

Frequently Asked Questions – EEF Methodology Update for Local Government Carbon Neutral Government Reporting

1. What is changing?

To measure the volume of greenhouse gas (GHG) emissions associated with electricity use, an 'Electricity Emissions Factor' (or EEF) is used to determine the number of tonnes of carbon dioxide-equivalent emitted per gigawatt hour (GWh) of electricity consumed.

The methodology used to calculate the EEF value applied to electricity use under the Carbon Neutral Government program is being updated to align with the methodology used for reporting under the *Greenhouse Gas Industrial Reporting and Control Act* (GGIRCA).

The new methodology will move from a utility-based approach to a geographic approach that accounts for electricity imported from out-of-province.

More information on the adopted GGIRCA methodology for EEF can be found [here](#).

2. Why is it changing?

Up until 2017, the Climate Action Secretariat (CAS) used a consistent approach for all reporting entities to quantify emissions from purchased electricity that only considered domestic production and emissions. Most of the electricity generated in B.C. is from renewable sources, and some of it is exported to other provinces and the US to help meet demand for clean energy. Sometimes B.C. imports higher emitting electricity from other provinces and/or the US if there is not enough local supply to serve all customers, such as in low water reserve years.

In 2017, industry reporting under GGIRCA was updated to include emissions from imported electricity to facilitate greater accuracy and allow us to better understand the progress we are making toward our emissions reduction goals through emission reduction measures such as energy efficiency and fuel-switching.

We have heard from stakeholders that there has been confusion around CAS using two different approaches to setting EEFs for electricity used in B.C.

Aligning the methodologies to calculating EEF values for reporting obligations under both the *Carbon Neutral Government Regulation* and *GGIRCA* will provide a single, consistent approach to reporting electricity emissions across the province. This will allow for comparability in emissions data for different sectors and ensure that government is held to the same standard of reporting for its corporate emissions as industry.

3. When did this change happen?

Application of the new EEFs came into effect for public sector organization (PSO) and local government corporate inventories on January 1, 2021. This means that the change will be in place for the full 2021 reporting year.

Details of the EEFs applied since 2017 under this methodology can be found [here](#).

4. What will I have to do differently to meet obligations under the Carbon Neutral Government program?

For those local governments that use CGRT for their reporting, no action is required as the new EEF approach will be automatically applied to reported electricity use. For those that use other means of reporting corporate emissions, you are advised to ensure that you are applying the new EEF values correctly in your estimations. Please contact the Ministry of Municipal Affairs (PLUM@gov.bc.ca) if you have questions on the EEF application to local governments.

CAS has also derived a set of 'hind-casted' EEF values, dating back to the 2007 baseline year, so that year-on-year changes in emissions from electricity can be accurately compared. These will also be reflected in CGRT and published in the BC Methodological Guidance for Quantifying Greenhouse Gas Emissions.

5. What impact will this have on my organisation?

Including electricity imported from out-of-province in EEF values will more accurately record actual GHGs from electricity use in B.C. The shift to a geographic approach will account for the specific electricity generating facilities on each grid, such as hydroelectric dams or natural gas power stations (see below and FAQ 6), as well as include emissions associated with imported electricity.

The change in approach means that the emissions from electricity use in your corporate inventory will increase. CAS has estimated that the average increase in electricity emissions across all PSOs will be approximately 7 per cent compared to emissions reported in the 2017 reporting year. The increase in reported electricity emissions will have a corresponding increase in carbon offset obligations for PSOs who are required to achieve carbon neutrality under the Carbon Neutral Government (CNG) program, and for any local governments that are voluntarily seeking to achieve carbon neutral corporate operations through offset purchases or reduction credits created from community reduction projects.

The extent to which your electricity emissions increase will depend on how much electricity your operations use and where you are located. Most PSOs and local governments are connected to the Integrated grid that services Southern and Western B.C. and is predominantly powered by hydroelectricity. Some organizations located in Northeast BC draw from the Fort Nelson grid, which uses natural gas-powered electricity and relies more on imports from Alberta. As such, the EEF for the Fort Nelson grid is higher than that for the Integrated grid.

6. How are EEFs calculated now and how is that different? Why have the EEF values gone up?

Close to 95 per cent of energy generated in B.C. is from renewable sources. BC Hydro exports surplus clean energy to the United States, in particular to California and Washington State, which is purchased to assist them in meeting their emissions reduction targets. However, due to seasonal and annual fluctuations in water reserves, sometimes B.C. needs to import higher-emitting electricity to meet provincial demand. This increases the GHG emission content associated with each unit of electricity consumed in BC. Accounting for this reality means that the EEFs under the new methodology are higher but more accurate than those under the previous methodology.

Up until now, CAS has used a utility-based approach to determine the volume of emissions associated with electricity use for public entities reporting under the CNG program. This approach used an average

of greenhouse gas emissions from each utility provider's owned-and-operated electricity generation facilities, supplemented by the average emissions of independent power producers.

The new methodology uses specific generation station data as well as the emissions associated with the imports and exports of electricity supplied throughout B.C. Separate EEFs are calculated for each of the two distinct electricity grids in the province – the integrated grid, which services Southern and Western B.C. and the Fort Nelson grid, which services Northeastern B.C. This approach accounts for the specific generation facilities or assets on each grid and more accurately attributes emissions to geographic area.

7. What about historic emissions? Will my organisation have to surrender more offsets if reported emissions from previous years have gone up?

CAS has worked with Powerex, BC Hydro and FortisBC Electric to generate historic EEF values back to the baseline year of 2007 to allow accurate year-on-year comparison of emissions. Local governments who have achieved corporate carbon neutrality in past years are not required to balance or offset emissions from previous years.

8. My facility(s)/community is on an isolated grid. What does this change mean for me?

Calculating EEFs requires a significant volume of verified data. There is insufficient reliable data available to accurately calculate the EEFs associated with each of B.C.'s 13 isolated grids on an annual basis. Information is available on the generating source on each of the grids which provides an indication of the likely scale of the grid's emissions intensity. Those isolated grids that are powered exclusively through diesel generation (Anahim Lake, Masset, Telegraph Creek or Toad River) should use the Fort Nelson Grid EEF values, as this value is estimated to more closely reflect the likely emissions associated with energy generation from diesel generators than the EEF for the integrated grid; those connected to any other isolated grid in B.C. should use the EEF value for the integrated grid, as these grids use a combination of diesel as stand by and run-of-river generation with an estimated emissions intensity closer to that of the integrated grid.

This approach balances the administrative burden and high data requirements associated with calculating robust EEFs for each isolated grid and the small number of PSOs and local governments connected to them with adopting a more accurate and geographical approach to estimating emissions from electricity use.