
Submission: Clean Electricity Regulations - Public Update

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Introduction

Clean Energy Canada and the Canadian Climate Institute have formed a partnership to support the development of the Clean Electricity Regulations (CER). We welcome this opportunity to provide additional feedback to Environment and Climate Change Canada (ECCC) on the latest proposals for the CER, as outlined in the new publication: [Public Update: 'What We Heard' during consultations and directions being considered for the final regulations](#) (Public Update).

We want to commend ECCC's ongoing efforts to find the right balance in the design of the CER, working to ensure the regulations are ambitious but flexible, and helping drive the decarbonization of the electricity sector in ways that support affordability and protect reliability.

However, without more details and modelling of the proposed changes, our ability to assess and provide comprehensive feedback on their full implications is limited. Therefore, our comments below focus on identifying key objectives that should inform design decisions and provide some of the key questions we believe should be considered in pursuing this new approach.

Response to “Public Update”

The following section provides detailed feedback on the new design considerations that were shared with stakeholders in the [Public Update](#). The first part outlines our general feedback on the CER as a whole, with the second part identifying key considerations for the specific design changes proposed in the document.

A main and overarching piece of feedback we wish to emphasize is that **it is essential that the CER is finalized as quickly as possible** in order to maximize investment certainty and lock in the positive effect this proposed policy is already having.

General feedback

Before exploring the new design proposals, it is important to acknowledge that the Clean Electricity Regulations **have already begun to have a meaningful impact** by encouraging provinces to consider energy pathways that align with net-zero electricity sector emissions by

2035. Indeed, a number of provinces explicitly cite the 2035 target or alignment with the CER directly in their energy strategies.¹

Turning to the new design proposal, to be both effective and durable, the final regulations need to strike the right balance between providing greater flexibility for gas-fired generation and ensuring the regulations effectively complement other electricity sector policies. This is something we noted in our feedback to the draft regulations provided in the [Canada Gazette Part I](#). Specifically, we believe the CER should be designed to achieve these two key objectives:

- **Create a planned trajectory for the decarbonization of the electricity sector** to accelerate and de-risk the rapid investments needed in non-emitting generation by providing policy certainty regarding the timing of key capital investments. Research has shown that the carbon price alone is unlikely to drive the investments and emission reductions needed to achieve Canada’s net-zero targets.²
- **Discourage further investment in new, unabated fossil gas generating facilities to reduce the risk of gas lock-in and stranded assets.** Additional gas units represent new sources of significant emissions and risk displacing the investments needed in non-emitting electricity generation.

To this end, the new proposed approach where a total annual emission limit for units would be established and allow for the pooling of emissions across units owned by the same regulated party may offer a path towards striking this balance. However, it will be critical to also examine what impacts this new direction would have on the long-term emissions trajectory, whether unabated natural gas deployment increases or decreases under these changes, and what specific role natural gas will play between now and 2050 (i.e. shifting to a primarily back-up function vs. seeing widespread use as a baseload resource).

More specifically, as ECCC considers the design and calibration of this new approach, we recommend the following:

- **Avoid excessive flexibility that incentivizes greater natural gas deployment and usage.** The *Public Update* identifies a variety of new approaches to enhance the flexibility of the CER. While greater flexibility is necessary, too much flexibility will undermine the regulation’s effectiveness. To the greatest extent possible, we recommend avoiding design options that lead to the increased deployment of natural gas or incentivize the expanded use of natural gas as a baseload resource in the long term.
- **Explore options to incentivize shifting natural gas to a resource of last resort.** Relative to CG1, the new proposed changes appear to place a larger emphasis on emission

¹ Both [Nova Scotia](#) and [New Brunswick](#) explicitly reference alignment with the 2035 target in their energy strategies. In Ontario, the development of the CER contributed to the IESO being directed to investigate scenarios for phasing out natural gas in their [Pathways to Decarbonization](#) report.

² Arjmand, R and McPherson, M. Canada’s electricity system transition under alternative policy scenarios. <https://www.sciencedirect.com/science/article/pii/S0301421522000696#sec6>. (2022).

reductions that come from the efficient operation of natural gas units relative to emission reductions that come from a shift to non-emitting generation. While this may still be an effective way of achieving emission reductions, it will be critical to evaluate how it changes the source of emissions (i.e., whether emissions are from resources operating as peakers versus as baseload resources), and whether it increases the risk of locking in more emissions for longer, as “efficient units” play a larger than necessary role. Options to reduce perverse outcomes might include adjustments to the way the overall emission limit is calculated, how it is applied to different resources or how different resources can make use of the pooled emission limit.

- Ensure regulatory design adequately incentivizes the deployment of non-emitting resources.** If the design framework emphasizes multiple compliance and flexibility mechanisms for natural gas, there is an increased risk that the deployment of renewables and other non-emitting energy solutions is displaced by a larger and potentially longer lasting role for natural gas. It will be essential that the department model the impacts this new design has upon non-emitting resource deployment, and demonstrate the new capacity additions expected under the new regulation. Furthermore, design options that maximize the deployment of non-emitting alternatives – including those that provide backup – should be prioritized.

Feedback on specific design elements

Performance Standard

We support efforts to create a more flexible performance standard. The performance standard should be set at a level that is ambitious but achievable for an average high-efficiency combined cycle fossil gas unit (either with a high rate of capture via carbon capture technology or via high levels of low-carbon hydrogen or bioenergy blending). We propose adopting a CER performance standard of not more than 60 tonnes of CO₂ per GWh, which would correspond with a 90% capture rate for a fossil gas plant performing at this “attainable” standard (i.e. of 420 tonnes of CO₂ per GWh).³

Emissions limit and pooling

We support the exploration of an approach that establishes a total emission limit and pooling between entities under the same ownership. This approach is likely to provide the needed flexibility to ensure the CER is ambitious yet achievable. Careful consideration should be given, however, to the specific rules that govern the calculation of the emission limit, as well as design elements related to pooling. **We urge careful exploration of:**

³ This calculation includes accounting for the “parasitic load” associated with CCS operation, which according to the [Global CCS Institute](#) can fall between 20-30%. Our calculation assumes a parasitic load of 25%.

- **Use of the “unit capacity” and a 100% capacity factor.** An emission limit based on these variables may inadvertently increase allowable emissions. The “nameplate capacity” of a unit and the actual intended capacity may greatly differ, and calculations based on nameplate capacity may incentivize the deployment of baseload units with high capacity factors to secure the greatest emission limit possible, instead of peaking units, designed to address a specific operation service need.
- **The constraints placed on how units qualify to be part of a larger “pool” of emissions.** Without limitations, pooling may incentivize “zombie units” that remain in operation only to contribute to the overall emissions limit regardless of the electricity they seek to provide. Pooling may also impact the types of units that are deployed, as high-efficiency, high-capacity units will offer the most cost effective flexibility to a system, but may net relatively more emissions than an approach focused on incentivizing less efficient but peaking-focused units.

End of Prescribed Life (EoPL)

EoPL should not be extended beyond the current proposal of 20 years. Analyses, including the government’s own Regulatory Impact Analysis Statement (RIAS), have consistently shown that even small increases to the EoPL can have a disproportionate impact on emissions.⁴ Changes to the EoPL at this point will introduce a number of significant risks, including increasing the number of potentially stranded assets and increasing both the quantity of emissions and the length of time these emissions remain on the grid.

Furthermore, the proposed shift to an emissions limit and pooling-based approach may already provide sufficient flexibility to allow for the continued operation of specific units beyond their EoPL.

New units under development

We support a discrete process to consider individual units that are already substantially advanced, but blanket changes to the definition of “new” units must be avoided. Allowing a small number of units that have already received substantial investment prior to the finalization of the CER to make use of the EoPL provisions may be justified. However, this “grandfathering” should be done on a limited project-by-project basis rather than through a blanket change to the timelines for determining what constitutes a “new unit.” Additionally, any extension of EoPL provisions to these units must carefully consider the emissions and costs associated with allowing them to operate, and the prescribed lives they are granted must be shortened commensurate with their delay in commissioning past 2025.

⁴ Government of Canada. Canada Gazette, Part I, Volume 157, Number 33: Clean Electricity Regulations. (2023). <https://www.gazette.gc.ca/rp-pr/p1/2023/2023-08-19/html/reg1-eng.html>

Offsets

We support the use of qualified offsets as a flexibility option but in a limited capacity.⁵ Offsets can be a useful flexibility measure to address unforeseen overages in emissions, reducing the binary nature of the CER. However, their use should be limited to this function, rather than built in as a structural means by which a unit or fleet can meet their emission limit. Offsets used as a primary compliance pathway will weaken the overall signal the CER sends and risk undermining actual emissions reductions.

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Clean Energy Canada and the Canadian Climate Institute look forward to continuing to support ECCC's efforts in developing the Clean Electricity Regulation, including the identification and calibration of the design options that best achieve the policy's intended outcomes.

⁵ If offsets are used as a compliance mechanism, the government must ensure that offsets represent real, independently verified, quantifiable, permanent, and additional negative emissions.