rebates, there were about 187 more sold during the three months when the rebates were offered based on the monthly average sales in the rest of 2024.

Sales of used EVs and PHEVs both increased during the period when the rebates were available, although more modestly. Compared to average 2024 monthly sales prior to the rebates, there were an additional 1,163 used EVs and an additional 305

used PHEVs sold during those three months. Using the same months in 2023 as a baseline increases the sales slightly to 1,694 used EVs and 490 used PHEVs.





The impact of the rebate is also clear when examining which type of EVs saw the biggest increases during those months. Four of the five models that saw the biggest sales increase had an average sale price of less than \$50,000. The average sale price of the top five models that saw increased sales is just under \$45,000, equivalent to a BMW 3-series sedan. So, while the average vehicle price was lower than prior to the rebates, the prices are still relatively high.

One goal of the rebates was to provide middle-income residents with the opportunity to buy an EV. That appears to have happened, but the impact was very slight. <u>Using Census data</u>, the median income of the zip codes weighted for EV sales in the first seven months of 2024 was \$122,601. During the three months when the rebates were in effect, that average fell to \$118,816. The rebates did not meaningfully alter who bought EVs.

It is also possible that some EV sales that would have otherwise occurred in November or December were simply moved forward. For new and used EVs and PHEVs and new electric trucks, sales fell by an average of 26 percent in November from October. Some percentage of vehicles sold when rebates were available would likely have been sold in November or later, but the purchase was moved up to take advantage of the rebates. This would reduce the impact of the rebate program

further. To be conservative, we will assume all additional purchases over the baseline are new.

#### **Rebates Fell Short of Promised Environmental Benefits**

Although the rebates likely increased sales of EVs and PHEVs, the \$45 million of taxpayer funding had very little impact on the climate goals the governor and others claimed were at the heart of the program.

When the program was announced, the <u>Department of Commerce press release</u> indicated the program would increase sales of EVs by up to 8,767 and "a reduction of up to 24,000 metric tons of Co2 [sic] emissions in the transportation sector, Washington's greatest contributor of greenhouse gas emissions." In an email to me, Commerce staff made it clear that the "24,000 emissions reductions is not annual, but for the internal combustion engine vehicles being replaced by EVs."

In reality, the program fell far short of those goals.

The Department of Commerce reported that the program ended up providing slightly more than 6,100 rebates. In <u>their press release</u> at the end of the program, department staff claimed, "89% of rebate recipients say they couldn't have bought or leased an electric vehicle without the rebate." The actual data indicate that the number of new EV purchases generated by the rebates is lower than that.

Sales of new and used EVs and PHEVs during the period when the rebates were available were about 4,788 above the baseline of the first seven months of 2024.

The other way to estimate the number of new vehicle sales created by the rebate is to compare sales during the same months from the previous year. Using the same three months in 2023 as the baseline yields a much smaller increase of 3,318 additional sales. Since very few electric trucks were sold (or available) in 2023, that number includes all 547 sales during the rebate period.

To be conservative, we will use the much higher number of 4,788 as the number of sales that were created by the rebate.

Using the higher estimate shows that, even using the most generous calculation, the program is far from meeting the promised goals. Assuming the rebates increased sales by 4,788 vehicles, that means about 78 percent of the 6,100 rebate-generated sales that would not have occurred otherwise, far short of the 89 percent claim or the high-end estimate of 8,767 new EVs.

The total CO2 reduction is also much smaller than predicted. Using the EPA's AVERT model, which the Department of Commerce said it used to estimate emissions reductions, the program reduced emissions by 13,030 MT CO2. According to AVERT, substituting 3,477 new EVs and 1,163 used EVs for gas-powered new vehicles would increase electricity-related CO2 emissions by 910 MT, but reduce emissions by 13,940 MT due to the displacement of gas-powered vehicles, yielding a total reduction of 13,030 MT of CO2.

That is 54.3 percent of what was claimed in the initial press release from the governor on Earth Day. By way of context, that amount of CO2 is equivalent to

0.03 percent – three one-hundredths of a percent – of Washington's transportation-related CO2 emissions in 2022 according to the EPA.

If we use the estimate of 13,030 MT of CO2 and the program cost of \$45 million, each avoided metric ton of CO2 cost Washington taxpayers \$3,453.57 per MT of CO2. That is an astronomical amount. It is almost 86 times as much as the current price of the state's CO2 tax. It is 345 times as much as the cost of widely available CO2-redution projects from organizations like the Bonneville Environmental Foundation in Portland.

Using the price of a \$6 latte as a comparison, the EV rebate program is the equivalent of spending \$2,072.14 for a \$6 latte.

Even that amount assumes the CO2 emissions reduced by the program are in addition to existing laws. That is not true. The state's cap mandates emissions reduction, so the EV program simply spends more taxpayer dollars to dictate how the state meets that cap, not whether CO2 reductions will occur. As a result, the real cost of the program to reduce each MT of CO2 is infinite because it adds nothing to total reductions.

#### A Program That Should Be Cancelled

Supporters will point to the increase in EV sales as evidence that the program worked. Governor Inslee's budget proposal says the program was "highly popular." Free money is always going to be popular. The question is whether spending that money achieved the promised goals and whether it could be better spent elsewhere.

The number of additional EVs sold is only slightly more than half of what was originally claimed in the governor's Earth Day press release. And while the limits on who could receive the rebates resulted in increasing sales of slightly lower-cost models, the average price of those vehicles is still similar to a BMW and the median income of EV buyers changed only marginally.

Even with the rebates, the percentage of new passenger vehicles sold in Washington that were electric was 21.8%, below the state's own projection that 27.4% of new cars needed to be electric or plug-in hybrids in 2024 to be on track to meet the 2026 requirement that 35 percent of new passenger vehicles be EV or PHEV. Even with the increased sales, Washington state is only on track for 25 percent of new vehicles to be BEV or PHEV in 2026.

The very poor environmental results make it clear that this program should not be continued. The program has a negligible impact on transportation-related CO2 emissions in the state and the cost for even that small amount is extremely high.

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#### About the Author

With more than two decades in environmental policy, **Todd Myers**'s experience includes work on a range of environmental issues, including climate policy, forest health, old-growth forests, and salmon recovery. A former member of the executive team at the Washington State Department of Natural Resources, he is a member of the Puget Sound Salmon Recovery Council.

He is the author of "Time to Think Small: How nimble environmental technologies can solve the planet's biggest problems," which outlines how small technologies are empowering people to protect threatened wildlife species, reduce CO2 emissions, and reduce ocean plastic. His previous book "Eco-Fads: How the Rise of Trendy Environmentalism Is Harming the Environment" documented how our environmental policies are driven by a desire to look good rather than to help the environment.

His writing has appeared in the Wall Street Journal, National Review, Seattle Times, and USA Today, and he has appeared on numerous news networks including CNBC, Fox News, the BBC, and CNN. He served as vice president of the Northwest Association of Biomedical Research and received their Distinguished Service Award in 2018 for his support of bioscience. He has also served as president of the Prescription Drug Assistance Foundation, a nonprofit providing medicines to low-income patients.

In 2021, Myers served as president of his local beekeeping club in his quest to build an army of stinging insects at his command. He has a bachelor's degree in politics from Whitman College and a master's degree in Russian/International Studies from the Jackson School of International Studies at the University of Washington. He and his wife Maria live in the Cascade Mountains in Washington state with 200,000 honeybees, and he claims to make an amazing pasta carbonara and an incredible dirty vodka martini with blue-cheese-stuffed olives.