



Wednesday, November 1, 2023

Environment and Climate Change Canada

Consultation via portal:

[Canada Gazette, Part I, Volume 157, Number 33: Clean Electricity Regulations](#)

Re. Outstanding questions and concerns regarding the proposed Clean Electricity Regulations

To whom it may concern,

On behalf of the Atlantica Centre for Energy, I am sharing outstanding questions and concerns raised by operators in the Atlantic Canada's energy sector, especially within the Maritime provinces, regarding the proposed legislation for the Clean Electricity Regulations. These proposed Regulations can help the region meet important emission reduction goals but must be done with the utmost flexibility in mind to ensure no province is detrimentally impacted during this critical energy transition.

The Atlantica Centre for Energy provides a unique forum for industry, academia, government, and the community at large to foster partnerships and proactively engage in energy-related issues here in Atlantic Canada. The Centre's partners represent the largest employers, energy producers, distributors, and consumers in the region, as well as virtually all sources of energy generation.

The Centre is proud to serve as an informed and independent voice with respect to the evolution and growth of this region's energy sector, including efforts to launch transformative new clean technologies and decarbonize systems in support of our collective net-zero goals.

The Centre was pleased to share feedback on the proposed frame for the Clean Electricity Regulations in August, 2022 ([attached](#)). Several recommendations from Atlantica's feedback on the proposed frame were recognized in the proposed Regulations, including changes to provide increased flexibility for utilities and allowing additional non-emitting generation sources. However, other noteworthy concerns have not yet been addressed.

The proceeding feedback covers five key topics the Atlantica Centre for Energy believes to be important considerations for changes to the Clean Electricity Regulations; regional differences, affordability, energy security and reliability, transparency, and equitability. Within these five topics, the Centre will identify several tangible amendments or actions to improve the proposed Regulations.

Regional differences:

The Atlantica Centre for Energy has raised concerns in the past regarding federal regulations deploying consistent energy policies and regulations across all provinces and territories. Regional policy leaders have voiced similar concerns with the Clean Fuel Regulations, for [example](#). In many cases, especially in the energy sector, regional differences in geography and weather, infrastructure, demographics, and industry are too great to deploy blanket strategies that are as effective and equitable in one province as another. This ineffectiveness and lack of equitability is apparent, especially for the Maritime provinces, relative to other provinces under the proposed Regulations.

The Clean Electricity Regulations do not account for geographic and weather limitations in some provinces, especially regarding access to hydroelectric generation. Provinces with access to hydroelectric generation have taken advantage of this fact in large part with investment in these resources decades ago. For example, Newfoundland and Labrador, Quebec, Manitoba and British Columbia have relatively fewer compliance costs associated with the proposed Regulations in large part because of these hydroelectric investments. The Maritime provinces do not have access to the same relative supply of this renewable energy, which would otherwise provide affordable and reliable baseload generation, while complementing additional variable renewable generation.

The Centre appreciates the regulations are largely technology agnostic and that the Department has acknowledge the 30t per GWh threshold *“aligns with the emissions intensity of natural gas generation with carbon capture and storage (CCS) achieving a 95% capture rate.”* There are concerns about the applicability of carbon capture and storage technologies in the Maritime provinces. While research is underway in to determine the potential for CCS in Newfoundland and Labrador, the Maritime provinces cannot reasonably rely on this technology or additional hydroelectric generation meet CER obligations.

The Atlantic provinces face highly variable electricity demand with dramatically higher winter peaks, in large-part because much of the residential and small business space heating needs are already met with electricity. Both New Brunswick’s and Nova Scotia’s natural gas grids reach limited customers outside of major centres, and there are effectively no natural gas customers for space heating in Prince Edward Island and Newfoundland and Labrador. This reality is different from elsewhere across Canada.

As a result, it is especially important for the Maritime provinces (indirectly for Prince Edward Island) to maintain access to natural gas-fired electricity generation to maintain energy security and reliability. This is reasonable given the aforementioned concerns, as well as the effectiveness of the rising price on carbon, already in place through output based pricing

systems, which ensures natural gas and other fossil fuels will be less and less cost-effective solutions, and utilities will be motivated to find incremental efficiencies in their corresponding fossil fuel-fired generating assets.

It is also important to recognize that not all fossil fuel-fired generation units have the same emission intensity and fleet averaging could further encourage utilities to deploy the lowest emitting fossil sources and most efficient technologies.

The Atlantica Centre for Energy proposes the Regulations be amended to allow fleet averaging of emissions, on a rolling average basis, to further flexibility for utilities and encourage incremental efficiencies in existing assets and processes.

The Atlantica Centre for Energy proposes the Regulations further explore average emission thresholds for fleet assets in addition to electricity imported and/or exported, to ensure utilities benefit if purchasing non-emitting electricity from another jurisdiction.

The Centre welcomes the certainty that electricity generation from biomass and nuclear are permitted in the Regulations as non-emitting sources of generation. This will not only provide utilities in the region with additional compliance pathways, where deployable, but as well provides some additional exemptions or flexibility for industry using cogeneration. However, the Centre is very concerned cogeneration using fossil fuels is not exempt entirely. For some facilities, the primary benefit of investing in cogeneration is to produce steam for different industrial processes. Alternative options to generate steam are limited in the region, especially with no offset credit system described to permit blended low carbon fuels.

The Atlantica Centre for Energy proposes the Regulations be amended to exempt all cogeneration.

The Atlantica Centre for Energy proposes the Regulations be amended to allow a credit system to encourage blended low carbon fuels, and other carbon offsets to achieve emission intensity requirements prescribed under the Regulations.

Affordability:

The Centre is concerned that under the proposed regulations, in addition to the required phase out of coal-fired generation in New Brunswick and Nova Scotia, fossil fuel-fired assets may be decommissioned before their otherwise achievable lifecycle. While decarbonizations efforts are critical, the Centre believes there are more cost-effective energy policies to achieve similar emission reduction results at a lesser cost to the public or ratepayers. Affordability is paramount to ensure continued public support for the energy transition, as identified by the

federal government. This is especially true in the Atlantic provinces where residential heating is more [electrified](#) (outside of Quebec) but the [medium after-tax household income](#) is lower than elsewhere in Canada.

The Atlantica Centre for Energy proposes the Regulations extend the emission performance standard for any unit “significantly modified,” or the ‘any other’ category to its otherwise reasonable operating life (possibly beyond 20 years).

Security and reliability:

While the Atlantic provinces will continue building additional capacity through renewable electricity generation, especially solar and wind (onshore and soon offshore), these sources of variable renewable generation alone cannot ensure reliability for the grid. Nuclear and hydroelectric generation (both local and imported to the Maritimes) and targeted solid biomass generation will help bridge this gap. However, there must remain a role for natural gas and other fossil fuels to use on a limited basis to ensure the energy transition is as affordable as possible.

One important concern raised by local stakeholders is the time remaining to make the changes necessary to existing generating assets, deploy additional ones to replace outgoing assets or meet growing demand, and improve the grid to ensure it is robust and resilient enough to carry clean electricity in the future. These are incredibly time-consuming tasks, which will be challenging to complete within the next 11 years.

The Atlantica Centre for Energy proposes the Regulations be amended to permit new natural gas-fired electricity generation until 2030.

The Atlantica Centre for Energy proposes the Regulations be amended to consider implementation delays on a case-by-case basis to ensure utilities and their ratepayers are not punished for unforeseen infrastructure delays.

As noted in the answers to questions raised during the webinar on the proposed Regulations, emergency generators running in conjunction with or as backup for nuclear facilities have not yet been exempted from emission caps.

The Atlantica Centre for Energy proposes the Regulations be amended to exempt any emergency generators operating with a nuclear facility.

Importantly, as these regulations will be incredibly impactful until at least 2050, they should be reviewed on a regular, ongoing basis to ensure the compliance pathways are feasible as technologies and costs evolve over time.

The Atlantica Centre for Energy proposes the Regulations be reviewed every five years to ensure pathways are achievable.

Transparency:

The Centre recognizes the challenging task to accurately forecast regulations as complex and impactful as those included in the proposed Clean Electricity Regulations. However, upon review and consultation with external stakeholders, the Centre is concerned about accuracy in the data shared for the Atlantic region, both in terms of cost and practicality of solutions chosen.

In particular, the Centre is concerned about data that has yet to be made public from the baseline scenario which could provide valuable context to the public about the costs associated with the energy transition. According to modelling in the RIAS, the average real residential electricity rate increases of 43% between 2025 and 2050 cumulatively in the baseline scenario, and additional two per cent (45%) in the regulatory scenario. Based on implied language in the RIAS, as well as external modelling, it is reasonable to assume the average real residential electricity rates will be higher than 45% real cumulatively in the Maritime provinces. Accordingly, it remains unclear whether savings from household energy changes over the period, especially for rural residents, will be enough to offset the rising cost of electricity in the region.

For these reasons, among others, the Centre is concerned about the accuracy of the forecasts included in the RIAS as they relate to the Atlantic provinces. It is our understanding that ECCC is working with utilities to improve the data used to develop the Regulations. We welcome changes to better account for the operational constraints in different provinces such as biomass generation in Nova Scotia or the assumption of an Atlantic Loop for which plans have since changed. The Centre looks forward to reviewing the corresponding cost implications.

The Atlantica Centre for Energy proposes the Regulations' RIAS be expanded to share additional data for each province and territory to help residents better understand the cumulative costs of the electricity transition to promote acceptance as costs rise in the future.

The Atlantica Centre for Energy conducted an analysis of the proposed frame Regulations (as of August, 2022) through Net Zero Atlantic's ACES Model. Of the scenarios modelled, it is clear changes to add flexibility in the most recent proposed Regulations cost ratepayers relatively

less than what was originally proposed. In the [Technoeconomic Analysis of the Proposed Clean Electricity Regulations prepared for Atlantica Centre for Energy in December, 2022](#), limiting fossil fuel-fired electricity generation from 100% optimal operation to 5% operation reduced GHGs across the region a combined 3 Mt between 2035 and 2055, without adding significant costs. However, the carbon price modelled in the scenario continued to rise annually by \$15/tCO₂e after 2030. Natural gas combined with CCS were also selected for some generation units, which may not be feasible. Therefore, it is reasonable to expect there could be additional costs for limiting optimal operations to 5% (like the proposed Regulations) if using the baseline scenario carbon pricing assumption from the RIAS.

Equitability:

The Atlantica Centre for Energy appreciates the financial tools made available to assist utilities and developers across Canada in the energy transition. Investment tax credits and access to affordable financing, in particular, are powerful tools to help attract the investments needed for decarbonize our electricity grids and meet growing demand, while maintaining reliability. However, the Centre is concerned that, like policies and regulations which are consistent across provinces and territories, financial tools that are equally accessible in Nova Scotia and they are in British Columbia, for example, does not provide an equitable electricity transition across the provinces and territories.

Based on Table 27 in the RIAS (Incremental costs net of incremental cost-savings by province (in millions)), the measure of relative net incremental cost by size of economy over the 27-year period in the regulatory scenario shows New Brunswick, Nova Scotia and Prince Edward Island would be see the first, fourth and fifth highest relative compliance costs of the ten provinces. For example, in New Brunswick, the net cost of the proposed Regulations relative to the size of the economy is \$9,910,000,000, compared to a net relative saving of -2,404,000,000 in British Columbia. More concerning perhaps is the \$405,000,000 annualized average net cost in New Brunswick, which would represent roughly a 2.5% annual increase from this regulation alone based on current revenues. This increase does not appear to be captured in New Brunswick's forecasted rate increase in the RIAS.

Emission reduction and climate change are problems shared by all Canadians. The costs of reaching these goals should be as well.

The Atlantica Centre for Energy proposes that federal financial tools designed to decarbonize electricity systems and grow electricity demand provide additional targeted support to provinces based on how each is impacted by federal regulations.



Thank you for your attention to these questions and concerns. As always, the Atlantica Centre for Energy is available and ready to help ensure the region's energy sector develops the most affordable, reliable and clean electricity for residents and businesses, while growing the economy through this transition. To discuss further, you can reach me at 506-674-9439 or by email at michelle.robichaud@atlanticaenergy.org.

Sincerely,

A handwritten signature in blue ink that reads "M Robichaud". The signature is fluid and cursive.

Michelle Robichaud
President