



Low Carbon Fuel Standard

Enabling low carbon transportation solutions and the transition to widespread adoption and use of sustainable low carbon energy.

Electricity supply effective January 1, 2022



B.C. Low Carbon Fuel Standard (LCFS)

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*Greenhouse Gas Reduction
(Renewable and Low Carbon Fuel Requirements) Act*

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Renewable and Low Carbon Fuel Requirements Regulation

The Act and Regulation can be viewed online at <http://bclaws.ca>

Supporting information for stakeholders is available online at <http://gov.bc.ca/lowcarbonfuels>



Part 3 Fuels

- Part 3 fuels include petroleum-based gasoline and diesel fuel and products that can be blended with these fuels, such as biodiesel and ethanol
- Part 3 fuels may also include natural gas, propane, **electricity**, and hydrogen, but only when used in transportation to displace diesel or gasoline
- Electricity has uses in addition to transportation and can only be identified as a Part 3 fuel when it is supplied through a charging station or other equipment that is the final supply equipment (FSE)



Part 3 Fuel supplier and reporting requirements for electricity as of January 1, 2022

The supplier for electricity will be the person who provides the electricity through the Final Supply Equipment, with the exception that the utility is considered the supplier in the following situations:

- Vehicle charging at a residential building that includes fewer than five (5) dwelling units,
- Translink trains that were in operation on December 31, 2020, and
- Electric trolley buses that were in operation on December 31, 2020



Decision Tree

to help determine if
you are a fuel
supplier

Is the electricity provided through the final supply equipment metered or can the quantity be estimated to reasonable accuracy?

Yes

No

No-one reports

Does the FSE service a residential building that includes fewer than five dwelling units?

No

Yes

The utility reports

Does the FSE service a Translink tethered or fixed guideway transit?

No

Yes

Was the transit route in operation before January 1, 2021?

No

Yes

The transit operator reports

The utility reports

The person who provides the electricity through the FSE reports



Part 3 Fuel Compliance

- Carbon intensity limits are prescribed in the regulation for each fuel class, which reduce annually toward the 20% 2030 reduction target
- Part 3 credits or debits represent the difference between the carbon intensity of a given transportation fuel and the current low carbon fuel requirements for that fuel class
- Fuel suppliers receive **debits** for fuels with a **higher** carbon intensity than the current limit
- Fuel suppliers accrue **credits** for fuels with a **lower** carbon intensity than the current limit



Credit Calculation

Credit or Debit =

$$\frac{(CI \text{ class limit} * EER \text{ fuel} - CI \text{ fuel}) * EC \text{ fuel}}{1,000,000}$$

Where:

Credit = tonnes of lifecycle CO₂ reduced relative to the CI class limit

CI class limit = prescribed CI limit for the fuel class for the compliance period (gCO₂e/MJ)

EER fuel = energy effectiveness ratio for the supplied fuel

CI fuel = carbon intensity of the fuel supplied

EC fuel = energy content of the fuel (energy density of the supplied fuel * total fuel supplied)



Credit Calculation - Example

- Quantity of fuel supplied in 2022: 20,000 kWh (8 to 10 vehicles)
- CI Class for Gasoline Class Fuel for 2022: 78.20 g CO₂e/MJ
- EER Fuel for Electricity: 3.4
- CI Fuel for Electricity: 19.73 g CO₂e/MJ
- Energy Density for Electricity: 3.6 MJ/kWh
- Energy Content Fuel: Energy Density x Quantity of the Fuel= 72,000 MJ

- Credit or debit for 20,000 kWh =
(78.20 g CO₂e/MJ x 3.4 – 19.73 g CO₂e/MJ) x 72,000 MJ/1,000,000
- Credits for 20,000 kWh = 17.7228 (rounds to 18)
- Average credit price (Nov 2021): \$465.00
- Estimated value of credits: \$8370



Part 3 Fuel Compliance

- Each compliance period is the calendar year from January 1 to December 31
- Compliance reports are due on March 31 following each compliance period
- At the end of each compliance period, suppliers must have a balance of zero or more credits to avoid non-compliance penalties.
- If a supplier has a credit balance at the end of a compliance period, they can retain those credits for use in later years or trade credits with other fuel suppliers
- Before the credits can be traded or banked for later use, they must be validated by the statutory Director, which is done through the submission of a Compliance Report via the Transportation Fuels Reporting System (TFRS)



Transportation Fuels Reporting System (TFRS)

- Used for Compliance Reporting and File Submissions
- Shows a fuel supplier's compliance standing
 - Credit balance
 - History of past credit transactions
- Used for credit trading
 - Transfer credits between fuel suppliers
 - In 2021, there were 85 transfers totaling over 245 million dollars



How to Report

1. Sign up for a TFRS account

- Instructions available on the TFRS page of the LCFS website
- A business BCeID is required to create an account for TFRS
- When signing up for a business BCeID account, Strata Corporations select “other” for the type of business and a Service Analyst will follow up to complete the sign-up process

2. Register your Final Supply Equipment (FSE)

- To register FSE, download and complete the Final Supply Equipment Registration form on the Electricity page of the LCFS website
- Coordinates of the FSE location are required to complete the registration form



Third-party Representation

- Suppliers may appoint an agent to act on behalf of the supplier in dealings with the Ministry
- Submit the Representation Agreement Form found on the Credit Market page of our website to lcfs@gov.bc.ca to inform the Ministry of the agreement between the agent and the supplier



Credit Market

- Credit market reports are published to our website monthly and quarterly
- Reports include information on the number of credit transfers, volume of credits transferred, and credit prices
- The quarterly report also includes a summary of credits generated and debits incurred in each compliance year
- Information Bulletin RLCF-013 on the LCFS website includes fuel suppliers' contacts for credit transfers



QUESTIONS?

Email: lcfs@gov.bc.ca

Website: gov.bc.ca/lowcarbonfuels