

Clean Fuel Standard Participation Guidance

Claiming Incremental Credits for Metered Residential EV Charging

Background

This guidance document provides information on acceptable methods for collecting EV charging data to be reported for residential incremental credits. It also includes guidance on registration and reporting to claim residential incremental credits.

Any equipment that is capable of measuring electricity used for residential EV charging, and for tracking and recording the amount of electricity dispensed to that vehicle over a specific time period, may be registered in the Washington Fuels Reporting System (WFRS) as a piece of Fueling Supply Equipment (FSE) using the [FSE Registration Template](#). The residential EV charging data for generating incremental credits can be measured using off-vehicle meters or on-vehicle telemetry.

1. Collecting EV Charging Data

Method 1: Measuring Charging using Off-vehicle Residential EV Charging Equipment

If the FSE is capable of measuring and logging electricity supplied solely for the purpose of charging a specific EV associated with a VIN, then the measured quantity of electricity dispensed during a quarter can be reported directly for claiming incremental credits.

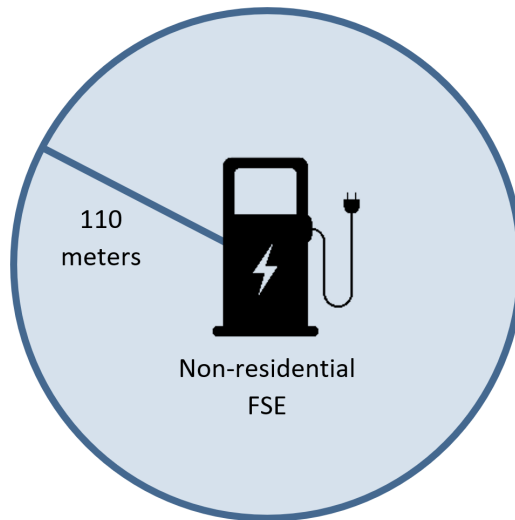
Method 2: Measuring Residential EV Charging Using Vehicle Telematics and Geofencing

On-vehicle telemetry can be used for reporting residential charging for vehicles registered as an FSE. Telematics must be capable of measuring and logging electricity supplied solely for the purpose of residential EV charging. In order to avoid misreporting by double counting, the quantity of electricity used for residential and nonresidential EV charging must be disaggregated for each VIN.

For EV charging that occurs at a non-residential location (like a public charging station), the reporting entity registering that non-residential FSE may claim credits for the electricity used by any electric vehicle charging through that FSE. To use telematics for reporting residential EV charging, the following options have been identified to prevent double-counting from non-residential EV charging that is already generating credits in the Clean Fuel Standard.

Option 1: Geofencing Non-residential FSE

To prevent double counting, vehicle location information alongside telematics data may be utilized to identify and exclude charging sessions that may have occurred at public charging stations. The reporting entity may use a minimum Geofencing Radius (GFR) of 110 meters. See Appendix A for rationale explaining recommended minimum and maximum geofencing radius.

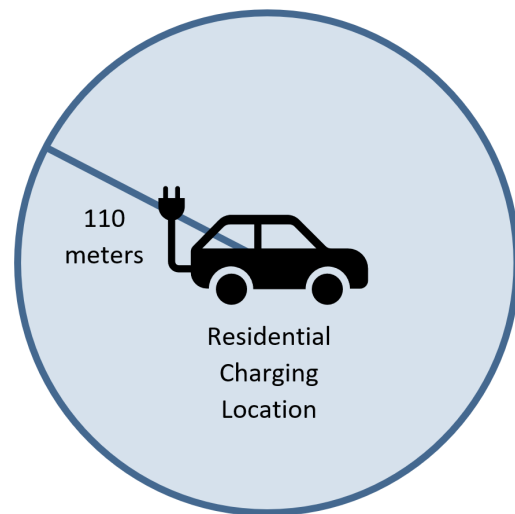


Any charging session recorded using telematics that occurs within the GFR of a nonresidential charging station that is registered under the CFS must be subtracted from the total charging measured by the vehicle telematics prior to reporting for residential incremental charging.

The list of FSE registered for non-residential EV charging will be made available each quarter on the [CFS Program Documents webpage](#).

Option 2: Geofencing Residential FSE

The reporting entity may geofence the residential location, where the EV charging will take place, with a maximum GFR of 110 meters. EV charging recorded within the permitted radius could be reported as residential EV charging.



Non-Residential FSE Locations

At the end of each quarter, Ecology will publish on the CFS website a list of all FSEs registered for non-residential EV charging in the CFS program along with the address, and latitude and longitude coordinates for each FSE. Reporting entities planning to use Option 1 under Method 2 above may use this list to identify the set of locations relevant for using geofencing methodologies to report EV charging.

2. Registering Fuel Supply Equipment

Prior to registering FSE, participants should review instructions on registering FSE for metered residential EV charging found in section 4.4.2 of the [Fuel Supply Equipment Registration User Guide](#). To register off-vehicle meters as FSE for residential EV charging, the following must be provided:

1. The name of the Original Equipment Manufacturer (OEM)
2. The serial number assigned to the charging equipment by the OEM
3. The Vehicle Identification Number (VIN) for the EV expected to be charged at the location

To register on-vehicle telemetry as the FSE for residential EV charging, the following must be provided:

1. The Vehicle Identification Number (VIN) for the EV expected to be charged at the location.

At the time of FSE registration, the entity planning to use vehicle telematics with geofencing for reporting in the CFS must provide a sample of charging data and accounting methods, based on geofencing, to demonstrate that the methodology sufficiently addresses and prevents double counting of non-residential charging. Ecology staff will work with reporting entities during FSE registration to confirm whether the geofencing methodology is anticipated to meet CFS reporting eligibility requirements. After an FSE is approved, any change in geofencing methodology should be sent to Ecology for review prior to the quarterly reporting deadline.

3. Reporting Electricity Consumption in WFRS

Charging data should be submitted through the correspondence tab in WFRS using the Residential Electricity Reporting Template. This data should be uploaded each quarter prior to the quarterly reporting deadline listed in WAC 173-424-410(1).

Ecology staff will work with reporting entities during FSE registration to confirm whether the geofencing methodology is anticipated to meet CFS reporting eligibility requirements. If on-vehicles telematics are used, an attestation of geofencing methods used must be written by the reporting entity and submitted along with the Residential Electricity Reporting Template.

Note: The deadline for submitting Q1, Q2, and Q3 2023 charging data is the Q4 reporting deadline, March 31st, 2024.

Residential Electricity Reporting Template

The reporting template includes multiple sheets. Both the *Quarterly_Report* sheet and the *Charging_Summary* sheet are required for each submission.

Quarterly_Report

The *Quarterly_Report* sheet is similar to the reporting template used for other quarterly data submissions in WFRS with two additional columns. Columns A-P should be completed according to the instructions available in section 5.3 of the [WFRS-CBTS User Guide](#). Columns Q and R are unique to residential incremental credits. Column Q indicates the utility service territory where the charging events took place. Column R indicates the method used to collect EV charging data.

Charging data must be reported per FSE with a certified fuel pathway code. A single FSE ID may require multiple entries if charging took place in multiple utility service territories.

Note: In order to report under the WAELECO02-R fuel pathway code, reporting parties must follow Ecology's guidance on [Retiring Renewable Energy Certificates](#) which includes submitting a lookup table fuel pathway application in the Alternative Fuels Portal (AFP).

Charging_Summary

The *Charging_Summary* sheet should be used to summarize the total metered kWhs reported in the *Quarterly_Report* sheet and aggregate them by utility service territory and fuel pathway code. Ecology will use this information to calculate incremental credits based on the difference between the utility specific carbon intensity and the carbon intensity of the fuel pathway code used to claim incremental credits.

4. Recordkeeping and Auditing

The reporting entity must maintain detailed records of EV charging events associated with each VIN as required under WAC 173-424-400(1)(e) of the Clean Fuels Program Rule. The reporting entity using vehicle telematics for reporting residential EV charging must be able to provide records to Ecology, upon request, demonstrating that the quantity of electricity reported for residential EV charging corresponds to residential EV charging only. All data and calculations submitted by a reporting entity for generating incremental credits are subject to inspection by Ecology and must be made available within 15 business days after the date Ecology requests a review of the records.

Contact

If you have questions regarding the above information, please email WFRSAdmin@ECY.WA.GOV

ADA Accessibility

To request an ADA accommodation, contact Ecology by phone at 360-407-6831 or email at ecyADAAccordinator@ecy.wa.gov, or visit <https://ecology.wa.gov/accessibility>. For Relay Service or TTY call 711 or 877-833-6341

Appendix A

Rationale for Minimum and Maximum Geofencing Radius

Most commercially available Global Positioning System (GPS) devices allow for accuracy readings within the 10 meter range. However, when line-of-sight with satellites is obstructed (for example, inside a parking garage), errors of 100 or more may occur¹². In the event that a vehicle does not have clear line-of-sight with satellites, additional measures for determining precise location will be necessary, or a less precise estimate of location will be required.

Given the uncertainty affiliated with precise estimates for vehicles where satellite signals may be reflected or blocked, Ecology is proposing a conservative estimate of 110 meters or greater for minimum-GFR to geofence non-residential charging locations. Similarly, Ecology is proposing a conservative estimate of 110 meters or less for the maximum GFR to geofence a residential charging location. Proposals for a reduced GFR will be considered if specific data or positioning methodology is provided.

¹ Lyu, Zhitao, and Yang Gao. "An SVM Based Weight Scheme for Improving Kinematic GNSS Positioning Accuracy with Low-Cost GNSS Receiver in Urban Environments." *Sensors*, vol. 20, no. 24, Jan. 2020, p. 7265. www.mdpi.com, <https://doi.org/10.3390/s20247265>.

² Gu, Yanlei, et al. "Passive Sensor Integration for Vehicle Self-Localization in Urban Traffic Environment." *Sensors*, vol. 15, no. 12, Dec. 2015, pp. 30199–220. www.mdpi.com, <https://doi.org/10.3390/s151229795>.