Federal Government Enacts Finalized Clean Electricity Regulations, SOR/2024-263

On December 18, 2024, the Federal government enacted the finalized *Clean Electricity Regulations* (CER). The finalized regulations are the result of nearly three years of feedback from provinces, territories, Indigenous communities and industry.

Background

First released in August 2023, the draft CER received significant pushback from provincial governments and industry over certain aspects of the regulations, including the prohibition against electricity generation units emitting more than an annual average of 30 tonnes of carbon emissions per GWh (t/GWh) of electricity generated over a calendar year.

In light of the feedback from the provinces and industry, in February 2024, the federal government released an update to the proposed CER, which we discussed in a previous post. Key changes included:

- instead of implementing a blanket fixed emissions intensity standard to all units, each unit would be subject to a unit-specific annual emission limit;
- indications that the federal government was considering a revised performance standard from 30 t/GWh;

- certain units are eligible to be issued transferable credits which that unit can either bank for its own use, or transfer to another unit that is eligible to remit transferable credits (pooling);
- allowing a unit to exceed its annual emissions limits through the remittance of offset credits.

Notably, the now-finalized CER include additional material changes likely intended as a federal compromise to provincial opposition, with a new pushed back date to decarbonize electricity grids from 2035 to 2050. Though enacted in December 2024, the emission restrictions under the CER will not come into effect until January 1, 2035, with the goal of reaching net-zero by 2050.

Overview of the Clean Electricity Regulations

Who does the CER apply to?

Under the CER, electricity generating units that meet the applicability criteria will be subject to an annual emission limit based on each unit's generation capacity. A "unit" means an assembly consisting of equipment that is physically connected and operate together to generate electricity.

The CER applies to a unit that meets the following criteria:

- the unit uses any amount of fossil fuels to generate electricity;
- the unit has a generation capacity of at least 25 MW; and
- the unit is connected to an electricity system that is subject to the North American Electricity Reliability Corporation's (NERC) standards.

However, depending on when a unit is commissioned, it may be exempt from certain CER requirements. For example, the emission limit and calculation requirements will not apply to

units, other than units that combusts coal, until January 1 of the calendar year following the unit's end of prescribed life, if it:

- has a commissioning date after December 31, 2009, but before January 1, 2025;
- is a "planned unit"; or
- is a "boiler unit" as described in the *Regulations Limiting Carbon Dioxide Emissions from Natural Gas-fired Generation of Electricity* that has an end of prescribed life after December 31, 2034.

A "planned unit" is a unit with its commissioning date between January 1, 2025, and December 31, 2034, and meets the other specified requirements under Section 3 of the CER, such as having construction start on or before December 31, 2027.

Additionally, and as detailed below, a cogeneration unit is exempt from the emission limits for any calendar year in which its facility's net supply of electricity to the grid is zero or less.

Registration and Reporting Requirement

The owner or person who has charge, management or control of a unit (responsible person) must submit to the Minister of the Environment of Climate Change of Canada (Minister of Environment) a registration report for that unit by the later of (1) December 31, 2025, or (2) the 60th day after the day the unit meets the eligibility requirements (i.e. uses fossil fuels, >25 MW capacity, and is connected to a NERC electricity system).

Units must also submit emission reports and reconciliation reports at the beginning of the calendar year that its annual emission limit begins to apply. Units that produce a net annual supply of electricity and that are subject to an annual emission limit must submit their annual emission report by

June 1 of the year following a compliance year. The emissions report includes all information relating to the facility's net supply, the unit's total annual emissions in the compliance year and information required for the issuance of its compliance credits (if applicable).

Units are also required to submit an annual reconciliation report by December 15 of the year following the applicable compliance year that includes information on Canadian offset credits being remitted, information on compliance credits that are being remitted or banked, as well as information on any tradeable compliance credits that were transferred or received.

If a unit intends to maintain a net supply of electricity is zero or less (e.g. cogeneration unit), the responsible person for that unit may choose to submit to the Minister of the Environment a declaration of net supply for the unit. The declaration must be submitted within 12 months before the emissions prohibition would apply to the unit. So long as the facility does not have a net supply, the unit is exempt from quantifying its emissions.

Emission Limit Requirement

Beginning in 2035, the CER will prohibit a unit's emissions above its annual emission limit, measured in tonnes of CO_2 per year per unit, based on its electricity generating capacity. The emission intensity caps used to calculate a unit's emission limit is 65 t/GWh during the period of 2035 to 2049, and 0 t/GWh in 2050 onwards. Specifically, a unit's annual emission limits will be determined using the following equation:

In practical terms, the requirement for an electricity generator to be net-zero will not come into effect until 2050, with an interim emission intensity limit of 65 t/GWh beginning in 2035. This is a change from the previously proposed

blanket 30 t/GWh annual average performance standard beginning 2035, as discussed in our previous blog post.

Compliance and Flexibility Mechanisms

1. Offset Credits

Between 2035 and 2049, a unit may emit up the equivalent of 35 t/GWh over the prescribed emission intensity by remitting an equivalent amount of eligible offset credits. Beginning in 2050, a unit may emit up to 42 t/GWh above the prescribed emission intensity by remitting such offsets. Accordingly, a unit's maximum annual use of eligible offset credits is calculated using the following formula:

Currently, only offset credits issued under the *Canadian Greenhouse Gas Offset Credit System Regulations* and provincial credits recognized under the *Output-Based Pricing System Regulations* are considered eligible offset credits. Furthermore, the greenhouse gas reductions must have occurred no more than eight calendar years before the year which the credit is remitted.

2. Compliance Credits and "Pooling"

The regulatory impact analysis statement following the regulations set out that a unit may remit eligible compliance credits equivalent to the amount of CO_2 emissions above its annual emission limit. These credits are remitted through the reconciliation report for the unit with respect to the relevant compliance period. Compliance credits may only be used to comply with a units emission limits until December 31, 2049, and may not be used for the 2050 compliance year and going forward.

Certain compliance units are eligible to be issued

transferable credits which that unit can either bank for its own use, or transfer to another unit that is eligible to remit transferable credits ("pooling").

In general and as set out in section 31(1) of the CER, transferable compliance credits that are generated by one unit may be "pooled" with another unit if:

- the unit is subject to an annual emission limit;
- the unit was commissioned before January 1, 2030 (i.e., an existing unit or a new unit commissioned between 2025 and 2030) or is a "planned unit";
- the unit does not combust any amount of coal; and
- the unit does not produce useful thermal energy.

3. Cogeneration

Cogeneration units are only subject to an annual emission limitation in calendar years where the cogeneration facility produces a net supply of electricity to the grid greater than zero (i.e., their annual supply of electricity to the grid is greater than the annual consumption of electricity from the grid) as calculated under the CER. A cogeneration unit may subtract from its total annual emissions the emissions attributed to the production of useful thermal energy (e.g. steam that is not used to generate electricity).

Furthermore, the finalized CER enables existing cogeneration units to calculate their annual emission limit based on their full electricity generating capacity, but only need to account for the emissions associated with the electricity that is supplied to the grid (measured in terms of net supply, in case their host facility also purchases electricity from the grid) to comply with its emission limit. Emissions associated with electricity consumed on-site do not have to be included for an existing cogeneration unit to comply with its annual emission limit for the 2035 to 2049 compliance years.

Starting in 2050, all emissions from electricity generation for existing cogeneration units are relevant to compliance with their annual emission limits, including electricity that is used behind-the-fence, if such units have a positive net supply. The CER also requires new cogeneration units (i.e., those with commissioning dates on or after January 1, 2025, and which are not “planned units”) to account for all emissions from electricity generation, including electricity that is used behind-the-fence, to comply with its annual emission limits starting January 1, 2035.

4. Emergencies

The CER permit emissions generated during an emergency circumstance to be deducted from a unit’s total emissions where the necessary conditions are met. In the event of an emergency circumstance, upon the direction of an electric systems operator, a temporary emissions exemption of up to 30 days can be triggered for the emissions generated by a unit to alleviate the disruption or significant risk of disruption to electricity supply to a province or in a contiguous province or state.

There are two types of emergency circumstances: an irresistible emergency event, determined by the electricity system operator, which is natural or arises from human action. The irresistible emergency event must be outside the control of the electricity system operator and the responsible person for the unit. The second emergency circumstance is a risk to human health and safety, of any duration, determined by the Minister of the Environment.

In response to feedback that facilities would not increase their operations during emergency periods, the Minister of the Environment no longer needs to approve the deductions prior to responding to an emergency. However, the responsible person of a unit must provide the Minister of the Environment notice

within seven days of such emergency response and provide information on the emergency circumstance. Furthermore, to extend the emergency exemption period beyond the 30-day period, unit operators must apply to the Minister of the Environment for an extension.

5. Renewable Natural Gas

A unit's total emissions will exclude the emissions associated with the combustion of biomass, including renewable natural gas (RNG), that occurs directly in the unit. A unit's total emissions will also exclude emissions from RNG that has been blended into a North American natural gas pipeline network that is physically connected to the unit, if the volume of RNG utilized is specified in a contractual agreement and the necessary conditions in the CER are met.

6. Carbon Capture and Storage

A unit's total emissions can exclude the quantity of emissions captured by a carbon capture and storage project that permanently stores such emissions. The geological site into which the CO_2 is injected into must be (1) a deep-saline aquifer into which injection is for the sole purpose of storage; or (2) a depleted oil reservoir into which injection is for the purpose of enhanced oil recovery. Interestingly, the inclusion of a depleted oil reservoir from the CER departs from the Federal Government's previous omission of such reservoirs for carbon capture and storage from eligibility for the equivalent federal income tax credits.

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The content of this article is intended to provide a general guide to the subject matter. Specialist advice should be sought about your specific circumstances.

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