

CleanBC Industrial Incentive Program

Chemicals Sector Guidance

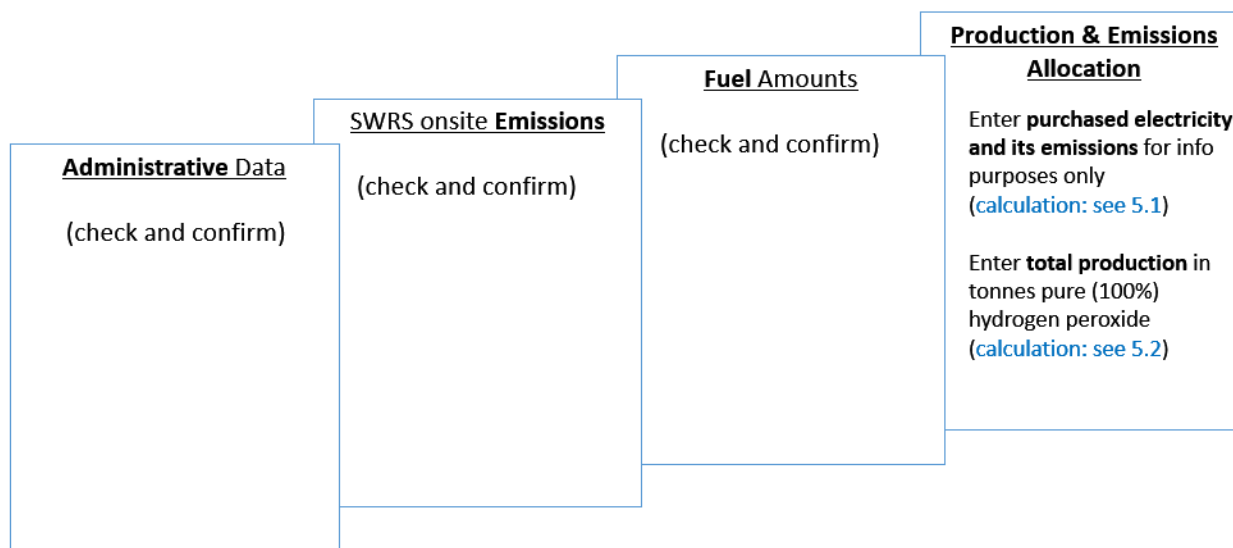
1. Applicable NAICS codes:

- **NAICS – 325189: All Other Basic Inorganic Chemical Manufacturing**

Sub-Sector	CIIP Product
Hydrogen Peroxide Production	Chemicals: Pure hydrogen peroxide

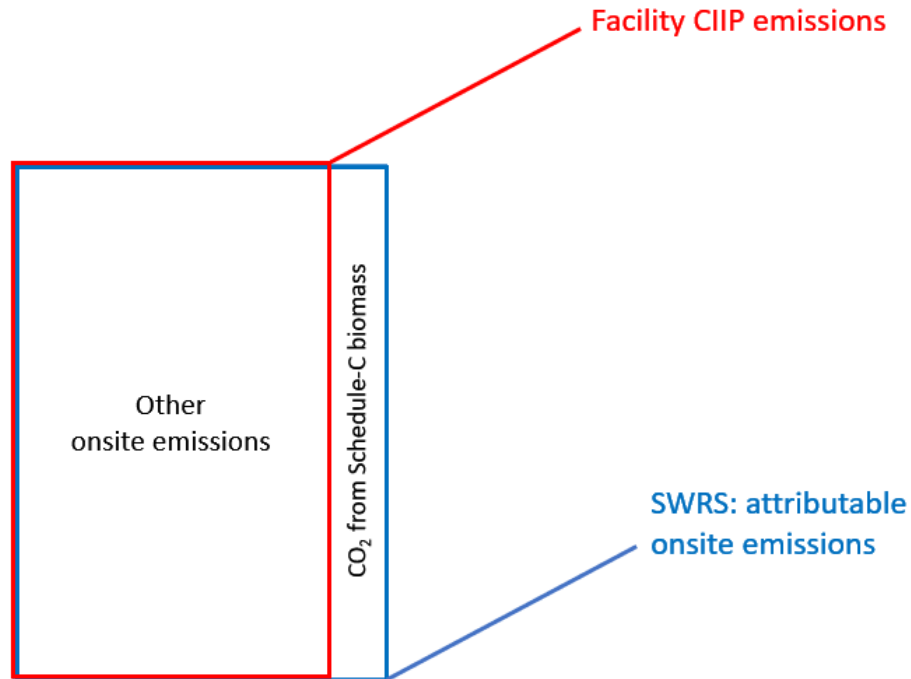
2. Quick Summary – Main Steps in CIIP application

- 2.1 Complete and submit a facility emission report in the Single Window Reporting System (SWRS)
- 2.2 Complete and submit a CIIP application (it is pre-filled with SWRS data where applicable)



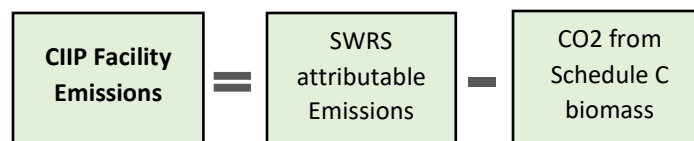
([calculation](#)) steps are detailed in section **5. Calculation Methodologies** below.

3. Facility Emissions for CIIP purposes



For the Facility emission total for CIIP purposes:

- Facility onsite emissions CO₂ from Schedule C biomass are excluded



Or, equivalently,

$$E_{Facility}^{CIIP} = E_{Attr.}^{SWRS} - E_{CO2bioC}^{SWRS}$$

Facility onsite emissions are pre-filled in the CIIP application with data submitted through the SWRS system.

4. Completing a CIIP Application

The CIIP application has four sections. Where possible, the *Administrative*, *SWRS Onsite Emissions* and *Fuels* sections are pre-populated with data reported through the SWRS system. Applicants must review, confirm, and, if applicable, update this information and also enter production and emissions allocation information in the *Production and Emissions Allocation* section.

Administrative Data

Most information in the administrative section will be pre-populated from SWRS.

- Review pre-populated data for accuracy
- Enter the BC Corporate Registry number as it appears on orgbook.gov.bc.ca

NOTE: The BC Corporate Registry number and the operator's legal name on the CIIP application must match the entry on [OrgBook](https://orgbook.gov.bc.ca). The incentive payment will be issued to the legal business name as it appears on the CIIP application.

- Please ensure all mailing addresses follow the [Canada Post address format](#)
- Enter at least one application contact. The Primary Application Contact field will be pre-populated based on the user who starts an application; please confirm or edit as applicable. This will be the primary contact CAS will use for all application-related correspondence: questions, application status changes, review results, etc. A Secondary Application Contact can be added, if applicable. Please note that automated system messages such as application status updates will only be sent to the primary contact.
- Choose the primary NAICS code that the facility operates under from the available list. The NAICS codes in the pre-populated list reflect the sectors eligible to apply for CIIP. You will not be able to enter a NAICS code that is not on the list. The production information required to be entered in the *Production and Emissions Allocation* section will depend on the NAICS code selection

If you believe your facility's sector is eligible but your NAICS code is not on the list, please contact the CIIP team at GHGRegulator@gov.bc.ca.

SWRS Onsite Emissions

This section is pre-filled with data from the facility's SWRS report. Please review and confirm. If the information needs updating, this likely means that the SWRS report has to be updated first.

Fuels

This section is pre-filled with data from the facility's SWRS report. Please review and confirm. If the information needs updating, this likely means that the SWRS report has to be updated first.

Production & Emissions Allocation

NOTE: The ministry provides a calculator spreadsheet with the appropriate calculation formulas built in, to assist in calculations at this step of the CIIP application process (available [at this link](#)).

To enter data as required in this section, first select 'Offsite Emissions: Purchased Electricity', then 'Chemicals: Pure hydrogen peroxide', as applicable, from the 'Product or Service' dropdown menu.

NOTE: Facility offsite emissions associated with purchased electricity must be calculated from electricity amount purchased and are required for information purposes only. These emissions do not count towards a facility's emission total for CIIP purposes (see section 3. above).

Allocating CIIP Facility emissions

CIIP facility emissions, calculated as shown in section 3, are automatically allocated to '**Chemicals: Pure hydrogen peroxide**'.

Select '**Offsite Emissions: Purchased Electricity**'

- Enter purchased electricity (in GWh). Enter 0 if not applicable.
- Calculate and enter the emissions associated with purchased electricity:
 - multiply the amount of purchased electricity by the published [grid electricity emission intensity](#) for the year, or
 - if preferred, use the calculator (see section 5.1 below for details)

Select '**Chemicals: Pure hydrogen peroxide**'

- Calculate and enter hydrogen peroxide production in tonnes of pure (100%) hydrogen peroxide, using the calculator (see section 5.2 below for details)

Summary

Review your application for accuracy, review the terms and conditions, and submit the application.

The system will automatically perform some checks for consistency. If inconsistencies are found, the application will show a warning message, highlighting the issue requiring attention. To address any highlighted inconsistencies, you must go back to the relevant application section/tab and either correct the reported values or provide an explanation by entering a comment in the relevant section.

Additionally, the system may detect errors in your application, such as missing data. These errors must be corrected in order to submit an application. In certain exceptional cases when the issue cannot be addressed through the application system, you will have the ability to override the error message by providing an explanation and then submit the application.

Any unresolved warnings or errors may delay the processing of your application.

5. Calculation Methodologies

Unless explicitly stated otherwise in CIIP guidance, quantification and reporting of greenhouse gas emissions and related information under CIIP must comply with the *Greenhouse Gas Industrial Reporting and Control Act* (GGIRCA) and the Greenhouse Gas Emission Reporting Regulation (GGERR), including with the referenced in GGERR Western Climate Initiative (WCI) quantification methodologies.

The [WCI methodologies](#) typically applicable to hydrogen peroxide-producing reporting operations are:

- WCI.020 General Stationary Combustion
- WCI.130 Hydrogen Production
- WCI.280 Mobile Equipment at Facilities

A CIIP applicant must first submit an emission report in SWRS (SWRS report) complying with GGIRCA and GGERR and using the WCI methodologies. A CIIP application is then pre-filled where possible with applicable information from the SWRS report.

5.1 Calculating emissions associated with purchased grid electricity

The ministry provides a calculator spreadsheet with the appropriate calculation formulas built in, to assist in calculations at this step of the CIIP application process (available [at this link](#)).

In the calculator, in the section 'Purchased Electricity (for information purposes only)', select the applicable electrical grid (Integrated or Fort Nelson) from the pulldown menu in cell E11. This will cause the appropriate electricity intensity factor in tCO₂e/GWh to be displayed in cell G11.

In the blue cell, enter the amount of purchased electricity (in GWh).

Emissions associated with purchased grid electricity are then automatically calculated and displayed in cell G13, in tonnes CO₂e. For example:

Purchased Electricity (for information purposes only)

INPUT each variable listed below:

Purchased Electricity

	Electrical Grid:		Amount	Units
Emissions Intensity Factor of Grid	Integrated Grid	EIF _{El. Grid}	11.5	tCO ₂ e/GWh
Amount of electricity purchased		EL_PURCHASED	300.00	GWh
Emissions from Purchased Electricity		EL_PURCHASED	3,450.00	tCO ₂ e

Choose grid
from dropdown
menu

Enter the amount of emissions from purchased grid electricity in the CIIP application.

The calculator uses the following methodology to determine emissions associated with purchased grid electricity:

If

$EIF^{El\cdot Grid}$ (selection) is the grid electricity emission factor for the selected grid and applicable year, in tCO₂e/GWh;

$Q_{Purchased}^{Electr\cdot}$ (input) is the quantity of purchased grid electricity, in GWh;

$E_{Purchased}^{Electr\cdot}$ are the emissions associated with purchased grid electricity, in tCO₂e.

Then

$$E_{Purchased}^{Electr\cdot} = EIF^{El\cdot Grid} * Q_{Purchased}^{Electr\cdot}$$

where $EIF^{El\cdot Grid}$ data comes from the published [electricity emission intensity factor for grid-connected entities](#) for the selected grid for applicable year.

5.2 Calculating total facility production in terms of pure (100%) hydrogen peroxide

Hydrogen Peroxide production includes all hydrogen peroxide (H₂O₂) produced during the reporting year, regardless of whether it is sold during the year or added to inventory. It does not include hydrogen peroxide sold from a previous year's production.

Calculating production in terms of pure (100%) hydrogen peroxide using the spreadsheet calculator

The ministry provides a calculator spreadsheet with the appropriate calculation formulas built in, to assist in calculations at this step of the CIIP application process (available [at this link](#)).

In the calculator, for each batch of H₂O₂, enter in the blue cells the amount produced in tonnes in column D and the batch's H₂O₂ concentration in column E. The calculator then displays the amount of pure (100%) hydrogen peroxide produced for each batch, by multiplying the mass of produced H₂O₂ by its concentration fraction.

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For example:

INPUT H₂O₂ production and concentration:

Rename batches as needed	H ₂ O ₂ Production (any concentration)	Concentration of H ₂ O ₂	Production 100% H ₂ O ₂
	Tonnes	%	Tonnes
Batch 1	10,000.00	70.0%	7,000.00
Batch 2	7,000.00	75.0%	5,250.00
Batch 3			-
Add Row			-

Click on 'Add Row' in column C to add more rows if necessary.

Once all batches are entered, the calculator displays below the table the total production in tonnes of pure (100%) hydrogen peroxide.

For example:

Rename batches as needed	H ₂ O ₂ Production (any concentration)	Concentration of H ₂ O ₂	Production 100% H ₂ O ₂
	Tonnes	%	Tonnes
Batch 1	10,000.00	70.0%	7,000.00
Batch 2	7,000.00	75.0%	5,250.00
Batch 3	12,000.00	78.0%	9,360.00
Batch 4			-
Add Row			-

100% Hydrogen Peroxide Production	21,610.00
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Enter the amount of 100% hydrogen peroxide production in the CIIP application.