



Instructions for using Renewable Energy Certificates in the Clean Fuels Program

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This document provides instructions on how to use Renewable Energy Certificates in the Clean Fuels Program. The instructions cover how to generate incremental credits in quarterly reports and how the credits are considered in renewable electricity generators' fuel pathway applications.

Types of renewable electricity

The program rules identify electricity generated from solar, wind, some hydropower and ocean energy as having a carbon intensity value of zero. For the 2023 reporting period, use the fuel pathway code "ORREC2023" to report offsite renewable electricity use from those sources. The last four digits of the code represent the year this fuel pathway can be used. A new fuel pathway code is generated annually for the next reporting year, (e.g., ORREC2024 for the 2024 reporting year).

Electricity generated from other renewable sources requires a generator-specific fuel pathway obtained through the fuel pathway application process. The generator-specific fuel pathways may also be updated through the Annual Fuel Pathway Reporting process. Table 1 outlines the types of renewable electricity that have a zero carbon intensity and those that are required to go through an application process.

Table 1: Renewable electricity generator eligibility by fuel type

Type of renewable electricity	Carbon intensity (CI)
Solar	Deemed CI of Zero
Wind	Deemed CI of Zero
Hydropower (subject to certain conditions)	Deemed CI of Zero
Biomass	Generator-specific Fuel Pathway application
Biodiesel	Generator-specific Fuel Pathway application
Biogas	Generator-specific Fuel Pathway application
Fuel Cell	Generator-specific Fuel Pathway application
Ocean Energy	Deemed CI of Zero

*Geothermal is excluded from carbon intensities indicated in this table; it is not a zero CI renewable electricity source but is mistakenly indicated under OAR 340-253-0470(6)(a).

Eligibility requirements for RECs

- Certification through Green-e.** All RECs used in the program must have Green-e certification. This requirement ensures compliance with Green-e standards and prevents the double-counting of carbon attributes from renewable electricity. Annual Green-e certification guarantees that credits issued represent genuine carbon reduction, which helps meet the requirement under the program's statute that all credits must represent real reductions of carbon emissions. It is essential for renewable electricity generators and/or reporting entities to understand and stay updated on Green-e standards. Access the latest information at <https://www.green-e.org/programs/energy/documents>
- Vintage.** RECs must meet the Green-e standard's vintage requirement for use in a reporting year, which means it must be generated in that calendar year, or in the last six months of the prior year or the first three months of the following year, for a total of a 21-month eligibility window. For example, to use RECs for 2023 electricity reporting, the RECs must be generated between July 2022 – March 2024.
- Start date.** RECs must come from renewable electricity generators that started operating in or after January 2016. For biogas to electricity projects, they must have started within the last 14 years in line

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with the start date requirements of the Green-e standard. For example, in 2023, the project must have started operating in 2009 or after.

4. **Location.** RECs used in the program must come from electric generators located in the Western Electric Coordinating Council Region¹.
5. **Tracking System.** RECs used in the program must be recorded and retired in WREGIS².

What can Renewable Energy Certificates be used for?

In the program's 2021 rulemaking, DEQ added "incremental credits" to the program's existing "base credits" for electricity. **Base credits** are generated by comparing the CI of gasoline or diesel with the CI of grid electricity. **Incremental credits** are earned by further reducing the CI of electricity through the retirement of RECs. RECs can be retired by electricity credit generators when reporting renewable electricity used for non-residential and residential electric vehicle charging.

- **Non-residential charging** covers charging of electric vehicles including cars, trucks, transit vehicles, cargo handling equipment, forklifts, transport refrigeration units, ground service equipment, and vessel shorepower. Charging can take place in the public, at workplaces, at private fleet locations, or at multi-unit (more than four) dwellings. These credit generators can purchase and retire RECs to lower the carbon intensity of the electricity they provide to electric vehicles and generate incremental credits under the program's rules.
- **Residential charging** covers charging of electric vehicles at residences (four or less dwelling units). The electric utility generates the credits for that charging. The backstop aggregator and incremental aggregator are eligible to claim base and incremental credits, respectively, that an electric utility could have generated if it fails to register in the program or designate an aggregator. Utilities may: 1) retire RECs on behalf of their customers' EV charging, 2) they can demonstrate to DEQ that their customers have purchased a qualifying utility renewable electricity product, or 3) purchase bundled renewable electricity with its RECs to generate incremental credits.

Hydrogen fuel producers who employ electrolysis as a production technology are also allowed to retire RECs from offsite generation to lower the CI of their production process and resulting hydrogen fuel. There is a lookup table value for hydrogen produced via electrolysis in Oregon using solar and wind that the producer can apply to use. For all other types of production of hydrogen, including any other source of renewable electricity being used or out-of-state hydrogen production, the fuel producer must submit a Tier 2 fuel pathway application.

Instructions for electricity credit generators

When reporting non-residential charging in a quarterly report, the reporting party selects the appropriate renewable electricity fuel pathway code to report their charging use for the respective year (Table 1). For example, if you are using solar electricity in 2023, use the ORREC2023 fuel pathway code. If you are using renewable electricity from biogas, select the generator-specific fuel pathway code for that biogas-to-electricity generator.

As required by OAR 340-253-0640(2)(d), quarterly reports that include off-site renewable electricity must include the REC retirement records from WREGIS in both PDF and Excel formats uploaded in the supplemental documentation section of that report. The retired RECs must match the renewable electricity fuel pathway codes used in that report.

¹ For more information on WECC, please see: <https://www.wecc.org/epubs/StateOfTheInterconnection/Pages/Western-Interconnection.aspx>

² For more information on WREGIS, please see: <https://www.wecc.org/WREGIS/Pages/Default.aspx>

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On an annual basis, the reporting entity that retired RECs for its reporting must submit proof of completion of final verification or validation from Green-e for all the RECs it reported in the prior year to the program. Those verification or validation statements must be submitted to DEQ via an email to OregonCleanFuels@deq.oregon.gov. Failure to submit such proof is grounds for DEQ to invalidate any incremental credits issued to the entity under the procedures of OAR 340-253-0670.

For utilities generating incremental credits from residential charging, RECs should be retired in the same way they are required for quarterly reports, detailed above. Because residential credit generation is done outside of the quarterly reports, DEQ will inform the utility of the amount of charging that occurred in their service territory on a biannual basis and REC retirement reports be submitted via email to OregonCleanFuels@deq.oregon.gov. These RECs must also be certified through Green-e and proof of completion must be emailed to DEQ.

Retiring RECs through the Western Renewable Energy Generation Information System

Registered parties should follow the instructions in this guidance to document their REC retirements. The only REC tracking system currently recognized by DEQ is the WREGIS. DEQ is not considering approving another REC tracking system at this time.

In WREGIS, RECs must be placed into a retirement subaccount named for the fuel pathway code you use to claim in the program. So, if the retiring of RECs to claim zero-carbon electricity is used under ORREC2023, use the title of the subaccount with that fuel pathway code. If the retiring of RECs in WREGIS before the CFP is added as a retirement reason under “Other Regulatory Program,” select the “Other Retirement Reason” and record the field provided by WREGIS, the name of the program, the fuel pathway code, and the quarter for which the REC is being retired for. For example: “Oregon CFP ORREC2021 Q1 2023.”

If there is a separate entity purchase and retire RECs on your behalf, they must provide you with REC retirement reports from WREGIS where they have:

- Created a retirement subaccount with the organization’s name as it appears in the Oregon Fuels Reporting System and the fuel pathway codes the RECs are being retired to claim.
- For example, ABCCorp_ORREC2023 followed the retirement instructions above.

After the RECs are retired and reflected in a quarterly report, use the upload supplemental documentation feature for that quarterly report to upload both the PDF and Excel copies of the WREGIS retirement report into the OFRS.

Failure to submit REC retirement records with the quarterly reports where incremental credits are claimed, is grounds for DEQ finding those credits invalid, and removing those incremental credits from the respective account under OAR 340-253-0670.

Instructions for renewable electricity generators

For electricity fuel pathways subject to a fuel pathway application for the electric generator, the fuel producer is responsible for the following:

- The fuel producer or pathway holder is responsible for informing any fuel reporting entities using RECs from this generator of the amount that can be claimed under each fuel pathway code assigned to a generator from each given month if the generator has multiple fuel pathway codes.
- The efficiency of the electric generating station must be determined based on operating records that demonstrate the net amount of electricity produced during the previous 24 months of operating data compared to the net quantity of fuel consumed by the electricity generating assets owned and operated by the producer during the same period unless a provisional pathway.
- For the fuel pathway application: The amount of electricity must be calculated using the electric generator’s energy efficiency as reported in the fuel pathway application or annual report, whichever is the most current.

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- The fuel producer or pathway holder must calculate a user-defined Emissions Factor (EF) for electricity generation (gCO₂e/kWh), which must be based upon the efficiency of electric generating assets, the quantities of fuel consumed, and the emissions factors for CH₄, N₂O, CO, and VOC emissions (g/MMBtu of fuel input) using the appropriate Global Warming Potential values (for converting to CO₂ equivalent values) from the DEQ OR-GREET 3.0 model. The applicant must use this EF to determine the GHG impacts of electricity acquired and consumed by the producer.
- The source, type, and quantity of fuel consumed annually, and the type of electricity-producing equipment used by the producer to generate electricity, are subject to annual verification by a Verification Body if a third party must verify the pathway under OAR 340-272.
- The quantity of electricity produced annually, and the quantity exported by the producer are also subject to annual verification by the Verification Body.
- The information requested above must be included in the Annual Fuel Pathway Report and separate tabs of the Tier 1 Simplified CI Calculator worksheet presented to the Verification Body. A fuel producer is subject to verification if its fuel pathway codes generate more than 6,000 credits and deficits annually.
- If the renewable electricity, biomethane, or other qualifying sources of low-CI inputs is owned by another party, the unredacted contract and unredacted invoices by which the fuel pathway holder obtained those environmental attributes must be provided.

Instructions for hydrogen fuel producers employing renewable electricity for hydrolysis

- For any renewable electricity, including an on-site or directly connected generator, that is used to reduce the CI of electricity used as a fuel or hydrogen production via electrolysis where that hydrogen was used as a fuel, the fuel pathway holder must upload records demonstrating that the electricity used was renewable. If the renewable electricity generation is on the same site and directly connected to the hydrogen production facility, and no RECs were generated, the producer may provide an affidavit and proof that the electricity generation is not registered in a REC tracking system. If any RECs were generated, they must be retired in WREGIS or another comparable, recognized REC tracking system to lower the certified CI.
- (If applicable) If renewable electricity supplied through RECs is used for process energy for hydrogen production where the hydrogen is being used as a fuel, the retirement report demonstrating REC retirement must be downloaded from WREGIS and uploaded to the AFP as part of each Annual Fuel Pathway Report to demonstrate the quantity of renewable electricity consumed within the fuel pathway and claimed to lower the CI of the produced fuel.
 - Note that this retirement account for process energy is distinct from, and in addition to, the requirement for any fuel reporting entity claiming electricity directly as a transportation fuel in the OFRS under this pathway to demonstrate quarterly REC retirement as part of each quarterly report.
 - This REC retirement is not applicable if the pathway holder can demonstrate the low CI electricity used as process energy generated no RECs during the entire reporting period. In those cases, the responsible party must provide an attestation letter in the annual fuel pathway report stating that the energy consumed behind the meter or interconnection to the outside grid does not and will never generate RECs in any renewable electricity tracking system. The RECs and/or the associated environmental attributes for energy reported as process energy in a fuel pathway can no longer be sold, transferred, or claimed by any entity or for any other purpose.

Special eligibility issues for California and Washington-sited projects

Because of the Cap-and-Trade programs in effect in California and Washington and of the way the Oregon calculates emissions obligations for the electric sector, there are additional steps that RECs from renewable

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electricity generators in both jurisdictions need to take for their RECs to be certified by Green-e and to be eligible for use in the in the program.

Under the Green-e standard³, all California-sited renewable electricity generators and Washington-sited generators that started operation after Jan. 1, 2020, have to retire allowances against any renewable electricity claims made outside of those states. This requirement also covers renewable electricity generators whose electricity is directly delivered into California or Washington. This requirement, set by Green-e, maintains the environmental integrity of RECs and the validity of carbon reductions claimed in the program.

While the California Cap-and-Trade Program has a Voluntary Renewable Electricity Program that retires allowances on behalf of voluntary renewable electricity claims, it is restricted to only voluntary uses of renewable electricity and the CFP is considered by California and Oregon to be a mandatory program. For California, the number of allowances that must be retired is calculated by multiplying the number of MWh of renewable electricity being claimed by 0.428mt/MWh, as provided in the Green-e Standard, and then rounding up to the nearest whole metric ton. The retirement records for the allowances must be provided to Green-e during the annual certification of the RECs that were claimed in the program.

The same process must be followed for Washington except the number of allowances is calculated by multiplying the number of MWh of renewable electricity being claimed by 0.427mt/MWh, as provided in the Green-e Standard.

For additional information contact OregonCleanFuels@deq.oregon.gov.

Non-discrimination statement

DEQ does not discriminate on the basis of race, color, national origin, disability, age, or sex in the administration of its programs or activities. Visit DEQ's [Civil Rights and Environmental Justice page](#).

³ See pages 34-39 for California and pages 42-43 for Washington in the standard here: <https://www.green-e.org/docs/energy/Green-e%20Standard%20US.pdf>

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