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Philippe Dunsky
Chair
Canadian Electricity Advisory Council

Via email: ceac-ccce@nrcan-rncan.gc.ca

Re: WaterPower Canada's submission in response to CEAC's discussion guide questions issued 2023-12-07

Dear M. Dunsky:

WaterPower Canada (WPC) is pleased to provide its response to the questions raised in the Canadian Electricity Advisory Council's (CEAC's) discussion paper issued on December 7, 2023. We have also reviewed and generally agree with the points raised in CEAC's Interim Report.

Please accept our apologies for the delay in getting these comments submitted to the Council.

General comments:

While Canadians often speak about the need to double or triple the Canadian electricity sector in the next twenty-five years, it is not clear that the scope and scale of that effort is fully sinking in. Achieving this goal will mean replicating (or beyond) our existing electricity system that has taken over 125 years to develop in Canada. At the same time as utilities are rebuilding our electricity grid, end users will need to retool their infrastructure and equipment to be powered by electricity.

We are concerned that the effort required to accomplish this goal is being dramatically underestimated by policy makers while others are using the magnitude of the effort as evidence that it is unachievable. We believe that achieving our societal decarbonization goals is achievable but must be enabled by critical success factors such as:

a) Dramatically improving our ability to get projects approved and constructed in a timely manner,

b) Encouraging investments in electrification wherever possible and avoiding investment in fossil fuel technology wherever possible,

c) Simplifying government programs and incentives to focus on getting things done rather than seeking to solve every possible policy issue with every government program, and

d) Ensuring that each level of government focuses on its respective areas of jurisdiction and strives to cooperate with others to achieve its goals. This is an important consideration for the federal government given that electricity is primarily an area of provincial jurisdiction.

In short, we need to look at our decarbonization effort as one of making continuous improvements to our carbon footprint where each utility, each class of end uses, each province, and the federal government have implemented and are managing the performance of specific initiatives, activities, and programs to achieve our goal. We must be prepared to implement adaptive management in the face of shifting priorities so that we continue to make progress. With required investments in the trillions of dollars and a host of challenges, we have no time to wait.

We echo the CEAC's call to conclude and implement the Council's early recommendations. In particular, the Clean Electricity Regulations and ITCs are critical to provide guidance to industry and to encourage investment. Matters relating to labour and supply chain issues, including labour productivity and availability of skilled trades, are critical not just for the electricity sector, but to the Canadian economy generally.

1. Comments Regarding Electricity System Oversight

i. *How might the mandates of regulators, system operators and utilities need to change or expand, to meet net-zero? How could net-zero mandates be implemented and operationalized?*

Ideally each province will establish plans and strategies to reduce emissions and electrify end-uses. Provinces may choose to change the mandates of utilities and regulators as part of their strategy, however there are many ways to drive action and provinces may take different pathways to guide their strategies.

While provincial governments could choose to change the mandate of a regulator as part of its strategy, it need not do so. If high emitting resources are ruled out by federal and/or provincial regulations or are rendered uneconomic by taxation, the rate regulator need only select amongst available resources as it has always done under its existing mandate.

With a constrained set of resources, regulators, system operators and utilities will each play a role, within a constrained set of choices, to ensure the delivery of least-cost electrical service to customers in a reliable manner.

Similarly, if utilities or other entities are directed or required to pursue electrification then a regulator may or may not have a role in that activity, depending on whether a province chooses to have that activity scrutinized by the rate regulator.

Problems may arise if federal or provincial strategies are unclear or ambiguous such that regulators, system operators, and utilities may interpret them differently. For instance, if emission constraints are unclear, utilities and regulators may view low emission solutions as optional and select lower cost but higher emitting options. Aspirational targets or objectives are not sufficient if the intention is to change resource decisions to net zero type outcomes.

Clarity is also needed about which provincial entities are responsible for pursuing electrification and that there is an ongoing obligation to serve these new loads. Otherwise, utilities and regulators may be incented to defer electrification efforts because the new customers may require investments that increase costs for all customers.

In summary, the issues are less about planning and oversight of electricity markets but rather about clarity in net zero requirements and about gaining and maintaining public support for electrification initiatives and investment in electricity supply.

Given the federal government does not have a direct role in electricity regulation, it's important for it to implement its policy objectives in ways that provide clear signals to provincially run electricity markets.

Some obvious examples are the tax on GHG emissions and investment tax credits, which provide economic signals to utilities and regulators. Other areas for consideration might include equipment standards or additional taxes on fossil fuel fired end user equipment, or conversely, broadly applied incentives for electric equipment.

ii. *How should independent, provincial/territorial pathways to decarbonization assessments be approached and scoped to inform net-zero energy roadmaps and coordinated system planning?*

Ideally each province will develop a net-zero roadmap that considers their unique circumstances and opportunities. The roadmap should inform the specific government actions that result in change. These may include directives, incentives, tax changes, orders in council, legislation, regulations, and changes to mandates.

These actions should provide a clear and coherent context for system and utility resource planning. There must also be utility and other stakeholder involvement to ensure that desired results of these government actions are achievable, affordable, and reliable.

iii. *What features should provincial governments build into their net-zero emissions roadmaps to enable more effective planning and utility regulation?*

There is urgency in reducing emissions, but we can't electrify everything all at once. The build-out of the electricity system must keep pace with growing loads. At the same time, it is critical to begin to drive electrification now. The roadmap should plan what gets electrified and when. Lowest cost options and lost opportunities should be prioritized first.

The roadmap should explicitly consider the importance of avoiding stranded investments for both consumers and utilities by encouraging deployment of new systems for new installations or replacements rather than replacing existing equipment at mid-life. The plan should also recognize the significance of costs outside utilities, and plan to migrate customers at opportune times. For residential HVAC systems or appliances, this would be at the time of initial installation or at end of useful life. Replacing functional assets mid-life is expensive in both equipment and labour.

The plan should also reward or require substitution of technologies that are functionally superior. For example, given the commonality between air conditioners and heat pumps, there is no reason for air conditioners to continue to be installed in new homes. Every effort should be made to encourage the replacement of end-of-life air conditioners with heat pumps as well. These approaches are much less expensive than 'buying out' serviceable assets part way through their useful lives.

The highest cost and most difficult options should be deferred until closer to 2050. The plan should recognize that technologies may evolve that may influence the plan and this may be more important to these higher cost or more difficult later applications. The road map should provide clarity about what we need to do now and in the very near future but should provide flexibility and adaptability in the longer term.

Net-zero energy roadmaps should also demonstrate greater granularity and transparency and provide sufficient information to inform forecasts of electricity demand. Similarly, this specificity is required for energy efficiency and the electrification of space heating. Greater transparency should be provided to better show the effects of GHG reduction policies on actual reductions. This would provide greater confidence in the projections and provide a stronger basis for investment decisions and ultimately regulatory approval.

iv. *What policy changes are needed to enable accelerated investment in electricity systems and infrastructure, and how does our appetite for risk need to evolve?*

Existing and proposed programs and policies intended to accelerate investment have too many conditions and are trying to solve every problem at the same time. They are overly complex and introduce new compliance risks for industry. This approach is entirely inconsistent with quickly achieving our net-zero goals.

First and foremost, policies should be framed on the basis that GHG reduction is an overarching Canadian goal, and laws, regulations, and policies all need to be framed with that overarching goal in mind.

Our collective appetite for risk is not likely to change – the risks as viewed by industry, consumers, and governments are framed by their perspectives. Greater confidence in market forecasts, demand drivers, and underlying policy certainty will provide a stronger basis for utilities and others to make electricity system investments and for regulators to approve them.

We may need to socialize more of the electricity infrastructure costs as we move forward. Electrification may provide the lowest cost societal costs to reach net zero, but the transition does not fit well within the traditional rate regulation frameworks. For electrification to be a viable solution, electricity must remain affordable. Government support should include tax credits, subsidies, and loan guaranties.

v. What conditions, if any, should be attached to provincial and territorial receipt of federal supports in order to facilitate a cost-effective decarbonization and build-out of Canadian electricity systems in line with climate goals?

In short, no conditions should be attached to federal supports to facilitate cost-effective decarbonization and build out of Canadian electricity systems.

Federal supports for the build-out of the Canadian electricity system should be clear and unambiguous: support should be available for any investment in non-emitting generation, transmission, or distribution.

The currently proposed investment tax credit scheme is overly complicated and seeks to transfer benefits from developers and operators to end users. The scheme unnecessarily introduces uncertainty into cost decisions that need to be made by developers and regulators, and this uncertainty will slow down project approvals and confidence in the program.

The ITC program is further burdened with extraneous objectives that weaken its effectiveness:

a) Given the current and projected shortages of skilled labour, adding labour requirements to the ITC only serves to add another complication and risk to project planning.

b) Political constraints requiring 'commitments to net zero' by provinces are a similar complication, adding federal-provincial relations to the risks project developers need to consider. If investment in electricity generation is a priority, ITC's should be available under all circumstances for low-emitting generation projects, as they are beneficial under any circumstance.

c) The stated 2035 deadline for support is also problematic. While we want to see projects brought online as soon as possible, projects will be required beyond 2035 and many projects cannot be delivered by 2035. We need clarity that ITCs and other financial supports will continue beyond 2035.

To summarize, all these financial supports need to be clear and unconstrained by extraneous conditions to the greatest extent possible.

Given the federal government's concern with end-user costs, then it might consider exempting or applying a zero-rate GST/HST to non-emitting electricity sales. This will immediately change the balance of electricity costs against fossil fuel alternatives and is logically no different than the taxation benefits currently enjoyed by electric vehicle owners relative to those who pay motor fuel taxes.

2. Building electricity infrastructure in a timely manner while creating benefits for Indigenous partners.

i. *Is a change to, or clarification of, the mandates of regulators needed to enable net-zero project approvals? If so, how could this be accomplished? If not, what approaches could enable these projects to receive regulator approval?*

First and foremost, federal regulators need to understand that projects to reduce GHG emissions are an overarching Canadian priority, and that this overarching principle is the primary reason that electricity generation and transmission projects require approval on an expedited basis. The need, purpose, and rationale for such projects is to achieve our GHG reduction goal. Secondly, delaying achievement of this goal is a significant adverse environmental effect.

The second clarification that is required is that a certain level of residual environmental effects after mitigation on federal matters of concern is acceptable when balanced against the priority of achieving GHG reductions. More specifically, unavoidable effects on fish and fish habitat and migratory birds that are adverse, but which do not threaten the sustainability of fish and fish populations, and birds and bird populations, and have been reasonably mitigated need to be accepted by federal regulators.

ii. *What are the most effective approaches to enabling federal, provincial, and territorial governments to cooperate to streamline project assessment, approval and permitting, and how can those approaches be quickly operationalized?*

All governments need to manage project assessment and permitting and strive to make decisions on project approval and permit conditions in a timely manner. The federal impact assessment process needs to be more focussed on areas of federal jurisdiction and streamlined to require less time from project application to project approval.

Considering the recent Supreme Court of Canada reference decision on the Impact Assessment Act, we expect the federal government to focus its attention on matters within federal jurisdiction. However, opportunities to streamline the overall process still exist, and some of these include:

a) the federal government should explicitly rely on provincial environment assessment processes to inform decision making within its jurisdiction on matters relating to fish and fish habitat, migratory birds, and federal species at risk. Current legislation allows the federal government to substitute provincial processes after a lengthy evaluation process; this should be streamlined.

b) All governments should consider class environmental assessments like the Government of Ontario has undertaken for small and medium-sized hydroelectric projects.

c) The Impact Assessment Agency of Canada should operate as a coordinator and single point of contact for federal environmental assessments for proponents, Indigenous groups, provincial agencies, and other federal departments. Most importantly, the Agency could coordinate Indigenous consultation rather than having multiple federal departments and agencies undertaking their own consultation.

d) Standard environmental assessment guidelines by sector should be created, with specific issues added as necessary to guidelines by Indigenous groups, communities, and stakeholders.

e) Permitting terms and conditions should be finalized during environmental assessment rather than after the EA is complete. This would avoid the delays associated with protracted discussions with government departments after environmental assessment is completed.

f) Finally, there should be an overall time limit from initial project application under the IAA to authorizations under other federal environmental legislation including the *Fisheries Act*, the *Migratory Birds Regulations*, and the *Species at Risk Act*.

iii. *What changes are required to help facilitate project approvals at the municipal and local levels, in line with federal and provincial policy? How can the federal government support and convene municipal governments in project approvals?*

All governments – federal, provincial, and municipal, have legislated mandates and roles in project approval. It is important that each government act within its own jurisdiction and ensure that effective mitigations to issues be developed and deemed acceptable.

iv. *How can existing solutions and processes such as those provided by Natural Resource Canada's Major Projects Management Office (MPMO) and the Impact Assessment Agency of Canada (IAAC), among others, provide benefits to project proponents in advancing project approvals?*

Further clarity in the role of these groups after the recent IAA reference case to the Supreme Court of Canada may be available, but in short, the MPMO and the IAAC should focus attention on matters of federal authority by ensuring that all the federal departments involved in the assessment, review, and permitting of a project work in a coordinated manner and by facilitating joint assessments and reviews with provinces to capture the effects of a project and to understand whether a project is in the public interest.

v. *Should electricity projects with strategic importance to net-zero be provided faster approval processes and, if so, how? How should strategic importance to net-zero be defined?*

Given our societal goal of reducing GHG emissions, and the essential role the Canadian electricity system will play in achieving that goal, <u>all</u> non/low emitting generation projects and transmission upgrades for domestic use need to be considered strategic.

vi. *What initiatives for accelerating project approvals should the Council look to for learning or to source best practices, either in Canada or internationally?*

One important approach to accelerating project approvals is to consider the effects and benefits from classes of projects that have similar environmental effects. Ontario's class approval process for small hydro projects should be replicated on a national scale for similar projects. If the environmental effects are generally understood and standard mitigation approaches can be applied to generally known effects, time and attention can be directed at specific issues rather than "reinventing the wheel" with every environmental assessment.

3. Creating Benefits for Indigenous Partners.

i. *What are the information and awareness gaps that, if filled, would help specific stakeholders understand the Indigenous context in Canada to more effectively advance projects in partnership with Indigenous communities, and what mechanisms could be used to address those gaps?*

While the Indigenous context in Canada is generally well understood by the electrical sector and our industry has a long history of early engagement, there can be significant gaps in the relationship between stakeholders. Federal, provincial, and territorial governments can work with Indigenous communities to develop detailed profiles of each community on their economic, social, and environmental priorities.

Having a more complete profile of the communities will help build better understanding at the beginning of engagement with Indigenous communities on projects.

ii. *What is necessary to enable proponents to engage earlier with Indigenous communities as active participants in project development, and conversely, what is necessary to enable Indigenous communities to fully engage with proponents in advancing projects quickly, effectively and with full participation, both early on and throughout the project implementation lifecycle?*

For Governments and proponents, the scope of engagement with Indigenous communities needs to go beyond being project centric. To move towards on-going and successful participation by Indigenous communities, long term sustainable relationships must be developed. Proponents must define for themselves the type of relationships they want to establish. As projects emerge, proponents will have established a successful foundation for advance projects quickly if they have already invested the effort in relation building.

Moving away from a project centric approach and toward building long-term sustainable relationships will allow for a greater understanding of the needs of individual communities and investing the time and resources in the community to allow for their full participation.

iii. *What mechanisms are most effective at ensuring Indigenous communities can fully participate in financing and equity ownership of electricity projects in their territories, and what gaps are there in existing policies, programs, and other mechanisms?*

In many cases, Indigenous communities lack the financial resources to directly invest in projects and are reliant on project developers to finance their participation.

Access to federal financing, either directly or through a loan guarantee program, would enable Indigenous groups to make their own funding decisions and directly invest in projects.

iv. *What additional organizations or initiatives should the Council look to for learning or to source best practices, either in Canada or internationally?*

The Assembly of First Nations and the regional and provincial organizations are working on climate change issues and have staff and resources assigned to this work. In addition, there are other organizations such as the First Nation Power Authority that are working on increased involvement of Indigenous communities in clean energy projects.

4. Attracting Capital Investments to Clean Electricity Projects and Maintaining Affordability for Consumers.

i. *What are the policy, regulatory, and other conditions that would lower the capital costs (including risk capital) for clean electricity projects?*

In short, governments must demonstrate that Canada is a good place to do business, and that we have a predictable and timely assessment and permitting process for projects. With demand for renewable investment increasing globally, jurisdictions that provide developers certainty their projects are acceptable and those that actively accelerate approval processes with reasonable development conditions will attract developers and their capital.

Conversely, those jurisdictions with slow processes and uncertain outcomes will lose the attention of developers.

ii. *What can governments do to support creating a competitive investment climate for the electricity grid in Canada and attract sufficient private capital to fund the electricity grid's decarbonization and expansion?*

For electricity projects in particular, governments can create a competitive investment climate by addressing the key requirements of project developers:

a) Ensuring we have a skilled, qualified, and productive workforce that can safely complete projects. Labour is a significant cost component in large scale projects and is a critical success factor for successfully completing projects.

b) Providing regulatory certainty for projects quickly, avoiding wasted resources and delays in getting needed projects on-line quickly.

iii. *What policies, programs, or other structural changes would support affordable and competitive electricity rates for all Canadians and businesses?*

The basic policy levers have been described above in this section, but the addressing the following issues would support lower and more competitive rates:

a) Reductions in end-user taxation for renewable electricity would have an immediate impact on consumer cost,

b) Improvements in regulatory efficiency will reduce project risk and cost uncertainty, and

c) Economy-wide focus on systemic issues such as labour productivity and availability

iv. *How can governments address the cost impact inequalities across and within electricity user groups (residential, commercial, and industrial) and provinces/territories?*

To the extent that different territories and provinces have different resources available to them, this may not be an achievable goal. These regional differences exist in other sectors of our economy, such as housing, transportation, and employment opportunities, and since the availability and cost of resources varies from region to region, this may not be possible.

Addressing these goals across classes of users falls within the mandate of each provincial government.

5. Enhancing regional cooperation to take advantage of efficient, low-cost pathways to a net-zero Grid.

i. *Do you think an improvement in regional integration and cooperation is required to meet electrification and decarbonisation targets? If so, what are the advantages and/or risks of deepened regional cooperation?*

First and foremost, the rationale for regional cooperation should be a mutual benefit for consumers in the cooperating parts of a region, rather than a desire to access a neighbour's low-cost resources. With the dramatic forecasted increase in demand, most regions may be strapped to meet their own needs rather than having surplus resources available for others.

Opportunities to benefit everybody do exist, and they should be pursued aggressively. The federal government can continue to foster and enable regional opportunities. One concrete example is reserve sharing, where a larger region could pool capacity reserves more effectively than smaller regions could maintain their own.

ii. *What general approach do you think could help advance regional integration and collaboration in Canada to meet electrification needs and goals?*

One benefit of regional cooperation could be to marshal resources to take on a large project that may be bigger than the capability of one province. The development of Gull Island in Labrador or the MacKenzie River in the Northwest Territories are examples where a regional approach could lead to project success.

The general approach is that regional integration and collaboration needs to recognize industry and market realities. To date the drivers for north-south integration have been stronger than integration on an east to west basis. It is important to understand that those drivers are likely to persist and that mutual dependencies have developed.

As has been stated earlier, it is critical to achieve policy and incentive clarity. When provinces and industry fully understand what the CER and other policies will be in place and the network of financial supports that are available, they will be better able to assess opportunities that may exist in their region. The Federal Government can play a positive role in facilitating and supporting regional dialog.

iii. *What specific Canadian regional planning activities would advance the ability of provinces and territories to meet electricity needs and net-zero goals? What steps are required to foster dialogue among key system stakeholders to ultimately advance these actions/solutions? What challenges would need to be overcome?*

As indicated above, regional co-operation makes sense when benefits exist for all stakeholders, and industry participants are in the best position to have visibility over all the benefits and issues.

iv. *What existing or new organisation/institution(s) are best placed to advance regional integration and cooperation amongst provinces and territories, and why?*

With limited resources, territorial governments may require financial support to explore opportunities, but provinces and utilities are well-equipped with the ability to identify, explore, and develop where appropriate.

While the federal government can play a role in facilitating regional dialog and study, we do not see a clear role for a new organization or institution to address this issue.

6. **Enabling electricity sector innovations that can reduce the cost and risk of the energy transition while maintaining grid reliability and resiliency.**

i. *How could federal measures (including funding) support the development of new market capabilities, regardless of the local electricity market structure? What measures should be implemented in the short, medium, and long term to drive local system changes to enhance innovation uptake at the distribution system level?*

While federal programs have a role in supporting research, development, and innovation, the decision makers for distribution system are local utilities and provincial regulators.

ii. *How can financing from ratepayers and taxpayers be shared and effectively coordinated to create a more predictable investment context for innovation and operational changes to support reliability in a highly electrified future?*

This is a role for utility planners and provincial regulators based on generally accepted utility practice. Whether our future is highly electrified or not, utilities are charged with maintaining reliable service for customers. As technologies evolve, they will be adopted by utilities as part of 'good utility practice.'

iii. *Where are the biggest gaps in electricity sector regulatory structures and policy levers in driving the development of technology innovation? Where would be effective points of intervention for the federal government?*

Canadian industry uses technology and operational strategies (including standards) that are defined on a North American and global basis. The federal government can support technology through research and development but has no role to direct its application by industry.

iv. *What methods, policies, and programs should be implemented to support greater customer participation in the electricity grid (including by local and Indigenous communities), and foster social license for and ensure benefits from electricity investments in Canada's net-zero transition? (Rooftop solar, EV integration and demand management, time of day rates and load management.)*

Customer participation needs to be predicated on an expected cost savings and/or enhanced service for electricity consumers. If community approaches to electricity investment make economic sense and access to financing is a barrier, then programs that address that need would be a benefit to all consumers.

All the initiatives listed in the preamble would garner regulatory support if they could be demonstrated to have economic or reliability benefits. It's essential, however, that a fulsome discussion about these alternatives consider all the costs, benefits, and policy considerations before widespread deployment decisions are taken.

v. *What innovative approaches to working should be adapted to enable our scarce resources to deliver on the energy transition objectives. How do we create practitioners in all the needed skills in a reliable, rapid, and scalable manner? How do we organize our currently siloed expertise to be able to better capture and imbed learnings into subsequent projects?*

An overarching human resources strategy is required – these challenges are not unique to energy. They exist in health care, education, and practically every profession and skilled trade in Canada.

It's not a given that all the competing requirements for human resources in our society will be addressed in a 'reliable, rapid, and scalable manner.' We need to prioritize our training and development initiatives on national priorities, invest in productivity-improving technologies, and be willing to use workers from the global market where projects need to be completed urgently.

Closing Comments

WaterPower Canada members recognize the importance of investing in non-emitting electricity production to address climate change as well as the magnitude of the challenge before us. As a society, we will not solve this issue overnight, but we need to start.

Consumers and industry need to be oriented in the right direction, with support and guidance to start making the necessary investments and to focus on priorities with short term potential to reduce GHG emissions.

We would be happy to discuss any of the points raised in this letter.

Sincerely,

Gilbert Bennett, P. Eng., FCAE
President