ONTARIO ENERGY ASSOCIATION

FEDERAL CLEAN ELECTRICITY STANDARD

OEA Response to Discussion Paper

APRIL 15, 2022

To shape our energy future for a stronger Ontario.

Ontario Energy Association

ABOUT

The Ontario Energy Association (OEA) is the credible and trusted voice of the energy sector. We earn our reputation by being an integral and influential part of energy policy development and decision making in Ontario. We represent Ontario's energy leaders that span the full diversity of the energy industry.

OEA takes a grassroots approach to policy development by combining thorough evidence based research with executive interviews and member polling. This unique approach ensures our policies are not only grounded in rigorous research, but represent the views of the majority of our members. This sound policy foundation allows us to advocate directly with government decision makers to tackle issues of strategic importance to our members.

Together, we are working to build a stronger energy future for Ontario.

The recommendations and positions contained in OEA papers represent the advice of the OEA as an organization. They are not meant to represent the positions or opinions of individual OEA members, OEA Board members, or their organizations. The OEA has a broad range of members, and there may not always be a 100 percent consensus on all positions and recommendations. Accordingly, the positions and opinions of individual members and their organizations may not be reflected in this document.

The Ontario Energy Association (OEA) appreciates the opportunity to provide feedback on Environment and Climate Change Canada's discussion paper *A Clean Electricity Standard in support of a net-zero electricity sector* released on March 8th, 2022.

The OEA represents the full spectrum of the energy industry in Ontario. Our membership includes local distribution companies (LDCs), electricity transmission companies, natural gas distributors, natural gas transmitters, power producers, demand response aggregators, energy storage companies, new technology companies, and a variety of companies that provide goods and services to the sector. Given its makeup, it is the OEAs members that will leading and involved in implementing the energy transition in Ontario.

The OEA strongly supports the federal government's efforts to ensure Canada meets its international GHG emissions reductions targets. Our association is committed to working collaboratively with federal, provincial, regional and municipal governments to find the optimal pathways to meet or exceed our emissions reductions targets while still maintaining energy affordability and reliability for our customers. Demonstrating that together, government and the energy sector have done everything they can to optimize energy affordability and reliability in the energy transition will ensure public support is sustained throughout the transition, and ensure that Ontario businesses are not competitively disadvantaged, leading to counter-productive emissions leakage to other countries.

OPTIMIZING EMISSIONS REDUCTIONS PATHWAYS

The OEA believes that the optimal strategy for the electricity system in Ontario requires a holistic economy-wide approach. As the discussion paper mentions, and is often cited in other analysis, Ontario is going to have to at least double the size of its electricity system to facilitate the fuel switching and associated decarbonization of multiple sectors: industry, transportation, buildings, etc.

This being the case, the optimal strategy for transition of the electricity sector becomes an optimization problem within a larger decarbonization strategy. Step one involves examining the optimal decarbonization approach for each sector of the economy in Ontario. This in turn will provide valuable information on the expected pace and magnitude of new electricity demand within Ontario[1]. With that analysis, done at a sufficiently thorough level, in consultation with affected knowledgeable industries and customers, a strategy can then be developed for Ontario's electricity system. The analysis must be done in this order to ensure Ontario and Canada are making the optimal choices to meet our decarbonization targets.

The OEA has been advocating for this approach for Ontario for the past couple of years. You can find more details on our proposed approach in our Energy Platform, where we outline the need for a comprehensive integrated energy plan for Ontario.

[1] And for other decarbonization approaches, such as energy efficiency, demand management, renewable natural gas, hydrogen, etc.

Currently in Ontario, natural gas fired generation provides about 11,000 MW of capacity. When the Pickering nuclear generating station shuts down completely in 2025, these gas plants will represent about one-third of Ontario's electricity generation capacity. At the same time, the natural gas plants are generally used sparingly to meet peak system needs. The gas plants only represent about six percent of the electricity generated in Ontario: Ontario's electricity grid is about 96 percent emissions free.[2]

A realistic forward-looking scenario might help illustrate the optimization calculations facing Ontario and the federal government. As a result of various emissions reductions imperatives (legislative, market, shareholder, lender, etc.), all large currently carbon intensive industries are now developing actionable decarbonization plans. On top of this will be layered new demand from the transportation sector, buildings, agriculture and all other sectors. All of this will require large and possibly massive increases in electricity production, transmission and distribution. Significant electricity infrastructure typically can take 10 years or longer from conception to completion. As these large demands inevitably materialize in Ontario, it is important to support the transition by ensuring that the electricity system is able to meet that demand. If Ontario moves too quickly to shut down and eliminate natural gas generation because of a specific focus on the electricity system, Ontario may be forced to tell customers that it cannot meet their growing electricity needs because it does not have adequate capacity. In this case it would result in Canada's emissions being higher than if the gas plants had been kept available to meet occasional peak needs. High GHG emissions end uses will be forced to carry on with current fuel and technology structures rather than fuel-switching to a very low emissions option.

If the above scenario unfolds, many of the risks cited in the paper facing Ontario businesses would materialize, including competitive disadvantage and border carbon adjustments. Canada should adopt a strategy that minimizes the exposure of its businesses to these risks.

GOVERNANCE AND THE ENERGY TRANSITION IN ONTARIO

As noted in the consultation document, provinces and territories hold jurisdiction over electricity planning and operation. It is at the provincial level where the greatest expertise exists as to how to best manage Ontario's electricity system. The Independent Electricity System Operator (IESO) is responsible for electricity system planning in Ontario, and the provincial government, through the Ministry of Energy, is typically heavily involved in decision making related to the procurement of significant resources in the province, and the independent provincial energy regulator – the Ontario Energy Board – is typically engaged in an oversight role for major investments funded by customers. Together, the IESO and the Ministry take the lead in defining the optimal evolution of Ontario's electricity system, with Ontario Energy Board regulatory oversight as and when appropriate.

[2] IESO. *Decarbonization and Ontario's Electricity System: Assessing the impacts of phasing out natural gas generation by 2030*. October 7, 2021.

Presently, the IESO is undertaking a *Pathways to Decarbonization* study to examine the issues raised in the federal consultation. The study will inform the development of achievable pathways to zero emissions in the electricity sector. The OEA believes that the IESO's work should inform any federal strategy and regulation. The OEA believes that any prescriptive federal regulation that restricts the IESO, Ontario Ministry of Energy, and Ontario customers from finding the optimal pathway to decarbonization of our economy may be premature. This speaks to the development of a Clean Energy Standard (CES) that is developed in partnership with the province of Ontario, and is sufficiently flexible to allow Ontario to find the optimal pathway to decarbonizing the provincial economy, under the expert guidance, in the Ontario specific context, of our provincial energy regulator.

ANSWERS TO CONSULTATION QUESTIONS

What follows are the OEA's answers to the questions included in the discussion paper.

General

1. **Should interim standards be included in the period before 2035?**

The OEA's answer would depend upon what those standards might be, and when they might be introduced. There should be extensive consultation in Ontario on any new interim standard that would affect Ontario's optimal decarbonization pathway.

2. **How should the CES regulation be designed to minimize stranded capital assets and associated rate impacts?**

Minimization of stranding of assets can be achieved with proper analysis of optimal decarbonization pathways that are specific to Ontario and its system needs. This suggests that there be some flexibility in any regulations to allow Ontario's system operator and Ministry of Energy and energy regulator, who have the detailed knowledge of Ontario's energy sector, to make decisions that optimize Ontario's ability to decarbonize its economy.

3. **What would be an acceptable end-point emissions intensity standard to achieve the objective of the CES?**

This is an excellent question. The OEA suggests that there be sufficient economy wide and detailed sectoral analysis undertaken, specific to Ontario, before the CES prescribes an emissions intensity standard.

4. **How do considerations differ for non-competitive electricity markets, vertically integrated utilities, etc.?**

The fact that Ontario has a hybrid market system is a lesser issue for development of the CES regulation. The main consideration for Ontario relates to the unique circumstances of the Ontario electricity system, topography and economic transition needs. These will

inform the types of resources that will be available to be brought to bear on the overall decarbonization of the economy. For example, topography dictates what might be available in terms of hydroelectricity or Carbon Capture Utilization and Storage (CCUS). Those capabilities or limitations, in turn, drive the pace and magnitude of need for incremental electricity resources with specific capabilities to ensure a balanced system.

Compliance Flexibilities

5. **Should the CES offer compliance flexibilities?**
    a. **What kinds of flexibilities?**

Yes, there should be compliance flexibility. Each jurisdiction in Canada is different, so flexibility will help each jurisdiction make decisions within their electricity system that best help Canada reach its decarbonization goals while retaining system resilience and affordability.

    b. **Should the flexibilities be targeted to individual generating units? To corporate fleets of units, such as fleet averaging, etc.?**
    c. **What constraints or limitations should be incorporated into flexibilities?**

Any constraints should be at the highest level possible: i.e. constraints should be for the overall electricity system, and not for individual resources, to allow the provincial government and system operator to maximize overall efficiency of decarbonization. Given this, constraints and limitations should be minimized.

6. **Under what conditions should offset credits available through federal, provincial/territorial, or other programs be permitted?**

To the extent credits are made available and defined to be legitimate for all players in the economy, they should be equally available to the electricity sector. The electricity sector should not face specific restrictions on the use of credits.

7. **To what extent can negative emission technologies like BECCS and DAC contribute to meeting the obligations of a CES regulation? To what extent should they be allowed to contribute to meeting those obligations?**

The OEA believes that all broadly accepted negative emissions technologies should be eligible to the electricity sector. Policies towards negative emissions options should be technology agnostic. The list of potential technologies should also include CCUS, as this technology is seen as a necessary tool for decarbonization by the International Energy Agency.

8. **Should compliance be assessed for the electricity sector on an annual or multi-year basis?**

This might depend on the compliance cost versus benefit of any proposed assessment methodology. This may point to possibly different compliance assessment approaches for different resources. Generally multi-year compliance periods provide maximum flexibility within the constraints of appropriately defined targets, thus enhancing the ability of policy and decision makers to optimize outcomes.

Alignment with carbon pricing

9. Should the way in which electricity generation is currently treated by carbon pricing be changed to facilitate achieving NZ2035?

Carbon pricing for electricity generation should be no different than for any other sector of the economy. Carbon pricing signals should be consistent and clear. Price fidelity sends the proper market signals and best incents the creativity and innovation that will be needed for Canada to reach its carbon goals.

10. How might the treatment of electricity under the OBPS have to change to align with the CES?

Given that Ontario has transition from the federal Output-Based Pricing System (OBPS) to Ontario's Emissions Performance Standards program, changes to the OBPS are not required in this context.

Treatment of natural gas generation

11. What is the role of natural gas in a net-zero electricity sector before 2035? Post-2035?

As outlined earlier in the first section of this paper, the role of natural gas generation should be determined first by a detailed sectoral emissions reduction pathway analysis of the Ontario economy. This would then inform the pace and magnitude of changes in electricity demand in Ontario, and the associated role of natural gas generation over time.

12. What flexibility should be allowed to use natural gas to maintain reliability in rare and extreme weather, emergencies, or other special circumstances? Which additional operating conditions/scenarios, if any, should be given special consideration?

As with the answer to question 11, any flexibility given to natural gas generation should be determined based on a detailed analysis as to what its optimal role is in decarbonizing Ontario's economy overall.

   a. **If natural gas has an electricity system-support role post-2035, what are the expected impacts on the rollout of emerging system support technologies such as energy storage?**

Ontario is going to need all available technologies in order to meet its decarbonization commitments. Natural gas plants with either Renewable Natural Gas (RNG), CCUS, could prove to be useful tools in Ontario's and Canada's decarbonization strategy.

Regardless, energy storage of various forms and technologies will be a necessary and critical element of our decarbonization transition: this includes pumped hydro storage, battery storage, hydrogen storage, and a variety of other technologies. We are going to need all the resources we can muster to facilitate this energy transition. As any technology improves and we gain more and more experience with it, straightforward analysis will tell us when energy storage projects should replace/complement natural gas generation.

b. If natural gas has a role in generation post-2035, what are the expected impacts on the penetration of nascent generation technologies like SMRs, geothermal electricity, etc.?

As with the answer to 12 a., fairly straightforward analysis will tell us when it is best to replace one technology with another to best meet decarbonization objectives.

Treatment of industry, private generation and remote generation

13. How should the CES treat electricity generated by cogeneration units that is sold to the electricity system? Should the CES apply fully to cogeneration units by 2035 or should it phase-in its application to cogeneration units after 2035?

The CES should recognize the environmental and economic benefits of cogeneration relative to grid-scale gas, along with the aforementioned considerations related to optimizing the decarbonization of the broader economy. Until recently, CHP units were incentivized as part of Ontario's Conservation and Demand Management (CDM) Framework, and business and industry customers made significant investments in this technology. The CES should phase-in its application to cogeneration units beyond 2035 in consideration of those investments, the life cycle of these assets, and their efficiency relative to other options.

14. What are the benefits of applying a CES to industrial generation units? What are the challenges of doing so? Of not doing so?

The CES should be applied through application specific intensity analysis, to industrial generation. Industrial generation units, even those using natural gas, could significantly reduce GHG emissions by displacing significantly higher carbon industrial process inputs.

15. How should the CES consider electricity generation in remote, northern, and Indigenous communities?

Some consideration should be given to the practicality of blanket rules being applied to remote communities. There may be cost and economic implications that are disproportionate for remote communities from the application of general rules.

16. How should the CES consider distributed energy resources?

Distributed energy resources should be treated in the same manner as all other resources. CES rules should be technology agnostic, but consistent in their objectives and rules regarding emissions.

Treatment of biomass

17. If CO2 emissions from biomass combustion are not counted towards compliance under a CES, to what degree might biomass generation increase?
18. What types of biomass are suited to electricity generation? What are their characteristics with respect to regenerative life cycle, non-CO2 GHG emissions, and land use characteristics?
19. What emissions reporting and compliance requirements for biomass generation should be considered to ensure that nature is protected and land-based emissions do not increase?

The OEA has no comments with respect to the treatment of biomass.

Other Questions

20. What additional investments are anticipated to be necessary to achieve NZ2035 to help ensure affordability for consumers?

Significant investments will be required to implement decarbonized energy options. Even the most cost-effective of some of these options may result in higher energy costs for Canadians. However, the cost of inaction on climate change will far outweigh the investments needed to reach net zero. To support a just transition, government investments will be required to offset the costs of energy solutions, and in programs that help households and businesses that will have to absorb higher energy costs.

21. What role could existing and expanded energy efficiency programming play in helping to meet new demand as they transition towards net-zero 2035? What are the constraints for additional efficiency measures? Technological? Policy? Other?

Energy efficiency will play a critical role in helping Canadians with energy transition. Energy efficiency has proven itself to be one of the lowest cost energy resources available. In order to maximize the potential from energy efficiency, the federal government should work closely with the provincial government to ensure there is not overlap and duplication in the energy efficiency area. Both levels of government should also work through utilities to leverage the close customer relationship which will help enhance take up and customer trust.

22. What other factors should the government consider in developing the CES?

Clean electricity generation is just one piece of a net zero puzzle. Any plans for a significant increase in generation capacity or inter-provincial imports will require a proportionate need for increased transmission and distribution capacity. New infrastructure will be required to reliably deliver this additional electricity from generators to loads, to allow for system optimization, and accommodate increases in two-way power flows. Federal support in provincial led strategies will be integral in this transition to ensure affordability for consumers.

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Let's unravel complex energy challenges, together.