

**WAC 173-424-600 Carbon intensities.** (1) **WA-GREET.** Carbon intensities for fuels must be calculated using:

(a) WA-GREET 3.0 (November 28, 2022) or another model that ecology determines to be equivalent or superior to WA-GREET 3.0. WA-GREET 3.0 was derived from CA-GREET 3.0 model (August 13, 2018), and is posted on ecology's website <https://www.ecology.wa.gov>. CA-GREET 3.0 includes contributions from the oil production greenhouse gas estimator (OPGEE2.0) model (for emissions from crude extraction) and global trade analysis project (GTAP-BIO) model together with the agro-ecological zone emissions factor (AEZ-EF) model for land use change (LUC).

(b) If a reporting entity wishes to use a modified or different life cycle carbon intensity model, it must be approved by ecology in advance of an application under WAC 173-424-610.

(2) **Ecology review of carbon intensities.** Every three years, or sooner if ecology determines that new information becomes available that warrants an earlier review, ecology will review the carbon intensities used in the CFP and must consider, at a minimum, changes to:

(a) The sources of crude and associated factors that affect emissions such as flaring rates, extraction technologies, capture of fugitive emissions, and energy sources;

(b) The sources of natural gas and associated factors that affect emissions such as extraction technologies, capture of fugitive emissions, and energy sources;

(c) Fuel economy standards and energy economy ratios;

(d) Methods to calculate lifecycle greenhouse gas emissions of transportation fuels including changes in:

(i) GREET, WA-GREET, CA-GREET; or

(ii) Methods to quantify indirect land use change including CCLUB; or

(iii) Methods to quantify other indirect effects.

(3) **Established carbon intensities.**

(a) Regulated parties, credit generators, and aggregators must use the statewide average carbon intensities listed in Table 6 under WAC 173-424-900 for the following fuels:

(i) Clear gasoline or the gasoline blendstock of a blended gasoline fuel;

(ii) Clear diesel or the diesel blendstock of a blended diesel fuel;

(iii) Fossil CNG;

(iv) Fossil LNG; and

(v) Fossil LPG.

(b) A hydrogen supplier may apply to use the applicable CI value in Table 6 under WAC 173-424-900, or apply for a specific carbon intensity under WAC 173-424-610.

(c) For electricity suppliers:

(i) The utility-specific electricity carbon intensity is calculated annually under WAC 173-424-630 and posted on ecology's website.

(ii) Credit generators or aggregators may use a carbon intensity different from the utility-specific average under (c)(i) of this subsection if the party generates lower carbon electricity at the same location as it is dispensed into a motor vehicle consistent with the conditions of the approved fuel pathway code under WAC 173-424-630(3).

(4) **Carbon intensities for established fuel pathways.** Except as provided in subsection (3) of this section, regulated parties, credit generators, and aggregators can use a carbon intensity that CARB or OR-DEQ certified for use in the California LCFS or Oregon CFP programs provided that:

(a) The carbon intensity value for the fuel pathway is adjusted for consistency with WA-GREET 3.0 including the adjustment for fuel transportation distances and indirect land use change, as applicable. The adjusted carbon intensity for the established fuel pathway can be used after ecology has reviewed and approved it for consistency with WA-GREET; or

(b) Matches the description of a fuel pathway listed in Table 6 under WAC 173-424-900. For hydrogen produced using biomethane or renewable electricity, the producer of the hydrogen must:

(i) Demonstrate to ecology that the carbon intensity value in Table 6 is appropriate for its production facility; and

(ii) Submit retirement records from an electronic tracking system recognized by ecology on an annual basis that the renewable electricity and biomethane attributes, as applicable, were not claimed in any other program except for the federal RFS and Climate Commitment Act (chapter 173-446 WAC). Any such claims under the federal RFS or the Climate Commitment Act must be made for the same use and volume of biomethane or its derivatives as it is being claimed for in the CFP, or the claim under the CFP is invalid.

(5) **Primary alternative fuel pathway classifications.** If it is not possible to identify an applicable carbon intensity under either subsection (3) or (4) of this section, then the regulated party, credit generator, or aggregator has the option to develop its own fuel pathway and apply for it to be certified under WAC 173-424-610. Fuel pathway applications fall into one of two tiers:

(a) **Tier 1.** Conventionally-produced alternative fuels of a type that have been well-evaluated. Tier 1 fuels include:

(i) Starch-based and sugar-based ethanol;

(ii) Biodiesel produced from conventional feedstocks (plant oils, tallow, and related animal wastes and used cooking oil);

(iii) Renewable diesel produced from conventional feedstocks (plant oils, tallow, and related animal wastes and used cooking oil);

(iv) Natural gas; and

(v) Biomethane from landfills; anaerobic digestion of dairy and swine manure or wastewater sludge; and food, vegetative, or other organic waste.

(b) **Tier 2.** Except CARB or OR-DEQ certified fuel pathways as provided in subsection (4) of this section, ecology will start accepting Tier 2 applications no later than October 1, 2024, and only after providing a 30 calendar day advance notice. Low carbon fuel production facilities with already-certified fuel pathways may also use it temporarily for the production capacity expanded facility. Tier 2 includes all fuels not included in Tier 1 including, but not limited to:

(i) Cellulosic alcohols;

(ii) Biomethane from other sources;

(iii) Hydrogen;

(iv) Renewable hydrocarbons other than renewable diesel produced from conventional feedstocks;

(v) Biogenic feedstocks co-processed at a petroleum refinery;

(vi) Alternative jet fuel;

(vii) Renewable propane; and

(viii) Tier 1 fuels using innovative methods including, but not limited to, carbon capture and sequestration or a process that cannot be accurately modeled using the simplified calculators.

(6) **Specified source feedstocks.** Except as specified in subsection (4) of this section, fuels that are produced from a specified source feedstock may be eligible for a reduced carbon intensity value

when applying under WAC 173-424-610 so long as they meet all of the following requirements:

(a) Specified source feedstocks are nonprimary products of commercial or industrial processes for food, fuel, or other consumer products and include, but are not limited to, used cooking oil, animal fats, fish oil, yellow grease, distiller's corn oil, distiller's sorghum oil, brown grease, and other fats, oils, and greases;

(b) The specified source feedstocks are used in pathways for bio-diesel; renewable diesel; alternative jet fuel; co-processed refinery products; biomethane supplied using book-and-claim accounting and claimed as a feedstock for CNG, LNG, L-CNG, or hydrogen produced using steam-methane reformation;

(c) Under WAC 173-424-610 (9)(d), any feedstock can be designated as a specified source feedstock if requested by a supplier using site-specific carbon intensity data or if it is specified in a pathway approval condition; and

(d) Chain-of-custody evidence must be used to demonstrate the proper characterization and accuracy of the quantity of the specified source feedstocks going into a fuel production facility or claimed as biomethane, subject to all of the following provisions:

(i) Chain-of-custody evidence must be provided to the verifier and to ecology upon request;

(ii) Joint applicants may assume responsibility for different portions of the chain-of-custody evidence;

(iii) Fuel pathway applicants using specified source feedstocks must maintain either:

(A) Delivery records that show shipments of feedstock type and quantity directly from the point of origin to the fuel production facility; or

(B) Information from material balance or energy balance systems that control and record the assignment of input characteristics to output quantities at relevant points along the feedstock supply chain between the point of origin and the fuel production facility;

(e) In order to maintain the pathway, the fuel production and any joint applicant must meet the following requirements:

(i) Maintain records of the type and quantity of feedstock obtained from each supplier, including feedstock transaction records, feedstock transfer documents pursuant to (f) of this subsection, weighbridge tickets, bills of lading or other documentation for all incoming and outgoing feedstocks;

(ii) Maintain records used for material balance and energy balance calculations; and

(iii) Ensure ecology staff and verifier access to audit feedstock suppliers to demonstrate proper accounting of attributes and conformance with certified CI data; and

(f) A feedstock transfer document for specified source feedstocks must prominently state the following information:

(i) Transferor company name, address, and contact information;

(ii) Recipient company name, address, and contact information;

(iii) Type and amount of feedstock, including units; and

(iv) Transaction date.

(7) The carbon intensity value certified under WAC 173-424-610, including any margin of safety requested by the fuel producer, is the maximum carbon intensity value that can be claimed for a fuel reported in the CFP. The actual operational carbon intensity of a fuel will be calculated from the most recent production data covering 24 months of the fuel production facility's operation. A fuel pathway applicant may

add a conservative margin of safety, of a magnitude determined by the applicant, to increase the certified CI above the operational CI calculated based on the data submitted in the initial fuel pathway application, to account for potential process variability and diminish the risk of noncompliance with the certified CI. Registered parties shall not report fuel sales under any CFP carbon intensity unless the actual operational carbon intensity is equal to or less than the certified CI.

(8) Fuel producers labeling fuel sold in Washington with a carbon intensity under the CFP and registered entities using those labeled carbon intensities to report in the WFRS, must ensure that the fuel so labeled and reported will be found to have an actual operational life-cycle carbon intensity equal to or below its certified carbon intensity.

(9) Fuel pathways for 2023 and 2024. A registered entity that supplies a fuel to Washington state and has an active fuel pathway approved by CARB or OR-DEQ:

(a) May use the fuel pathway temporarily to participate in the CFS program until ecology approves the fuel pathway under this chapter. The fuel pathway holder may also use a CARB or DEQ approved fuel pathway temporarily for a facility that has undergone capacity expansion, provided that the fuel pathway holder demonstrates that the expected carbon intensity of the expanded capacity fuel pathway does not exceed the CARB or OR-DEQ approved CI based on the energy sources, feedstocks, process technology, product and co-products mix, etc. of the expanded production facility.

(b) Must submit the revised fuel pathway application by April 30, 2023, according to WAC 173-424-610, if the entity plans to participate in the program in 2023.

(c) Must submit the 2023 temporary annual compliance reports using the CARB or OR-DEQ approved fuel pathway, unless ecology approves the revised fuel pathway before December 31, 2023, according to WAC 173-424-430. The registered entity must submit the 2023 revised annual compliance report together with the 2024 annual compliance report using an ecology-approved fuel pathway carbon intensity.

(d) Must use an ecology-approved fuel pathway to participate in the program in the next quarter after ecology approves it.

[Statutory Authority: Chapter 70A.535 RCW. WSR 22-24-004 (Order 21-04), § 173-424-600, filed 11/28/22, effective 12/29/22.]