April 25, 2022

Washington State Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503

Re: Comments of Nuvve Holding Corp on Draft Chapter 173-424 WAC, Clean Fuels Program Rulemaking

Nuvve Holding Corp ("Nuvve") is a San Diego-based company operating across the U.S. and internationally whose mission is to lower the cost of electric vehicle ("EV") ownership while supporting the integration of renewable energy sources, such as wind and solar. Nuvve's Grid Integrated Vehicle platform ("GIVe"), transforms EVs into grid assets when those vehicles are charging while guaranteeing the expected level of charge at the time the owner or driver needs it for transportation.

The aggregation of thousands of parked and plugged into bidirectional chargers turns EVs into a virtual power plant using Nuvve's GIVe platform. This allows Nuvve to provide EV drivers and fleet owners with additional value through earning revenue from participating in electricity markets with a power capacity and capability comparable to traditional stationary storage systems. Using our proprietary vehicle-to-grid ("V2G") technology, Nuvve's GIVe platform produces real benefits to society by reducing the cost of electric infrastructure to support transportation electrification. In addition, V2G helps to reduce CO_2 emissions beyond those associated with switching from liquid fuels to electricity for transportation by supporting the integration of variable sources of generation including solar and wind. These benefits can be realized across all types of EVs including light-duty vehicles (both battery-only and plug-in hybrids) and medium- to heavy-duty vehicles, such as school buses and other short-haul fleets. Nuvve appreciates the opportunity to comment on this rulemaking.

Nuvve supports Washington's efforts to develop a Clean Fuels Program

A clean fuel standard (CFS) represents an important piece of the transportation electrification puzzle. This market-based mechanism provides a price signal through tradable credits based on the carbon intensity (CI) of competing transportation fuels. A CFS increases the demand for low CI fuels and thus supports the development of clean fuels infrastructure.

Today there are opportunities for V2G-capable vehicles to generate grid services revenues in New York[1], California[2], Massachusetts, and other New England states[3]. These value streams reflect the value of a kWh conserved or exported at a particular time and grid location. These real-time price signals compensate EV owners and aggregators according to the impact charging or discharging their EV will have on the electricity system. While this type of price signal includes a value stack capturing various elements of the generation availability, transmission, and distribution systems, such a signal does not acknowledge that EVs straddle the transportation and electric systems. To capture the value of reducing the CI of transportation fuels the proposed Clean Fuels Program ("CFP") is an essential component of the complete Grid-Integrated Vehicle price signal, and Nuvve supports it.

WAC 173-424-150 General Requirements (Section 3 b and c)[4]

Nuvve is pleased to see that aggregators will be able to trade credits on behalf of customers. With electric school bus rollout beginning, intermediaries will be essential to increase the benefits school districts see from their decision to electrify. In general, our experience in California has been that schools are more likely to participate in clean fuel credit generation if they can outsource the management and sale of credits to third parties.

WAC 173-424-220 Designation of Fuel Reporting Entity for Electricity, Smart Charging Incremental Credit (Section 7b)[5]

Nuvve supports the proposed incremental credit for smart charging in accordance with a CI signal. While we understand this section was previously reviewed, Nuvve is hoping to clarify whether the smart charging pathway currently applies only to residential charging, or if Commercial and Industrial accounts may also take advantage of this pathway. Light-duty fleets, medium- and heavy-duty segments such as school buses, maintenance vans, and delivery fleets can certainly adjust their charging profiles in response to such a signal.

[1] New York Value of Distirbuted Energy Resources (VDER) rider tariff
[2] California Emergency Load Reduction Program (ELRP), SDG&E rate application for dynamic V2G Export Compensation
[3] Massachusetts Connected Solutions Program
[4] Draft Chapter 173-424 WAC, Page 6
[5] Draft Chapter 173-424 WAC, Page 14

WAC 173-424-GCCZFI Generating and Calculating Credits for ZEV Fueling Infrastructure Pathways, (Section (2) DC Fast Charging Infrastructure (FCI) Pathways)[6]

Nuvve seeks clarity that all DC Fast Chargers will not necessarily come under this heading. Nuvve provides a 60 kW DC charger capable of bi-directional power transfer to schools with bus route requirements that may not be fulfilled using a Level 2 AC charger. These are not publicly-placed chargers and we hope to confirm that all DC fast chargers need not be in publicly accessible lots to generate clean fuel credits.

Nuvve strongly supports the adoption of a CFS in Washington State. Without a CFS, the value that electricity provides as a low CI fuel to the transportation system is missing. This price signal provides an incentive to accelerate both EV adoption and the buildout of the electric fueling infrastructure. A CFS is most effective when third-party aggregators can trade credits, incremental credits for smart charging are available to all EV and EVSE classes. The CFS will compliment other market-based signals and programs designed to compensate grid-focused values, creating a complete value stack for Grid-integrated and bi-directional electric vehicles as these market segments develop.

Respectfully submitted,

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[6] Draft Chapter 173-424 WAC, Page 103-104