

Focus on: Zero-Emissions Vehicles program



Figure 1. Zero emissions vehicle charging

Background

Zero-Emissions Vehicle (ZEV) regulations will reduce greenhouse gas emissions from transportation by requiring manufacturers to sell increasing numbers of the very cleanest cars they can make. In 1990, California adopted the first ZEV regulation. Currently, 14 more states have adopted California's ZEV standards, including Washington. In August 2022, California adopted a new ZEV mandate that sees the sale of gas-powered passenger vehicles phased out by 2035. A 2020 law passed by the Washington Legislature requires Ecology to amend the ZEV rules in its Clean Vehicles Program to match those in California. In September 2022, Washington proposed its own rules requiring all new light-duty cars and trucks sold in Washington to meet ZEV standards by 2035. The rule is expected to be adopted December 19, 2022.

The problem

Motor vehicles are the largest source of Washington's greenhouse gas emissions and our largest source of hazardous air pollution. We must tackle this challenge by transitioning from gas- and diesel-powered transportation as quickly as possible. Reducing vehicle emissions will improve public health, help meet state and federal air quality standards, and go a long way towards achieving our state's climate goal of reducing greenhouse gases to net zero by 2050.

About ZEVs

A ZEV is any vehicle that emits zero, or nearly zero, emissions while running. This includes plug-in hybrid, battery electric, and hydrogen fuel cell electric vehicles. Currently, there are close to 60 unique models of ZEVs available that range in size from compact cars to vans to SUVs and pickup trucks. In addition, there is a wide range of medium-duty and heavy-duty trucks currently available. Automakers have announced they are introducing more ZEVs over the next few years, expanding the range of available makes and models to more than 100 by the end of 2024.

ZEVs meet the same safety, quality, and warranty requirements as traditional petroleum-fueled vehicles. Another advantage is that ZEVs continue their clean operation as they get older, unlike traditional combustion engines, which typically produce more pollution as they age. Right now ZEVs cost more to buy than similar petroleum-fueled vehicles, but cost much less to operate and maintain, resulting in lower cost of ownership over a vehicle's life cycle.

How our ZEV program works

Beginning with model year 2025, manufacturers are required to produce a percentage of ZEVs and plug-in hybrids each year based on the total number of cars sold in Washington State. Manufacturers with higher overall sales of all vehicles are required to make more ZEVs. Cars sold that have a higher driving range will earn the manufacturer more credits. Those who earn more credits than needed to be in compliance may bank credits for future use, sell them, or trade to other manufacturers. Washington will work with the California Air Resources Board to track credits for the ZEV program and release annual credit bank balances, as well as the total number of petroleum-fueled, ZEV, and plug-in hybrid vehicles produced for that model year. By the year 2035, 100% of vehicles sold in Washington must be electric.

What are the benefits of Washington's ZEV program?

Our ZEV program will:

- **Reduce greenhouse gas pollution:** The ZEV program projects a reduction in Washington's greenhouse gases from passenger vehicles by more than one million metric tons by 2030. Washington must decrease pollution from transportation to achieve the 2035 and 2050 greenhouse gas reduction goals outlined in state law.
- **Increase consumer choice:** The ZEV program will require automakers to increase the percentage of ZEV models available for sale over time. Providing early credits to automakers in our Clean Cars Program incentivizes them to offer all available ZEV models in Washington.
- **Decrease consumer cost:** Even with a higher up-front cost than a traditional car, ZEV owners can expect to pay lower costs for fueling and maintenance, creating an average of \$6,000 to \$10,000 savings over the lifetime of the car, even with the cost of installing a home-charging station.
- **Improve public health:** The ZEV program will ensure cleaner, healthier air and reduce greenhouse gas pollution. Electric vehicles have no tailpipe emissions during operation and fuel cell vehicles emit only harmless water vapor, which reduces exposure to toxic substances.
- **Contribute to environmental justice:** Communities overburdened by air pollution because they are located along heavy traffic corridors and freight hubs will experience the greatest benefit from reduced transportation emissions.

About ZEV driving range

A common concern of motorists is the driving range of ZEVs, or the number of miles a vehicle can drive between charges. Many newer ZEVs are able to travel more than 300 miles between charges and should reduce the "range anxiety" some people feel. Ranges will increase as battery technology continues to advance, with several upcoming vehicles able to travel up to 600 miles on a single charge.

About ZEV charging

ZEV charging is available in many settings that are expanding every day. Even though more than 70% of ZEV charging occurs in homes, more and more charging stations are slated for workplaces and in public locations, such as grocery stores and hospitals. To date, Washington has more than 3,500 publically accessible level 2 ports at more than 1,600 locations and more than 800 DCFC ports at more than 230 locations statewide.

Why it matters

Washington faces serious health, economic, and environmental disruption from the effects of greenhouse gas (GHG) pollution. Greenhouse gases cause unhealthy ozone pollution and contribute to climate change. Climate change is causing extreme weather, larger and more frequent wildfires, and decreased snow pack, affecting our water supply, agriculture, and wildlife.



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To request an ADA accommodation, contact Ecology by phone at 360-407-6800 or email at melanie.forster@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341.