	<b>Ministry of Energy and Climate Solutions</b>  <i>Issued: December 2010</i> <i>Revised: February 2025</i>	Low Carbon Fuels Act  <b>Carbon Intensity Records</b>  <b>Information Bulletin RLCF-006</b>
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## 1. Background

The Low Carbon Fuels Act (LCFA), Low Carbon Fuels (General) Regulation (LCFGR) and Low Carbon Fuels (Technical) Regulation (LCFTR), set requirements for those that market fuel in British Columbia (BC). A person who markets fuel in BC is described in Section 6 of the LCFA. In this document the term ‘supplier’ and ‘fuel supplier’ means a person who markets fuel as per Section 6 of the LCFA.

Section 18 of the LCFA establishes the concept of a “Carbon Intensity Record” (CI Record) and sets out how to determine the carbon intensity (CI) of the fuel. Section 21, 22 and 23 of the LCFGR outline when a CI Record is required, and what information is needed within the CI Record.


The purpose of this bulletin is to assist fuel suppliers in determining when a CI Record is required, and in creating a CI Record.

## 2. Carbon Intensity

Carbon intensity is the measure of greenhouse gas (GHG) emissions associated with extracting, producing, transporting and using a fuel. It is measured in grams of carbon dioxide equivalent per megajoule of energy (gCO<sub>2</sub>e/MJ) and is determined using a life cycle assessment (LCA).


The International Organization for Standardization (ISO) standards 14040 and 14044 have established a framework for conducting life cycle assessments which can be applied to transportation fuels. This framework forms the basis of the determination of carbon intensities for the purposes of the Regulations.

The LCFTR defines the fuel life cycle as consisting of several stages, each of which has associated GHG emissions, as shown in LCFTR Schedule 3 and in Table 1, below. The carbon intensity of a fuel is the sum of the carbon intensity of each of the stages. The details that describe each stage for a specific fuel are collectively referred to as the “pathway” for that fuel.

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**Table 1: GHG life cycle stages for fuels**

Stages	Description
1 Direct land use change	The activities and processes associated with changing the use of land from another use to: (a) feedstock production or recovery, (b) fuel production, (c) roads for access to feedstock or an energy source, (d) feedstock exploration activities, or (e) pipelines, transmission lines or other means of transporting feedstock or fuel
2 Feedstock production	The activities and processes associated with producing feedstock, including, without limitation: (a) land cultivation, (b) soil organic carbon changes from land management, (c) fertilizer production and use, (d) harvesting, and (e) processing, handling and storage that occurs before transporting the feedstock for upgrading or to a fuel production facility
3 Feedstock upgrading	The activities and processes associated with upgrading feedstocks from raw material to a material suitable for fuel production
4 Feedstock transport	Activities and processes associated with transporting feedstocks from the location of production to an upgrading facility or to a fuel production facility
5 Feedstock co-products production	The activities and processes associated with producing products other than the feedstock during feedstock production or upgrading activities
6 Fuel production	The activities and processes associated with producing fuel at a fuel production facility
7 Fuel co-products production	The activities and processes associated with producing products other than the fuel during fuel production
8 Fuel storage and distribution	The activities and processes associated with storing, handling and transporting fuel from the fuel production facility to and at the fuelling station
9 Fuel dispensing	The activities and processes associated with dispensing the fuel at a fueling station
10 End use of fuel	The end use of the fuel

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Fuel suppliers should be aware of the following:

- The carbon intensity referred to in the Regulations does not account for drive train efficiencies or additional emissions from end use. These adjustments are calculated in section 13 (3) of the LCFA using the energy effectiveness ratio (EER) and the additional carbon intensity attributable to end use (UCI). Values for EER and UCI are prescribed in Schedule 2 of the LCFTR.
- Because the fuel user's vehicle is not normally known to fuel suppliers, fleet average emissions are used for the "end use of fuel" (stage 10).
- Emissions attributed to vehicle fabrication and transport are not included in the carbon intensity of a fuel. The carbon intensity reflects emissions associated with the fuel and not the vehicle.
- Emissions associated with the construction of fuel production facilities are considered insignificant and treated as zero.
- Effects related to indirect land use change are not included in the Regulations.

### 3. Carbon Intensity Records

A CI Record is a document used to confirm the CI of a fuel. For fuels manufactured or imported in BC, a CI Record is required for Type A fuels (except for base fuels and fossil derived components of base fuels), and Type B fuels with a published CI (Including Proxy CI and Approved CI). See [RCLF-024: Proxy Carbon Intensities](#) and [RCLF-012: Approved Carbon Intensities – Current](#), for more information. When a fuel requiring a CI Record is supplied to another person in BC, a copy of the CI Record must also be provided.

In accordance with Section 18 of the LCFA and Section 23 of the LCFGR, a Carbon Intensity Record must include:

1. The date the CI Record is prepared
2. If applicable, fuel code and published carbon intensity for the fuel as it stood on the date the record was prepared
3. The LCFA provision used to determine the CI of the fuel:
  - a. Section 19(a) - Prescribed Carbon Intensity
  - b. Section 19(b)(i) - Published Carbon Intensity
  - c. Section 19(b)(ii) - Default Carbon Intensity
4. A description identifying the fuel, as set out by the Director, at the time the record is prepared. See 'System for Categorizing or Describing Fuels' section in [RLCF-016: Fuel Identification Requirements](#) for additional information.


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Table 2 summarizes when a CI Record is required, and what information it must contain.

**Table 2: CI Record requirements for fuels manufactured or imported in BC**


Fuel	CI Record Required?	Information Required in CI Record
Base fuel Fossil-derived component of a base fuel	No	N/A
Type A fuel	Yes	<ul style="list-style-type: none"> <li>• Date of CI Record</li> <li>• Published CI and fuel code, if any</li> <li>• LCFA Provision used to determine the CI</li> <li>• Description identifying the fuel</li> </ul>
Type B Fuel with a published CI	Yes	<ul style="list-style-type: none"> <li>• Date of CI Record</li> <li>• Published CI and fuel code, if any</li> <li>• LCFA Provision used to determine the CI</li> <li>• Description identifying the fuel</li> </ul>
Type B Fuel without a published CI	No	N/A

CI Records must be kept for six years after the end of the compliance period to which they pertain to comply with section 35 (2) (a) of the LCFA.

## 4. Revisions to CI Records for published CIs

In certain situations, the CI listed on a CI Record may not match the published CI value for the CI Record date. In such cases, the record holder may choose to rely on the record or revise the CI Record to show the published CI for the record date. To revise the record, the following must be indicated on the record:

- The date of the revision
- The fuel code, if any, for the published carbon intensity
- The fuel code, if any, that previously applied to the fuel
- The person who holds the record when the revision is made

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### Need more information?

Please visit the Renewable & Low Carbon Fuels website or email the Low Carbon Fuels Branch at [lcfs@gov.bc.ca](mailto:lcfs@gov.bc.ca).

This information is for your convenience and guidance only and does not constitute legal interpretation of the legislation. The Low Carbon Fuels Act, Low Carbon Fuels (General) Regulation and Low Carbon Fuels (Technical) Regulation are accessible at: <http://www.bclaws.ca>.