QUEST

April 15, 2022

The Honourable Steven Guilbeault
Minister of Environment and Climate Change Canada
200 Bd Sacré-Coeur
Gatineau, QC
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Re: Clean Electricity Standard Consultation Comments

Dear Minister Guilbeault,

Firstly, we would like to commend the Government of Canada, and specifically Environment and Climate Change Canada (ECCC), on your climate action leadership for Canadians. The recently released Emissions Reduction Plan in concert with Carbon Pricing, the Clean Fuels Standard, Output-Based Pricing System, Updated National Building Code and other recently established policies create the suite of measures necessary for Canada to ramp up climate action.

QUEST Canada is an independent, national non-profit organization that supports communities in Canada on their pathway to net-zero by facilitating connections, empowering community champions and influencing decision-makers to implement efficient and integrated energy systems that best meet community needs and maximize local opportunities.

As Canada forges ahead to achieve its goal of net-zero emissions by 2050, we believe that while we must all be working together and pulling in the same direction, it is also critical that Provinces and Territories are empowered to identify, select and enable the pathways that are most suitable to their unique context. This will enable them to balance the need for timely, effective and efficient emissions reductions while maintaining energy imperatives of affordability, reliability and security.

QUEST Canada offers the following 5 Recommendations for consideration:

1. Consider a Clean Electricity Performance Program or include more performance-based measures in the Clean Electricity Standard (CES)
2. Consider the cost-benefit and unequal jurisdictional impact of achieving net-zero electricity generation for each of Canada's 13 electricity grids
3. Encourage Provinces and Territories to change the way that electricity producers and consumers interact with and use power grids to encourage adoption and investment in emerging energy systems and technologies
4. Consider supply chains and how they can inhibit or accelerate the objectives of the CES
5. Consider the role of communities in achieving net-zero electricity grids and engage with them early and often

Recommendation 1: Consider a Clean Electricity Performance Program or include more performance-based measures in the Clean Electricity Standard (CES)

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In your discussion paper, ECCC has called out the need for the CES to be flexible in its design to both allow for the emergency use of natural gas to produce electricity under certain conditions and for the CES to be accommodating of the unique opportunities to produce clean electricity in each region of Canada.

In order to accomplish this outcome QUEST Canada recommends that ECCC design the CES with more flexibility by leveraging performance-based measures such as those considered in the Community Electricity Performance Program (CEPP) under consideration in the US.

A CEPP is a modified version of a CES that gives each electric utility an initial target reflecting its average share of clean energy used for electricity generation. Each utilities' target would increase annually. Utilities that achieve their annual target would receive grants from the federal government for every MWh greater than a specified percentage above the prior year's clean electricity sales. Utilities that do not achieve their target would owe payments to the federal government for every MWh shortfall.[1]

Some aspects of the CEPP mirror that of a CES with one chief difference being the CEPP shifts some compliance costs to federal taxpayers rather than compliance costs falling largely on electricity consumers ensuring greater equity as Canada moves to transition all 13 electricity grids to be clean.

The financial grants and payments in the CEPP could encourage increased use of clean electricity and achieve reductions in electricity sector emissions; however, they do not guarantee them. Utilities may also face cost or other constraints (siting, regulatory requirements) on achieving the CEPP targets. It is therefore important that the grant and penalty incentives need to be sufficiently large to overcome these hurdles.

Performance-based measures allows for solutions to be identified that accommodate each jurisdictions' unique challenges and opportunities. The addition of a increasing scale with clearly articulated and detailed plans on how each step will be achieved offers clarity to investors, prosumers, renewable energy solutions providers and new generators who can bring private investment into the market to help offset the need for large scale electricity generation.

Performance based measures rather than prescriptive measures will also help to minimize stranded capital assets and associated rate impacts as they give each jurisdiction the ability to identify the pathway that achieves emissions reductions in a timely fashion but also gives them the ability to ensure energy imperatives are maintained.

Recommendation 2: Consider the cost-benefit and unequal jurisdictional impact of achieving net-zero electricity generation for each of Canada's 13 electricity grids

While the cleanliness of Canada's 13 electricity grids averages 82%, individually some are much cleaner than others due to the prevalence of hydroelectric generation (BC, MB, QC, NL, YK) and therefore the impact of decarbonization on affordability, system reliability and security will be negligible in some jurisdictions and acute in others. For the jurisdictions without large-scale hydroelectric resource potential, the path forward requires some more careful consideration.

[1] Congressional Research Service: The Clean Electricity Performance Program (CEPP): In Brief (October 2021) https://sgp.fas.org/crs/misc/R46934.pdf

Equity is a foundational and critical component of our energy transition. Setting the target of net-zero clean electricity for all jurisdictions could result in an unequal and unjust impact on already marginalized and low-income Canadians. Without consideration for jurisdictional flexibility, the CES will likely exacerbate already higher rates of energy poverty in provinces with higher emitting electricity systems.

A better methodology may be to position the CES to achieve net-zero across all electricity grids rather than each independently, with a requirement that all new generation in every jurisdiction is net-zero.

For grids that are going to be challenged to achieve net-zero in a timely manner and in a way that doesn't erode the energy imperatives, using a holistic cost-benefit analysis with long-term time horizons to determine how much electricity generation must come from non-emitting sources, how much should come from emitting sources with carbon abatement solutions, and how much could come from neighbouring jurisdictions with cleaner grids will be needed.

The last kW will be the hardest and most costly to decarbonize in every jurisdiction and therefore we must leverage the strengths of one jurisdiction to protect those that will bear the brunt of the cost of decarbonizing our electricity grids.

Leveraging this holistic cost-benefit analysis methodology would help jurisdictions that currently emit more from their electricity grids and already experience high rates of energy poverty to have the flexibility to meet the objective of the CES but through a more cost-effective and flexible pathway.

As consideration is given to improving electricity interties, which can help jurisdictions without large-scale hydroelectric resources to decarbonize and mitigate against increased energy poverty from rising electricity prices, it is imperative that the federal government play a role in ensuring that contractually one province or territory doesn't become beholden to another.

With energy security front of mind globally, it is imperative that we don't create the conditions for future energy security challenges within Canada and between jurisdictions as we navigate toward our net-zero future.

Recommendation 3: Encourage Provinces and Territories to change the way that electricity producers and consumers interact with and use power grids to encourage adoption and investment in emerging energy systems and technologies

Many electric utilities across Canada had already made commitments to achieve net-zero prior to 2050 and had developed and were executing plans to achieve their objective while ensuring the energy imperatives of reliability, affordability and security were able to be maintained.

With the target being reduced to 2035, electric utilities' ability to maintain energy imperatives are being challenged and therefore alternative pathways are needed. One of the pathways that has been identified is to change the way that producers and consumers interact with and use power grids to provide long-term benefits for both consumers and the electricity industry.

As is being discussed in Alberta today through Bill 86, the Electricity Statutes Amendment Act, more flexibility in how producers and consumers can interact with the grid will contribute to reducing emissions, building buy-in locally for distributed and renewable energy solutions and is not expected to impact consumers' utility costs.

The key changes in Alberta's Bill 86 include:

- Allowing for the integration of energy storage into interconnected electricity system in both the competitive electricity market and the transmission and distribution system
- Allowing for unlimited self-supply with export technology that allows electricity to be generated on-site with excess power sent to the grid while ensuring that transmission costs are balanced among all system participants
- Modernizing electricity distribution systems to ensure the cost-effective integration of distributed energy resources in the system
- Adding a requirement for distribution owners to prepare long-term plans as per future regulations which will describe the outcomes and timing of the plans

Additionally, currently, there are only two primary entities with the expertise needed to integrate local renewable electricity generation into electricity grids - electric distribution utilities and industrial electricity users. It will be critical that services in each jurisdiction are developed to support renewable energy owners with system integration, maintenance and operations to ensure effective and efficient integration and system reliability.

This is not a service that is currently offered in most jurisdictions and is most logically offered by electric distribution utilities.

Increasing the opportunity for distributed and renewable electricity generation will also serve to help drive down the cost of current and emerging renewable technologies which will improve the business case for solutions such as solar that are still higher at 0.20/kWh than most provincial electricity rates.

Recommendation 4: Consider supply chains and how they can inhibit or accelerate the objectives of the CES

With 2035 only being 13 years away, the CES must also consider how supply chains including, and perhaps more importantly the capacity of those doing the implementation, may inhibit or accelerate the objectives of the CES.

Today there are many supply gaps that stand in the way of the success of the CES from shortages of access to critical minerals for batteries, to a lack of supply for heat pump technology component parts, to a lack of trained workers to both inform purchasers and deploy solutions. Today, our heating, refrigeration and air conditioning experts who are the first call for anyone urgently replacing a furnace, are not trained on the lifecycle costs, future-proofing, and benefits of alternative home heating systems, nor do we have enough technicians to deploy technologies such as heat-pumps at scale.

There are also a number of critical technological solutions that need to be developed in order for the CES objectives to be met including the rapid development of nascent technologies such as hydrogen, CCUS and direct air capture.

While effort, primarily driven by the federal government, is being put into training the workforce of the future, ramping up supply chains for critical minerals, and accelerating and de-risking new technologies, as the timeframe that we are working within is so tight, these barriers must be taken into consideration by the CES.

Recommendation 5: Consider the role of communities in achieving net-zero electricity grids and engage with them early and often

Communities across Canada, including Indigenous communities, have put themselves in the driver's seat on energy planning through the development and implementation of Community Energy (and Emission) Plans. Communities have the power to enable or significantly inhibit the goals of higher orders of government with respect to electrification, and more broadly, energy planning.

Extreme weather events, local political awareness of the vulnerability of communities to our changing climate, communities increasingly recognizing that 50% of emissions come from Canada's communities, a need to retain energy dollars as a means to support local economic stability, and the groundswell of messaging and empowerment they communities are receiving from around the world for cities to take action on climate change is driving communities to take charge on emissions reduction and energy transition.

Increasingly communities are saying 'no thank you' to further fossil fuel energy coming into their communities and in some cases renewable fuels too. Communities are seeking to derive economic benefits from local energy generation opportunities, prioritizing local emissions reduction and looking into ways to reduce energy demand through building retrofits, robust transit systems and better land-use planning that reduces the need for energy inputs.

Most communities are running down a narrow path to address emissions, primarily through the electrification pathway. While this may sound promising, we must also consider that some communities are also still somewhat resistant to grid-scale renewable development in their jurisdiction without prior consultation and direct local benefit. Additionally, transparent discussions are not being had with communities on the cost of the energy transition and the need for new interties and transmission lines or nuclear development within their jurisdiction.

Early and transparent discussions with communities on the tradeoffs that we all must accept, including impacts on affordability and reliability, are critical to achieving the objectives of the CES and net-zero. It will be challenging to deploy every clean electricity solution that is needed if communities, and more importantly their constituents, have not fully bought into the value proposition and the social benefit, do not see an economic benefit locally and haven't had the opportunity to engage in discussions on trade-offs and timelines.

Similarly, communities have the power, if well engaged, to be the accelerant that we need to achieve the 2035 objective. If empowered and financially supported to do so, have the ability to reduce the infrastructure needed to meet future electricity demand through the deployment of and creating the demand for local low-carbon thermal solutions such as waste heat capture from sewage systems, anaerobic digestion of agriculture and forestry waste, landfill gas, combined heat and power, district energy systems and through energy demand management practices such as sustainable development, enhanced transportation solutions and building energy retrofit programs.

While communities across Canada are the gatekeepers to many of our energy system transition goals, they also need help to understand how to wield their power and need the capacity to fully leverage it. Communities need help to better understand their role and their responsibilities in the transition of our energy systems - where should they be driving clean electrification versus low-carbon thermal solutions, and how can they better influence and reduce demand for energy in the first place. For Indigenous communities, additional meaningful consultation and empowering them to lead the process will be critical. We cannot impose our methods on Indigenous communities and they must be encouraged and permitted to sit in the driver's seat on how they will enable clean electricity.

While the CES discussion paper comments on the need to engage with the Provinces and Territories to ensure the CES is well-positioned to help them achieve a 100% clean electricity grid, there is an equal need to build the buy-in and support of local governments where the changes to the system will take place.

Again, we commend ECCC for offering the opportunity for Canadians to weigh in on the CES design and we very much appreciate the opportunity to do so.

We welcome further discussions about the recommendations that we have provided in this letter at any time.

Sincerely,

Tonja Leach
Executive Director