

# Clean Electricity Regulations

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## Summary

We expect that the federal government will soon unveil the final *Clean Electricity Regulations* (CER). The regulations will set emissions limits for fossil fuel-powered electricity generation starting in 2035 and aim to put Canada on a path to a net-zero electricity grid - a must-have for Canada to build a clean economy.

### What to look out for in the final Clean Electricity Regulations:

- Whether the emissions limit placed on power producers is in line with the Prime Minister's COP26 promise of delivering a net-zero electricity grid by 2035<sup>1</sup> and the legislated goal of reaching net-zero emissions by 2050 economy-wide.
- Whether the rules effectively deter the construction of new gas plants in Canada's electricity grid and progressively push gas-powered electricity generation off the grid, as required for Canada to meet its climate targets.

## Context

### A net-zero grid lays the foundation for Canada's clean economy

As Canada electrifies everything from transportation to buildings to manufacturing in order to reduce greenhouse gas emissions, it is essential to ensure the electricity that underpins our economy is clean. Indeed, with electricity demand in Canada expected to grow by 60-110% by 2050 compared to current levels,<sup>2</sup> failing to ensure the grid is emissions-free would mean failing to meet Canada's climate targets. To make our legislated goal of reaching net-zero emissions economy-wide by 2050 in a cost-effective way, our grid must be decarbonized much earlier.<sup>3</sup> That's because as other sectors - transportation, buildings, and manufacturing - shift away from fossil fuels to electric power, having a clean grid ensures that this electrification actually reduces overall emissions rather than just shifting emissions to the power sector.

<sup>1</sup> <https://electricautonomy.ca/charging/utilities/2021-11-15/trudeau-canada-clean-net-zero-grid/>

<sup>2</sup> <https://climateinstitute.ca/reports/big-switch/>

<sup>3</sup> <https://www.gazette.gc.ca/rp-pr/p1/2023/2023-08-19/html/reg1-eng.html> and <https://www.iea.org/reports/world-energy-outlook-2024/executive-summary>

## Regulations are needed to offer planning and investment certainty


Adding new generating capacity to the grid means locking in a certain technology for several decades because the upfront capital costs are only justifiable if power producers can secure long-term contracts - typically 20 years or more. To avoid stranded assets or locking in emissions for decades to come, it's imperative to ensure that new electricity being built today will meet tomorrow's needs by being reliable, affordable and emissions-free. It's the risk of stranded assets, or conversely, locking in emissions, that prompt organizations like the International Energy Agency to say that there can be no new investments in fossil fuel infrastructure if the world hopes to meet its climate goals.<sup>4</sup> This same dynamic holds at the national and subnational levels.

## The world is rapidly moving towards renewable energy

At COP28, countries committed to tripling global renewable energy capacity by 2030. Canada formally adopted this goal. All of the G7 Leaders, including Prime Minister Trudeau, committed to achieving a net-zero electricity system by 2035. Momentum is building as countries install renewable energy at record speed. Last year alone, global renewable energy installations grew by 50%.<sup>5</sup> In 2023, Germany installed 17 GW<sup>6</sup> of renewables, and the UK installed 14 GW.<sup>7</sup> Yet, despite vast potential for wind and solar, Canada has been slow to the race, installing just 2.3 GW<sup>8</sup> in 2023.

**Countries installing  
renewable energy  
faster than Canada:**

**Keep  in the race.**  
**SUPPORT CLEAN ELECTRICITY REGULATIONS**

**CleanElectricityNow.ca** 

<sup>4</sup> <https://www.iea.org/reports/net-zero-by-2050>

<sup>5</sup> <https://www.iea.org/reports/renewables-2023/electricity>

<sup>6</sup> <https://www.cleanenergywire.org/news/germany-boosts-renewables-biggest-energy-policy-reform-decades>

<sup>7</sup> <https://www.uswitch.com/gas-electricity/studies/renewable-statistics/>

<sup>8</sup> <https://renewablesassociation.ca/by-the-numbers/>

## Canada can meet its demand without new gas-powered plants

Modelling has shown that Canada can reach 100 percent zero-emissions electricity by 2035, accounting for increased electricity demand.<sup>9</sup> Achieving this requires a dramatic increase in the rate of installation of renewable energy, as well as energy efficiency, interprovincial transmission and increased battery storage capacity.

But Canada is in an enviable position. Our grid is already 82 per cent decarbonized.<sup>10</sup> We have abundant wind, water, and solar resources, and are well on our way to phasing out coal. Phasing out gas is the final step.

Adding new gas-powered plants to the electricity grid runs counter to the Prime Minister's promise of achieving a net-zero electricity grid by 2035. It has become abundantly clear that natural gas is not cleaner "bridge fuel" that can act as an intermediary between coal and renewable energy because, in addition to emissions from combustion, methane leaks throughout the supply chain significantly increase its climate impact.<sup>11</sup> Current analysis finds that, when accounting for these "fugitive emissions" and methane gas' powerful impact on the climate in the short term, gas is no better, and perhaps even worse than coal when burned to generate electricity.<sup>12</sup> A gas plant built today would be expected to run for a minimum of 20 years, bringing us far past the 2035 deadline for a net-zero electricity grid and dangerously close to Canada's 2050 economy-wide net-zero goal.

### Analysis of the most recent CER update

The draft CER was released in June 2023. The latest public update<sup>13</sup> from February 2024 provides insights into what is currently being considered for the final regulations, expected to be published by the end of the year. We explore below the changes contemplated in the update and their potential implications:

#### → **The restriction on emissions could switch from a unit of energy basis to an annual average per plant**

The main feature of the draft regulations is the emissions performance standard it places on power producers. In the draft regulations, it was proposed that plants covered by the regulations will not be able to emit more than a certain amount of carbon dioxide per every gigawatt hour produced (CO<sub>2</sub>e/GWh).

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<sup>9</sup><https://davidsuzuki.org/wp-content/uploads/2022/05/Shifting-Power-Zero-Emissions-Across-Canada-By-2035-Report.pdf>

<sup>10</sup> <https://energy-information.canada.ca/en/energy-facts/clean-power-low-carbon-fuels>

<sup>11</sup> <https://news.cornell.edu/stories/2024/10/liquefied-natural-gas-carbon-footprint-worse-coal>

<sup>12</sup> <https://iopscience.iop.org/article/10.1088/1748-9326/ace3db>

<sup>13</sup><https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/clean-electricity-regulation.html>

The draft regulations placed an emissions limit per unit of energy produced. In the update, the government is considering changing it to an annual limit per plant. The limit per plant would be calculated based on the emissions standard set by the regulations and the total production capacity of a specific plant.

***This change would likely lead to certain plants running a number of hours unabated and stop running when they reach their annual emissions limit, instead of requiring plants to invest in abatement technology, such as carbon capture (which is plagued by challenges) that would theoretically reduce emissions intensity per unit of energy produced.***

This flexibility is understandable as it will help with grid reliability, as long as the annual limit is sufficiently stringent (i.e. low) to effectively reduce the sector's emissions.

**→ The emissions limit per plant could be raised**

The draft regulations put the emissions limit per unit of energy produced at 30t/GWh starting in 2035 and then 0t/GWh in 2050. This standard came from the fact that most carbon capture technology targets a 90-95% capture rate, which for an average gas plant would place them around the 30t/ GWh mark. However, the government's update now suggests that this standard is not feasible for load-following units (e.g. peaker plants) with carbon capture technology and is contemplating increasing the limit.

***This change could significantly increase the total allowed emissions for the electricity sector. The effectiveness of the regulations will need to be evaluated once we see how the emissions authorized under the chosen limit compare to Canada's goals of a net-zero electricity grid by 2035 and net-zero economy by 2050.***

**→ Some gas-powered plants could be exempt from the regulations for another 25 or 30 years**

While the CER comes into force in 2035, the draft regulations included an additional exemption for existing gas plants. Gas plants operating by January 1st 2025 wouldn't be required to comply with the regulations until the end of their prescribed life (EoPL), which the draft regulations set at 20 years after the plant starts producing electricity. In its update, the government considers extending this EoPL to 25 or even 30 years.

***This change would exempt numerous gas plants across the country from the regulations until as late as 2050. For example in Ontario, under a 25-year EoPL, 11 gas plants would be able to operate unregulated past 2035. Under a 30-year***

***EoPL, every active gas plant in the province would be operating unregulated past 2035, and some would only be affected by the regulations starting in 2050.***

Any EoPL clause means the government's electoral promise of a net-zero grid by 2035 will not be delivered solely through the CER. Extending the EoPL beyond a 20-year period would significantly undermine the effectiveness of the regulations by exempting much of the polluting power generation during critical decades for climate action. The EoPL period should be maintained at 20 years.

→ **Some new gas plants built after 2025 might be eligible for the exemption**

The government's update also suggests that gas plants with "significant work underway," but not commissioned by January 1st, 2025, might also benefit from the EoPL exemption.

***This change would allow new gas plants to come onto the grid in the coming years and be exempt from regulations on their emissions for 20 years or more, depending on the EoPL chosen. So a gas plant that comes online in 2028, for example, may not be subject to the regulations until 2048 or later, depending on the EoPL clause. Adding any new gas to the grid runs counter to Canada's climate plans, and the final CER must be evaluated on their ability to discourage new gas plans from being built.***

## **Conclusion**

A zero-emissions electricity grid is necessary for Canada to build a net-zero economy. Canada has an important head start compared to the rest of the world with over 80 per cent of Canada's electricity already emissions-free, thanks to its transition off coal-powered electricity and its reliance on hydropower and nuclear energy. However, recent efforts by provincial governments and fossil fuel interest groups to add gas to the grid are moving us in the wrong direction.

To accelerate the build-out of renewable energy at the scale and speed required to meet our energy needs and emissions reduction goals, Canada needs **stringent Clean Electricity Regulations** that constrain the sector's emissions in line with Canada's climate goals. This must be done in parallel with significant support for renewable energy deployment through direct investments, investment tax credits, labour-training programs, enhanced equity for Indigenous nations in projects, capacity building for municipalities that will approve projects, interprovincial transmission buildouts and an acceleration of energy efficiency efforts.



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