CleanBC Industrial Incentive Program
District Energy Sector Guidance
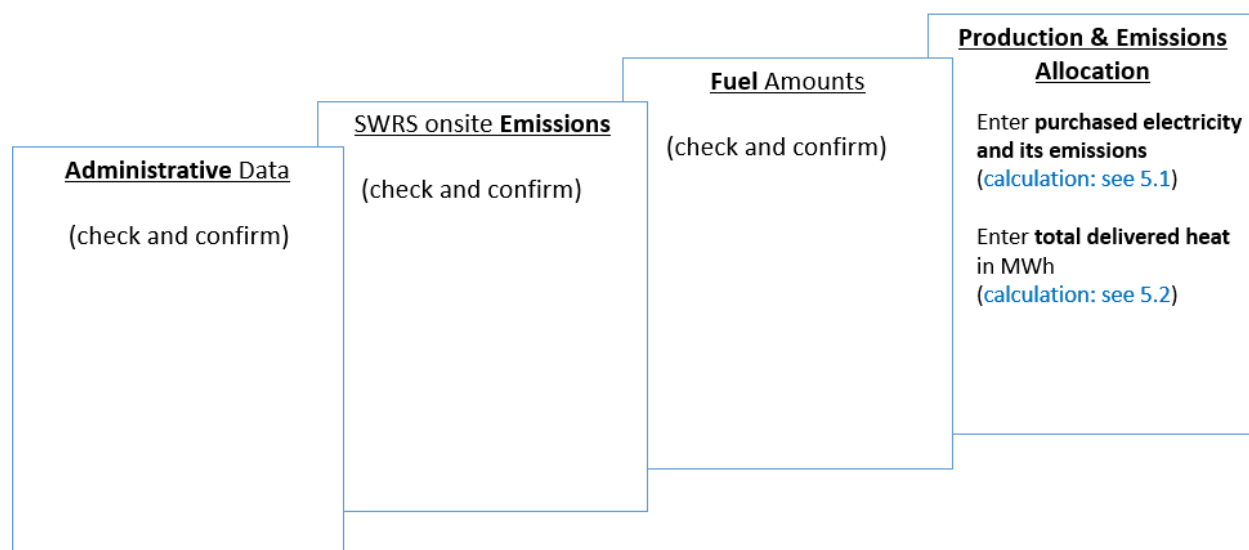
1. **Applicable NAICS codes:**

   - **NAICS – 221330: Steam and air-conditioning supply**

 | Sub-Sector | CIIP Product |
     |---|---|
     | District energy (heat) | Delivered heat |

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)

Administrative Data

(check and confirm)

SWRS onsite Emissions

(check and confirm)

Fuel Amounts

(check and confirm)

Production & Emissions Allocation

Enter **purchased electricity and its emissions**
(calculation: see 5.1)

Enter **total delivered heat** in MWh
(calculation: see 5.2)

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

3. Facility Emissions for CIIP purposes
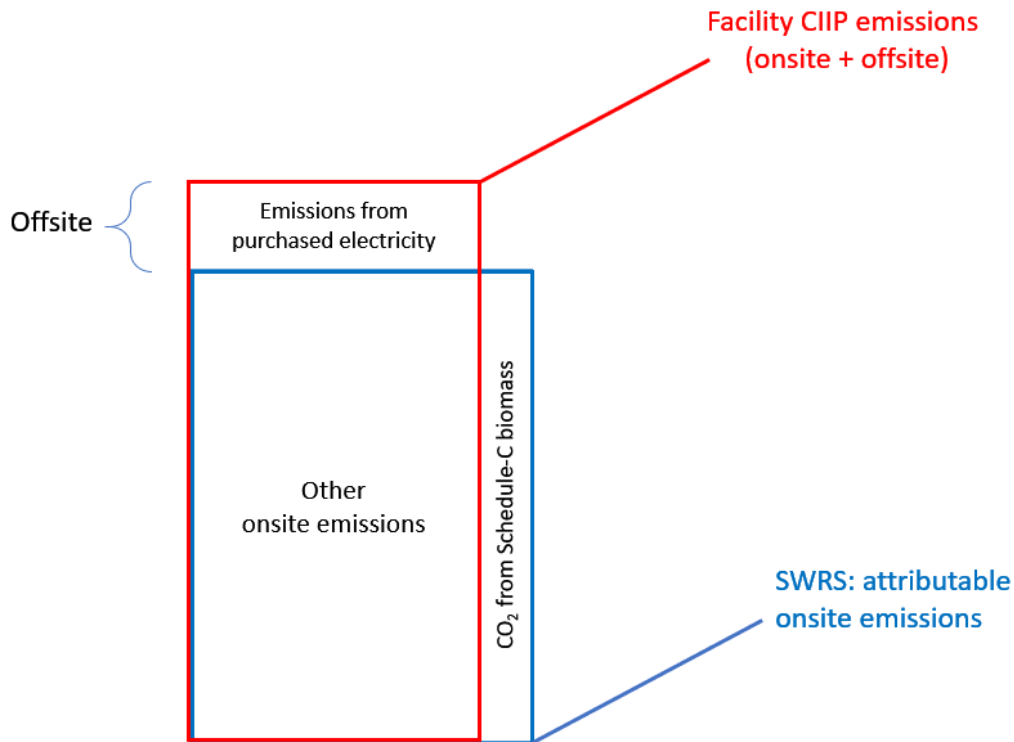
For the Facility emission total for CIIP purposes:

- Facility onsite emissions CO2 from Schedule C biomass are excluded, and
- Facility offsite emissions from purchased electricity are included.
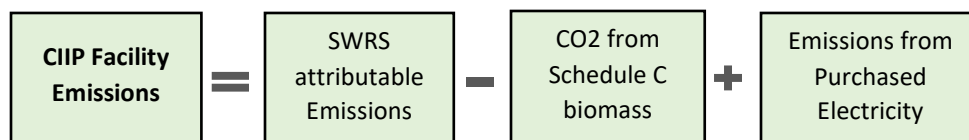
Or, equivalently,

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

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

Facility offsite emissions associated with purchased electricity must be calculated from electricity amount purchased. Both amounts and emissions are entered in the *Production and Emissions Allocation* section of the CIIP application.

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 though 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. 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).

NOTE: To enter data as required in this section, first select 'Offsite Emissions: Purchased Electricity', then 'Delivered heat', as applicable, from the 'Product or Service' dropdown menu.

Allocating CIIP Facility emissions

CIIP facility emissions, calculated as shown in section 3, are automatically allocated to '**Delivered heat**'.

Select '**Offsite Emissions: Purchased Electricity**'
- Enter purchased electricity (in GWh). Enter 0 if not applicable.
- Calculate and enter the emissions associated with purchased electricity:
  o multiply the amount of purchased electricity by the published grid electricity emission intensity for the year, or
  o if preferred, use the calculator (see section **5.1** below for details)

Select 'Delivered heat'
- Calculate and enter total amount of delivered heat in MWh, using the calculator (see section **5.2** below for details)

Delivered heat means the heat delivered to customers. Heat that is produced within the facility but lost in the production and distribution process must not be included in this total.

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 district energy reporting operations are:

- WCI.020 General Stationary Combustion
- 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 on Purchased Electricity, 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

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	Choose grid from dropdown menu	_PURCHASED	300.00	GWh
Emissions from Purchased Electricity		_PURCHASED	3,450.00	tCO$_2$e

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;

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

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

Then

$$E^{Electr \cdot}_{Purchased} = EIF^{El \cdot Grid} * Q^{Electr \cdot}_{Purchased}$$

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 delivered heat in MWh

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 'Calculation of total delivered heat in MWh', in the blue cells:

- In column D, enter all the applicable delivery pressures in units of bar gauge (bar g)
- In column E, enter the total steam (Kg) delivered at each of the delivery pressures

The calculator then determines the steam enthalpy (KJ/Kg) at each delivery pressure and the corresponding delivered heat energy in MWh, by multiplying the Kg steam by the enthalpy and converting from KJ to MWh.

Below that, the total delivered heat in MWh is then displayed as the sum of the line items in column G.

For example:

Calculation of total delivered heat in MWh

	Delivery pressure (bar g)	Delivered Steam (Kg)	Enthalpy (KJ/Kg)	Delivered Heat (MWh)
1	0.20	10,000,000.00	2,608.95	7,247.08
2	0.30	9,000,000.00	2,624.55	6,561.38
3	0.10	8,500,000.00	2,583.89	6,100.84
4			-	-
5			-	-
6			-	-
7			-	-
			Total Delivered Heat in MWh:	**19,909.30**

Enter the amount of the total delivered heat in MWh in the CIIP application.