CleanBC Industrial Incentive Program

Cement Sector Guidance

This guidance applies to reporting operations with primary NAICS codes as follows:

- NAICS – 327310: Cement Manufacturing

Sector: Cement Manufacturing

CIIP Product: Cement equivalent

Quantification and Reporting of Emissions and Related Information

Unless explicitly stated otherwise in the CleanBC Industrial Incentive Program (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 cement-manufacturing reporting operations include, but may not be limited to, the following:

- WCI.020 General Stationary Combustion
- WCI.090 Cement Manufacturing
- WCI.100 Coal Storage
- WCI.280 Mobile Equipment at Facilities

Emissions associated with purchased electricity consumed at the reporting operation must not be included in the emissions total for CIIP purposes.

Emissions used for CIIP benchmark calculations must be equal to the reporting operation’s onsite emissions total as required to be reported under GGIRCA and submitted in the Single Window Reporting System.

\[ E_{CIIP} = E_{Onsite} \]

Quantification of Production

The amount of cement equivalent is calculated as follows.

If:

- \( CE_{eq} \) is cement equivalent (annual amount)
- \( CE^p \) is cement produced (annual amount)
• \( CUC \) is clinker used to produce cement (annual amount)
• \( CL^p \) is clinker produced (annual amount)
• \( CL^s \) is clinker sold (annual amount)
• \( CL^I_{\text{date}} \) is clinker amount in inventory on a given date

Then

\[
CE_{eq} = CE^p \times \left( \frac{CL^p}{CUC} \right)
\]

where

\[
CUC = CL^p - CL^s - (CL^I_{\text{Dec 31}} - CL^I_{\text{Jan 1}})
\]

Operations must report their production in cement equivalent.

Cement production (\( C^P \)) means the amount of cement produced during the reporting year, regardless of whether it is sold during the year or added to inventory. It does not include cement sold from a previous year’s production.

Clinker production (\( CL^P \)) means all clinker produced during the reporting year, regardless of whether it is converted into cement, sold as clinker, or added to inventory. It does not include clinker sold from inventory from a previous year’s production.

Clinker sales (\( CL^S \)) means clinker sold which was produced during the reporting year as well as clinker sold from inventory.

**EXAMPLE:** If an operation produces 10 tonnes of clinker, has a January 1\(^{st} \) clinker inventory of 4 tonnes, sells 3 tonnes clinker, and does not add any newly-produced clinker to inventory, then its Dec 31 inventory would be 3 tonnes and its clinker used to make cement would be 10–3-(3-4) or 8 tonnes.

In addition to this guidance document, to assist in calculating cement equivalent production the Ministry provides a spreadsheet with the above cement equivalent calculation formulas built in (available via e-mail and webpage).

In order to complete the spreadsheet, operations will need to have information on:

• Cement Production \( C^P \) (tonnes)
• Clinker production \( CL^P \) (tonnes)
• Clinker sales \( CL^S \) (tonnes)
• Clinker inventories (tonnes), on both January 1\(^{st} \) and December 31\(^{st} \) of the reporting year
Emission Intensity

For the purposes of CIIP, the Emission Intensity will be calculated as:

$$E_{l_{\text{Cement}}} = \frac{E_{\text{CIIP}}}{C_{E_{\text{eq}}}}$$