Oregon Department of Environmental Quality

Calculating 2020/2021 Residential Electric Vehicle Credits

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Cory-Ann Wind, cory.ann.wind@deq.state.or.us

Background

Oregon Department of Environmental Quality, Oregon Department of Energy, and the Public Utility Commission receive monthly registration data from the Oregon Department of Transportation (Division of Motor Vehicles). This data set is the "official" data used to track progress towards electric vehicle adoption goals. It is also the data that ODOE uses to populate its EV Dashboard. As the agencies continue to work together to ensure the information we provide to the public and stakeholders is consistent, we've identified a few discrepancies.

In addition, 2020 presented the Clean Fuels Program specifically with challenges in how CFP staff calculate the residential EV credits. Briefly, our standard methodology considers the DMV registration data and spatially attributes registered EVs to specific PUC geographies. However, because of COVID-19, many DMV offices closed, and registrations deadlines were waived. This led to incomplete registration data. Accordingly, ODEQ adopted an alternative method for 2020.

In 2021, although the DMV offices have reopened, there is still a lag in the registrations. As such, for the 2021 calculations, the CFP staff are following a similar methodological approach as used for the 2020 residential credit generation estimates. A few of the main discrepancies between CFP and other agencies' data derived from the same source (the DMV registration data) (points #1 & #2) and key assumptions (points #3 & #4) used for the CFP residential EV credit generation estimates are described below.

1. Identifying how many electric vehicles are on Oregon roads

DEQ receives registration data from ODOT for use by its Vehicle Inspection Program. DEQ gets information about all light-duty vehicles registered in the state in this data request. In speaking with VIP staff, they noted that they often see vehicles with expired registrations, from a few months to several months up to 2 years. Possible explanations for this lag in registrations include the owners deciding whether to keep the vehicle registered and check it through VIP at the last minute. Considering this insight and COVID-19 related registration delays, DEQ chose to include all electric vehicles registered in any month in the entire year's registration period. In addition, any duplicate registrations (or VINs) are removed from the dataset to prevent double counting. We think this is the most reasonable approach for accurate accounting of the number of EVs actively driven in the state at the time of the analysis.

DEQ's approach varies from ODOT's approach in that ODOT assumes that once a vehicle has not been registered for two consecutive months, it has "left the system" –that the vehicle is operating in another state or is not being driven at all. This seems reasonable in "normal" times, but in "COVID" times, many vehicle owners have not renewed their registrations and yet are still driving on the roads.

2. Allocating the electric vehicles to electric utilities

In the past, both DEQ and ODOE independently allocated the EVs to individual electric utilities, and discrepancies were identified between each agency's efforts. Two primary root causes for the discrepancies were identified, namely differences in 1) the shapefiles used and 2) the geocoders used. As a result, we collaborated with ODOE and the electric utilities to ensure we have the best available information and most up-to-date shapefiles. We also agreed to use the same geocoder ODOE uses—the Bing geocoder. Previously, we used the Oregon composite geocoder.

3. Categorization of electric vehicle type

Currently, we assess the total number of PHEVs and EVs with active Oregon DMV registrations. Therefore, commercial vehicles in the DMV data are not presently excluded from the residential credit generation estimates. However, we are developing criteria to separate commercial vehicles from the DMV registration data to limit any potential double-counting of EVs (with other aspects of the CFP).

4. Identifying mopeds and motorcycles

Currently, electric mopeds and motorcycles do not count toward the total number of EV-related CFP credits. Still, they may be included in the future as we develop technical and policy strategies for other electric mobility options.

Alternate formats

DEQ can provide documents in an alternate format or a language other than English upon request. Call DEQ at 800-452-4011 or email deqinfo@deq.state.or.us.