CAPP CANADA'S OIL & NATURAL GAS PRODUCERS

October 30, 2023

The Honourable Steven Guilbeault
Minister of Environment and Climate Change Canada
200, boul. Sacré-Coeur
Gatineau, Quebec
K1A 0H3
(via email: minister-minister@ec.gc.ca)

Dear Minister Guilbeault:

Re: Canada Gazette, Part I, August 10, 2023, Clean Electricity Regulations

The Canadian Association of Petroleum Producers (CAPP) is committed to environmental leadership and working to be a constructive and solution-oriented partner in addressing the triple challenge of emission reduction, energy security and affordability. It is in this spirit that we provide our comments regarding the federal Government's proposed Clean Electricity Regulation (CER), as announced on August 10, 2023.

Upon review of the CER, CAPP members are concerned that the proposed regulations as drafted will be challenging to industry competitiveness as well as decarbonization opportunities.

With respect to competitiveness, the overall average price of electricity is expected to rise, but more concerning is the expected increase in the volatility of electricity prices, which is a key input to the oil and gas industry's operations.

Of greater concern is the potential reduction in electrification options in the oil and natural gas fields. A key element of industry's ability to decarbonize—depends on the ability to access grid electricity. We note that electrical utilities in British Columbia, Alberta and Saskatchewan are already concerned about the cost to build clean, grid-based electricity lines to oil and natural gas fields. The CER, as proposed, will make it even more difficult for utilities to justify building electrical generation and distribution infrastructure to enable access and supply for our industry. As we have conveyed to federal government officials in the past, many of CAPP member operations exist in remote areas, across several provinces, including the offshore. As a result, they rely heavily on natural gas, propane and diesel to do work and support production operations.

2100, 350 – 7 Avenue S.W.
Calgary, Alberta
Canada T2P 3N9
Tel 403-267-1100

1820, 275 Slater Street
Ottawa, Ontario
Canada K1P 5H9
Tel 613-288-2126

1004, 235 Water Street
St. John's, Newfoundland and Labrador
Canada A1C 1B6
Tel 709-724-4200

201, 1114 Langley St.
Victoria, British Columbia
Canada V8W 1W1
Tel 778-265-3819

www.capp.ca ○ communication@capp.ca

Our sector relies on reliable energy sources to support production operations to ensure they can operate in a consistent and stable manner 24 hours a day, 7 days a week, delivering the energy that both Canada and the world needs.

As new projects are designed, industry evaluates all forms of power for facilities, notwithstanding the limitations and constraints on electricity systems to fulfill the needs of these projects.

Electrification is one pathway to lower emissions intensity of the products we produce if electricity is available and is a cost competitive alternative to other energy sources. If electricity is not a dependable and cost competitive option, operations will not be able to consider it. New projects aside, our sector remains a significant consumer of electricity and any actions that have the potential to impact the reliability and affordability of electricity will have a direct adverse effect on the sectors' current operations.

Over and above the potential capacity increase from the oil and gas sector, energy demand is increasing in all provinces. Even in Budget 2023, it was noted that supply capacity would have to more than double by 2050 to ensure adequate supply.[1]

Electricity has the potential to reduce emissions from many parts of the economy, however this will not be achieved if the safety, reliability and affordability of the electricity system is compromised, even without considerations for necessary growth and expansion. Regional considerations must be afforded, and CAPP believes that a one-size fits all approach will not be suitable to address the widely varying ability to access clean electricity systems across the country.

CAPP's comments will further highlight some of the potential impacted areas to upstream oil and natural gas sector but overall, our industry is looking for the following outcomes:

- Regulations must ensure the safety, reliability, and affordability of electricity.
- Regulations must maintain the important role of natural gas to be a reliable part of the electricity mix.
- Regulations should recognize the contribution and provide flexibility for co-generation operations within the oil and natural gas sector.

Currently, the federal Output Based Pricing System (OBPS) has a standard to reduce the intensity of the electricity used in the country and that tool should be the first step in the process on what should be done and enable operations to use the system to its fullest capacity. Tools such as the OBPS have just been implemented and it is unclear why current policies under the Greenhouse Gas Pollution Pricing Act (GGPPA) are deemed insufficient. Additional policy layers are likely to create unnecessary complexity thus diminishing the effectiveness of the

[1] Government of Canada (Budget 2023) A Made-in-Canada Plan: Strong Middle Class, Affordable Economy, Healthy Future

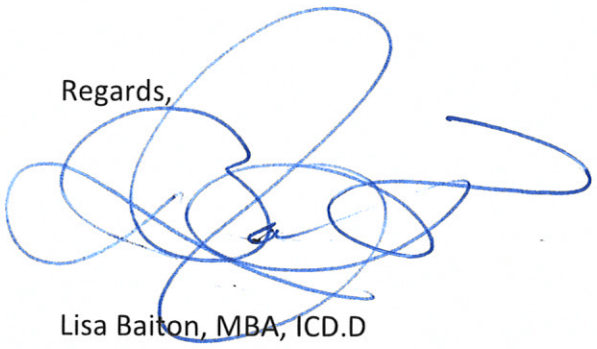
existing policy tools. Investors that are vital to funding our industry's decarbonization efforts need greater clarity, not greater complexity.

CAPP suggests that the federal government of Canada work with provincial jurisdictions on what timing is feasible for reducing emissions from electricity systems to 2035 and beyond to ensure they can deliver the electricity Canadians need and on an achievable timeframe. In some cases, 2035 is too ambitious for achieving a Net Zero grid. Regional considerations and recognition that provinces are starting at different points needs to be factored into the regulatory framework.

CAPP urges the government to reconsider its approach with respect to co-generation energy production. Co-generation units utilize what would otherwise be wasted heat in the generation of electricity to meaningfully contribute to the thermal needs at oil and natural gas operations. Inclusion of this technology in the CER is not consistent with the other generation options. In Alberta, Co-generation plants are physically tied to the production operation systems and as such cannot be cycled up and down. Inclusion of co-generation within the CER will result in unintended consequences and these operations should be excluded.

We urge the Government of Canada to carefully consider the complexities surrounding all emission reduction policies. There is a fundamental risk that if not considered and addressed, the impacts of a proposed clean electricity regulation could affect progress on decarbonization in our sector and impact our ability to deliver energy to those that need it within Canada and beyond. Should you have any questions related to the details contained herein, please contact the undersigned or patrick.mcdonald@capp.ca.

Regards,



Lisa Baiton, MBA, ICD.D
President & CEO

Cc: Jean-François Tremblay, Deputy Minister, Environment and Climate Change Canada
John Moffet, Assistant Deputy Minister, Environment and Climate Change Canada
Karishma Boroowa, Director, Electricity and Combustion Division

Attachment 1

As ECCC reviews the CER in context of Canada's oil and natural gas sector, CAPP believes the following critical elements need to be considered:

1 – Safety, Reliability and Affordability:

- **Our sector is a major consumer of electricity that is required to run operations.**
- **Reliable and affordable electricity continues to be needed for existing operations and will be necessary if electrification is to be leveraged as one of the key decarbonization pathways of the industry.**

2 – Natural Gas:

- **Our sector is a supplier of natural gas to the electricity system.**
- **Natural gas has been responsible for a significant reduction in emissions from electricity and provides reliable baseload electricity.**

3- Co-Generation:

- **Our sector is an electricity generator through co-generation units.**
- **Co-generation units have been efficiently and effectively improving the performance of the Alberta grid and enabling effective resource recovery.**

Safety, Reliability and Affordability

Oil and gas plant operations rely heavily on a stable source of energy and power outages most often lead to plant outages and operational upsets. Significant portions of oil and natural gas operations can be electrified if favorable conditions exist. Specifically, if electricity is available and a cost competitive alternative to other energy sources. New technologies are constantly being incorporated and will continue to be able to leverage the electricity grid when there is access and affordable and reliable supply to support low emitting resource production.

CAPP notes that the electricity supply across Canada needs to have sufficient baseload to assist in the decarbonization of many sectors including oil and natural gas. Sacrificing the reliability of the system and increasing cost will slow down industrial operations' ability to reduce emissions through electrification. Technology to support a lower emission baseload power is evolving and will take time to implement depending on what resources provinces have developed and the changes that need to be made to lower emissions of the system. Many provinces are in the process of phasing out coal and this additional timeline constraint will have implications on past investment decisions.

CAPP believes there is potential in using electrification as a key decarbonization pillar for the conventional oil and natural gas sector. Electrification can significantly reduce stationary combustion emissions form processes which are fueled by fuels like natural gas, propane, and diesel. However, electrification of these sources can only be realized if there is access to affordable and reliable electricity. In absence of that, operators must look to other means of

energizing their operations. An analysis by S&P Global highlighted that a potential 17% increase in supply for electricity across Canada by 2040 would be necessary to fulfill electrification needs of the conventional oil and natural operations sector.[2]

This increase in potential demand is significant when considering the needs for transportation and other sectors across the economy. As noted in Budget 2023 the demand for electricity is expected to increase broadly across Canada and electricity systems need time to adapt. According to Alberta's Electricity System Operator, even with aggressive renewable growth that has dominated the Alberta supply mix in the past few years there is still expected to be a gap in the ability to meet generation requirements on the forecasted timeline.[3]

In consideration for potential mitigation outcomes to avoid unintended consequences, the key consideration is that sufficient time is provided to provinces to manage regional circumstances to decarbonize unique to their jurisdictions.

Natural Gas

Natural gas supports affordable and reliable electricity generation within Canada. Currently, the performance standard included in CER (30 tonnes CO2 emissions/GWh) is over a 90% reduction in the current Federal Standard of 370 tonnes CO2e per GWh for gaseous fuels.

It is unclear if the proposed standard is achievable for new gas fired plants coupled with carbon capture and sequestration. Existing plants would not be able to achieve the standard and would require significant retrofitting or would have to be used in limited capacity. Given natural gas generation in AB and SK are 72%[4] and 38.6%[5] respectively, the implications of minimizing natural gas' role in the future of electricity generation in these provinces will be immense. Natural gas has been an effective means globally for reduction.

On average, coal-to-gas switching reduces emissions by 50% when producing electricity and 33% when providing heat.[6] We recognize that maximizing the climate benefits of switching to natural gas requires best practices to reduce methane leaks, and Canada has a proven track record in this regard.

As written, the draft regulations risk electricity generation with natural gas not being a viable means to produce energy after 2035.

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[2] Reference S&P Global Electrification 2023

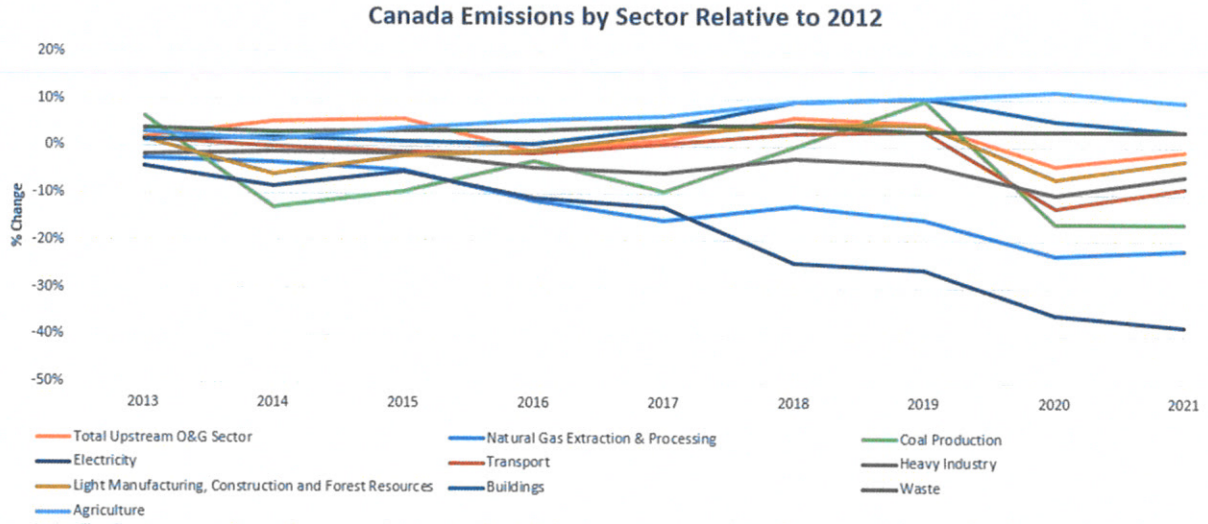
[3] Alberta Electric Systems Operator (September 28, 2023) *Technical Briefing on Proposed Clean Electricity Regulations* https://www.aeso.ca/assets/AESO-CER-Technical-Briefing_FINAL.pdf Approved AESO Slides

[4] Alberta Electric Systems Operator (September 28, 2023) *Technical Briefing on Proposed Clean Electricity Regulations* https://www.aeso.ca/assets/AESO-CER-Technical-Briefing_FINAL.pdf Approved AESO Slides

[5] SK Power (n.d.) *System Map* https://www.saskpower.com/Our-Power-Future/Our-Electricity/Electrical-System/System-Map System Map (saskpower.com)

[6] World Energy Outlook (2019) *The Role of Gas in Today's Energy Transitions* https://www.iea.org/reports/the-role-of-gas-in-todays-energy-transitions IEA. The Role of Gas in Today's Energy Transitions

Natural gas implementation has been one of the largest sources of emission reductions in the electricity system in the last ten years and this needs to continue. See Figure 1.



Any proposed regulations need to enable the continued use of natural gas for effective baseload power delivery and include flexibility for regions that depend and currently use natural gas as the primary source of electricity generation baseload.

Potential mitigation outcomes to avoid unintended consequences, requires that the regulation recognizes the contribution natural gas has and will continue to deliver to the electricity system in Canada and beyond. Any standards must ensure natural gas can be a key contributor to the electricity system.

Co-Generation

Oil sands operations and gas processing plants have brought on a significant amount of electricity generation in past years. This has helped to lower the intensity of Alberta's electricity grid over the past decade. More co-generation units are expected to come online between now and 2035. Co-generation is unique as it allows for increased efficiency for multiple uses to leverage the thermal heat produced from the operation.

Co-generation has been a key technology to reduce the emission intensity of electricity grids and support thermal needs at facilities. As the co-generation unit is in many cases fully integrated into the system it will affect how these projects operate if they are to adjust the electricity they generate.

If the units are not used, there will have to be other systems built to meet the thermal heat demands if the co-generation units are not able to meet the performance standard requirements and are shut in.

Approximately 28% of the Alberta generation maximum capacity is delivered through co-generation[7]. Many of the Heat Recovery Steam Generator units associated with co-generation in oil and natural gas operations are closely tied with operations that need the thermal heat to generate steam to recover the resource through SAGD or CSS or to run process units. As these systems are fully integrated with the production operation system overall, there is an added level of complexity that must be considered.

Currently any export of electricity from co-generation results in inclusion in the CER. This position is significantly more stringent than the 25 MW of generation capacity threshold than is proposed for other sources within the CER. This unreasonable limit must be addressed as the inclusion of co-generation systems that are physically integrated with industrial operations will result in unintended consequences to the operation and the ability to support the electricity grid with low emission intensity.

Given the complex nature of co-generation and the direct integration into the production systems, these units should be excluded from the scope of the CER.

If the units are not excluded, flexibility needs to be added back into the regulatory framework system or else significant generation capacity may be lost, past investments in co-generation will be negatively impacted, and additional infrastructure will have to be built to meet thermal needs of the production operations.

[7] Alberta Electric Systems Operator (April 14, 2023) *Current Supply/Demand Asset List* https://www.aeso.ca/market/market-and-system-reporting/data-requests/current-supply-demand-asset-list/ Current Supply/Demand Asset List » AESO