

Submission to Natural Resources Canada's Clean Electricity Strategy consultation

**Submitted by Positive Energy, University of Ottawa
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About Positive Energy

The University of Ottawa's Positive Energy (PE) research and engagement program uses the convening power of the university to bring together academic researchers and senior decision-makers from industry, government, Indigenous communities, local communities and environmental organizations to identify how to strengthen public and investor confidence in energy and climate decision-making.

PE's deep engagement with energy and climate leaders across the country fosters a balanced and integrated approach to effectively frame challenges, undertake relevant solution-focused applied academic research, and rapidly get recommendations, new insights, and research findings into the hands of decision-makers to inform their choices.

Since PE's inception in 2015, we have examined the relationships within public energy decision systems, notably between regulators with responsibilities for the approval of resource development and infrastructure, and other actors in energy decision-making in Canada, including policymakers, courts, Indigenous and municipal governments, industry, other regulatory authorities, and affected and interested parties.

In our current phase of work, our mandate is to help Canada strengthen public confidence in energy policy, regulation, and decision-making for net zero. Our core areas of research and engagement focus are four-fold: reforming regulatory frameworks for net zero, ensuring emissions reductions also maintains energy fundamentals (reliability, affordability, resilience, safety, security), fostering constructive intergovernmental relations (notably federal-provincial collaboration, but also collaboration with Indigenous and municipal governments) and understanding the opinions and attitudes of Canadians towards energy and climate issues.

Approach to this Submission

Given the centrality of the recent report of the Canada Electricity Advisory Council (CEAC) to NRCan's development of a Clean Electricity Strategy, we focus our submission largely on the recommendations of the CEAC as seen through the lens of our research and engagement over the last decade.

We draw in particular on two recent Positive Energy reports:

Positive Energy report related to electricity and natural gas delivery:

[NET ZERO: An International Review of Electricity and Natural Gas Delivery System Policy and Regulation for Canadian Energy Decision-makers](#)

Positive Energy White Paper on energy project development

[Energy Projects and Net Zero by 2050: Can we build enough fast enough? A White Paper](#)

In addition, we recommend that NRCan review the *Government of Ontario's Electrification and Energy Transition Panel* final report, which addresses many of the issues the federal government should take into consideration as it develops a Clean Electricity Strategy. Positive Energy Chair Professor Monica Gattinger was a member of the panel. See: <https://news.ontario.ca/en/statement/1004088/ontario-welcomes-report-on-electrification-and-energy-future>

1. Overarching Comments: Electricity and Emissions Reductions; Electricity and the Constitution

Positive Energy's research and engagement over the last decade has highlighted a number of ideas that should underpin effective energy and climate policymaking. Our assessment of the advice of the Clean Electricity Council is that the recommendations are for the most part sensible and well aligned with work done by Positive Energy in recent years. We do, however, have a few reservations.

The first flows from the mandate of the Council, which was to examine pathways to electrification. This mandate creates an unduly narrow lens through which to view the energy transition, a transition which will in all likelihood involve other end use fuels – sometimes but not always associated with carbon capture – and will rely perhaps to a significant extent on various forms of offsets outside the energy system per se. Without that broader context it is difficult to assess what is most probable, what is most practical, and what is most urgent respecting electrification.

The second flows from the Canadian constitution, which places virtually everything to do with electricity firmly in provincial hands. To this reality we can add the widely varying circumstances faced by different provinces or regions. There are undoubtedly many things the federal government *can* do in the electricity domain, but much sober reflection is needed before deciding what it *should* do and the degree to which the various provinces and territories should take the lead role in both the expansion and decarbonization of power systems and the transformation of many end uses to electricity from fossil fuels.

Finally, we have reservations about the way the report frames its “cornerstones”: speed, affordability, reliability and Indigenous engagement. All of these issues are important, but they don't always pull in the same direction, and they require considerable care to apply to real world issues. For example, community acceptance, most notably that of Indigenous communities, will be vital. But it can take significant time: to build trust and acceptance; to build skills and organizational capabilities; to ensure that Indigenous and other local communities become true beneficiaries of energy transition; and to ensure that progress toward emissions reductions is durable.

We know that public acceptance will rest on affordability and reliability as well as security, safety and resilience (what we refer to collectively as ‘energy fundamentals’). Maintaining energy fundamentals on an ongoing basis will take time: time for the right technologies to evolve; for good projects to be designed, approved and built; for consumers and communities to adapt; for skills and supply chains to be mobilized; and for policy to be developed that reflects those realities, rather than stepping over them in the pursuit of urgency.

2. The Three ‘P’s: Provinces, Priorities, Principles

In light of the above, we advise the federal government to be mindful of the parable of the tortoise and the hare: take the time to get it right. It may take a little longer in the short term, but in the long term will ensure durable change.

Positive Energy’s research and engagement suggests that this may best be achieved by considering three “P’s”: Provinces, Priorities and Principles.

Provinces

Canada’s federal government – as appropriate – has made an international commitment respecting greenhouse gas emissions. But it is a peculiarity of many federal systems that the national government’s ability to meet such obligations is inevitably constrained by constitutional structure. In Canada’s case, that reality is compounded by the vastly different physical circumstances faced by different provinces and territories, circumstances duly noted by the CEAC.

Without a firm commitment to this reality as the starting point, the federal government will always struggle to make progress on emissions reductions and energy objectives. Provinces and to a degree local communities may not always know best, but they are closest to the physical, political, social and economic realities of their power systems. That will be the most important determinant of the pathways Canada takes and to the politically, socially, economically and technologically feasible pace of change. Note that it should always ‘pathways’ – plural, as no one knows with certainty what the future will hold (we return to this point below in the section on principles).

The federal government should send a signal to the country that it is cognizant of the above and that it is prepared to accommodate the challenges and embrace the opportunities of federalism for Canadian emissions reductions.

Priorities

The Council’s recommendations, as noted earlier, are in our estimation largely sensible. But they are daunting in their scope and complexity. No government, far less 14 governments attempting to collaborate, can possibly act on all recommendations at once or even over several years. It is vital for the government to structure the Council’s recommendations into a hierarchy of priorities:

- what is truly urgent,
- which actions are foundational and need to be taken soon mindful that results may be slow in emerging, and
- what actions require careful assessment before being acted upon.

A major insight that has emerged from Positive Energy’s work over the years (and is evident throughout the policy system beyond energy), is that government capacities are increasingly stretched – whether the capacity to engage Canadians, the capacity to decide on policy, fiscal capacity or the capacity to implement chosen

directions. Our international commitment to net zero by 2050 is a fact. But so are the limits on our ability to get it done. Establishing priorities to mobilize scarce resources for maximum impact is crucial.

Principles

The Council has grounded much of its thinking in important principles, several of which are touched upon in the preceding comments. Research and engagement at Positive Energy has identified seven principles that should inform the approach Canada takes both to electrification and to emissions reductions overall. We would encourage the federal government to adopt these principles in its development of a Clean Electricity Strategy.

1. ***Energy fundamentals.*** In addition to emissions reductions, it is crucial that policy continue to support five fundamentals of the energy system:
 - Reliability: the system must deliver energy without interruption.
 - Affordability: energy must be affordable to Canadian consumers (and taxpayers) of all types.
 - Resilience: the system must be able to respond and recover from incidents like extreme weather or sabotage.
 - Security: infrastructure, policies and processes must be able to deliver needed fuels and power to consumers of all types.
 - Safety: ensuring physical segments of the system are designed and working to prevent accidents and ensure the confidence of the communities hosting, using or working with them.
2. ***Respect for difference and constitutional jurisdiction.*** Canada has one of the most divided and decentralized constitutional arrangements for energy of western industrialized democracies. Approaches must be built on this foundation or they risk compromising national unity, without which it will not be possible to achieve the deep ongoing collaboration necessary to pursue net zero. Approaches must also be anchored in respect for differences. Energy systems differ markedly across the country, from province to province, community to community, urban to remote settings, and the like. Importantly, this includes Indigenous communities.
3. ***Reconciliation with Indigenous peoples.*** Canadian institutions and society are in the process of furthering reconciliation with Indigenous peoples, for whom engagement, partnerships and ownership in energy projects is a high priority as a means of economic reconciliation, social equity and community development. The majority of changes to upstream power systems and transmission (not to mention the development of critical mineral resources) will occur on Indigenous lands. In addition, Indigenous nations are increasingly asserting their right to self-determination, which extends all the way from the impacts of new energy projects on land, air and water to the way energy is consumed and which sources of energy are consumed. If done right, emissions reductions and energy transition can go hand in hand with the process of reconciliation. Here there is a clear win-win on offer and Canada should take the time necessary to get it right.
4. ***Integrated approaches and systems thinking.*** Successful policies take an approach that integrates energy and climate change objectives and, increasingly, the imperative of addressing the productivity challenge, ensuring investments sustain and improve Canadians' standard of living. Policy must be built on the understanding that energy systems are complex and multidimensional as well as foundational to

Canadians' overall well-being. Systems thinking is crucial to ensure policies have their intended – not unintended – effects. Narrow, siloed approaches are unlikely to prove durable in the long term.

5. **Collaboration.** The 2050 goal will require high levels of active and ongoing cooperation among all governments – federal, provincial, territorial, Indigenous, and municipal – as well as coordination and integration among policy and regulatory agencies of different governments (climate, energy, finance, innovation, infrastructure). Deep ongoing collaboration between government and business is also required to ensure policy and regulation have their intended effects. The sheer complexity implied by these statements should not cause Canada to pause in its determination to move forward but it implies the need for robust analysis and constructive approaches.
6. **Public and investor confidence.** Without the ongoing confidence of Canadians and investors, durable emissions reductions are unlikely to be achieved. If Canadians' support for climate action withers, policy durability and predictability will suffer as governments reverse course. Likewise, if investors do not have confidence in the investment environment, the capital needed to transform the country's energy systems and broader economy cannot possibly be secured.
7. **Recognition that the future is uncertain.** Planning for an energy transition that will take place over decades requires recognition of multiple uncertainties and the judicious use of techniques like modelling, forecasting and scenario planning. Positive Energy's research and engagement have underscored that the political, social and economic environment is volatile, unpredictable and uncertain. That reality should underpin the way governments approach thinking about the future.

Positive Energy would like to thank Natural Resources Canada for the opportunity to provide our views and recommendations as the government develops a Clean Electricity Strategy. We would be pleased to meet to discuss any or all of the above.