



Are Washington state agencies required to purchase electric vehicles?

The short answer is yes.¹ Transportation is the largest source of greenhouse gas and other major pollutant emissions (such as particulate matter and nitrogen oxides) in Washington. The continued progress of electric vehicle (EV) technology, coupled with the state's abundance of economical, zero-emission electricity, provides an opportunity to reduce transportation emissions through electrification. State agencies are ushering in a new era of more sustainable transportation through the [Electric Fleets Initiative](#) and [State Efficiency and Environmental Performance](#).

The following information about [EV Policies and Laws](#) support this requirement:

- [RCW 43.19.648](#) requires state agencies and local governments to use electricity or biofuel—to the extent practicable—to fuel publicly owned vehicles, vessels and construction equipment. The definition of practicable is provided in Chapter [WAC 194-28](#) for state agencies and [Chapter 194-29 WAC](#) for local governments.
- [Executive Order 20-01](#) directs state agency decision makers to prioritize battery electric vehicles (BEVs) or better emerging technology and support the installation of charging infrastructure for each new vehicle leased or purchased. For vehicle classes in which BEVs are not available, agencies shall prioritize the most cost-effective low-emission options available.

Will agencies need to replace vehicles before their normal replacement schedule?

No. Agencies should plan to replace vehicles according to their normal replacement schedule.

How do costs of EVs compare with internal combustion engine vehicles?

Public fleet managers should evaluate the total cost of ownership (TCO) for each vehicle they are thinking about adding to their fleet. The TCO takes into account the total cost of buying and owning a vehicle, including incentives, upfront costs, and operations and maintenance.

Especially in the light-duty class, EVs typically have a lower TCO than vehicles with internal combustion engines (ICE). This results mainly due to lower operation cost and less maintenance required. Battery EVs are a great default choice for replacing ICE sedans. Plug-in hybrid or other hybrid vehicles should be considered only after the fleet manager has determined that a battery EV is not practical for typical daily use. Battery EVs available through the [state vehicle contract](#) are consistently less expensive to operate, maintain, and repair, based on regular TCO analyses.

Nearly all battery EV options are within 5 percent of the total lifecycle cost of common hybrid vehicles. (This is the threshold that state agencies and institutions of higher education are expected to consider before requesting DES approval of passenger vehicle purchases or leases.)

What types of EVs are available under the state contract?

The [state contract](#) offers the following types of EVs:

Battery Electric Vehicles operate solely on electricity provided through grid charging and regenerative braking. These vehicles include the Nissan Leaf, Ford Mach-E, and Tesla models Y or 3.

Plug-in Hybrid Electric Vehicles (PHEVs) use both gasoline and battery electricity. These include the Ford Escape, and Mitsubishi Outlander.

¹ <https://www.commerce.wa.gov/about-us/rulemaking/electric-vehicle-policies-and-laws/>



A good tool for comparing EVs and PHEVs is [PlugStar](#). PlugStar maintains a list of all-electric and plug-in hybrid EVs, including their driving ranges. Although not all may be available in Washington, the Department of Enterprise Services can help agencies develop solicitations for other types of EVs to meet their needs.

Which government agencies own EVs?

State and local government agencies are quickly adding EVs to their fleets. Local governments have been particularly interested due to sustainability goals and more compact travel patterns. Once employees become familiar with EVs, they often become the preferred choice for daily driving. Drivers with stop-and-go travel patterns, such as pick-up and delivery drivers, enjoy the fact they are no longer exposed to the fumes and noise of an internal combustion engine. Here are some of the many achievements established by public fleets in Washington:

- King County Metro established the nation's first EV motor pool.
- The City of Olympia negotiated one of the first municipal leases in the country.
- Sea-Tac Airport electrified 650 ground support vehicles before moving to electrify many other vehicles at the airport.
- The Washington State Department of Transportation was the first state agency to acquire EVs and continues to add more to their fleet.
- Other agencies with EVs, or plans to acquire them in the near future, include Commerce, Ecology, Corrections, and the State Printer.

The [Department of Enterprise Services](#) (DES) provides many resources for fleet and facility managers who are planning to add EVs to their fleet. DES makes several EVs and plug-in hybrids available for interagency loan through their [Fleet Rental Program](#) so others can become comfortable with these EVs and determine if the vehicles meet agency needs before making a longer commitment through vehicle replacement.

Does my agency have to choose an EV for long-distance travel?

Many EVs are available that provide longer ranges. EVs should be a default option, before looking at other options. To optimize EV use, agencies may need to develop or modify fleet management strategies. For example, rather than acquiring a PHEV to accommodate occasional long-distance travel, it may be more economical to designate a certain percentage of the fleet as common hybrids or plug-in hybrids vehicles, or use the state motor pool or rental vehicles, such as the [Fleet Rental Program](#) operated by the [Department of Enterprise Services](#) (DES)

With a little planning, an EV can also be used for long-distance travel. You can use this [Electric Vehicle Charging Locations table](#) that lists the DES charging network locations and public charging resources to confirm that adequate charging opportunities are available along the route and/or at the final destination.



What factors affect vehicle range?

As with gas-powered vehicles, many factors can affect and EV's range. In general order of importance, these factors include:

- Speed, terrain, number and weight of occupants, and weather conditions, such as strong winds or heavy rain.
- Heating and air conditioning use. If possible, cool or heat the car while it's still connected to the charger.
- Drag from rolling down windows: this can reduce range more than using the fan on a low setting.

Use of the wipers, headlights, radio, and similar accessories do not have significant impacts of EV range. And the use of cruise control can improve range.

What guidance should we provide to new EV drivers?

New EV drivers should familiarize themselves with the full range of vehicle features, the charging process, and the location of chargers along their most commonly traveled routes. Here are a variety of activities that public fleets use to engage their employee drivers with new EVs:

- Offer a Ride & Drive to communicate the importance of adding EVs to the fleet.
- Publish a map illustrating parking changes, including bollards, signage, and parking spot painting.
- Let potential EV drivers check out the new EVs.
- Check out resources on the [Green Transportation Program website](#) on implementing a driver engagement program specific to these new cars.
- Highlight changes in parking rules or expectations, the vehicle check-out and drop-off process, and how to re-charge at work and at home.
- Ask the original equipment manufacturer to offer a driver training program for medium- and heavy-duty EVs.

Vehicle range: a word to the wise

Until drivers become familiar with variables that can affect vehicle range, we recommend traveling no further than 75% of the estimated range before recharging.