

Environmental Defence Canada

Submission to: “Powering Canada Strong: A National Strategy for an Electrified Canadian Economy”

Submitted to:

Natural Resources Canada

Prepared by:

Environmental Defence Canada

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Environmental Defence Canada offers the following feedback on "Powering Canada Strong: A National Strategy for an Electrified Canadian Economy."

In general, Environmental Defence welcomes the Government of Canada's recognition that electrification is central to Canada's climate and economic future. Canada's wind energy, solar energy, and energy storage sector will provide the power an electrifying and growing economy needs.

However, we are deeply concerned that the strategy as presented risks entrenching Canada's dependence on fossil fuels rather than accelerating our transition away from them. The discussion paper positions natural gas as "strategic and essential" to Canada's electricity future. This is wrong on two counts — it is wrong as a matter of climate policy, and it is wrong as a matter of economics.

Canada's electricity sector is already approximately 80% non-emitting — a global advantage we must build on, not squander. The path forward must prioritize wind, solar, energy storage, demand management, and grid modernization, not a prolonged reliance on natural gas justified by short-term cost or reliability concerns that can be addressed through clean alternatives. In fact, surging emissions from gas-fired power plants — which have doubled in the last decade to 40 MT in 2024 — have already erased half of the gains made in cleaning up Canada's electricity sector by phasing out coal.¹

The proposed amendments to the Clean Electricity Regulations represent a dangerous and unacceptable rollback of Canada's most important regulatory tool for grid decarbonization. If the government moves forwards with these changes, it will undermine the regulatory certainty needed for clean energy investment, delay the transition, create stranded-asset risk, and damage Canada's international climate credibility.

We also question the role that nuclear power should play in Canada's supply mix. Nuclear is considered to be non-emitting, but it is inflexible, expensive, and can effectively shut out cheaper, distributed resources which can be backed up by batteries. Our research indicates that for Ontario, a nuclear expansion pathway would cost ratepayers over \$117 billion more than a renewable energy pathway.²

We urge the Government of Canada to:

- set a firm, legislated target for a near-zero emissions electricity grid no later than 2035
- strengthen rather than weaken the Clean Electricity Regulations
- deliver a strategy to transition away from natural gas entirely, without relying on costly dead-end technologies such as CCS

¹ National Observer (2026) Surging gas power emissions and policy rollbacks are erasing Canada's biggest climate win. Available:

<https://www.nationalobserver.com/2026/07/13/analysis/gas-emissions-surging-policy-rollbacks>

² Environmental Defence Canada (2026) The Real Costs of Ontario's Nuclear Gamble. Available: <https://environmentaldefence.ca/wp-content/uploads/2026/06/Nuclear-Gamble-Report.pdf>

- commit that no new public financing will flow to fossil fuel generation or ineffective abatement measures such as carbon capture and storage
- ensure that public financing for electricity prioritizes the lowest cost sources of generation, as supported by independent analysis
- ensure that Canada's electricity strategy prioritizes residential and commercial grids, or industrial activities that grow the clean economy
- reinforce our electricity supply chains, in part by developing manufacturing capacity for electrical and amorphous steels and developing domestic supply chains for steel
- strengthen energy affordability
- ensure Budget 2026 delivers sufficient funding to achieve the goal of doubling electricity infrastructure and delivering an affordable, reliable and non-emitting electricity grid
- establish a just and equitable transition framework for workers and communities currently dependent on jobs and revenues from fossil fuel generation.

In addition, this submission offers recommendations across the eight areas for action identified in the discussion paper.

1. Building the electricity system without natural gas or CCS

We are very supportive of the goal of doubling electricity infrastructure and optimizing federal-provincial-territorial support for that. We are also supportive of the goal of transforming the electricity system and reducing emissions, however this goal must be one that we strive to achieve as soon as possible, i.e. not in the “longer-term.”

We do not support the idea of encouraging technologies and efficiencies that reduce the emissions impact from natural gas, but would instead argue for technologies and efficiencies that allow Canada's electricity system to transition away from natural gas entirely.

Natural gas is a fossil fuel, most of which is fracked. A full life cycle analysis of the emissions of natural gas, which is how its impact is best measured, demonstrates that gas is just as polluting as coal, given the huge volumes leaked in extraction and transit.³ The latest data on the cost competitiveness of energy sources demonstrates that gas is more expensive than renewable energy, even paired with battery storage.⁴ This was further supported by the outcomes of recent procurements in Ontario. Adding abatement technology such as carbon capture would make gas significantly more expensive, while almost certainly failing to reduce emissions to near zero, which must be Canada's overarching goal.

Despite decades in development, there are only around 50 commercial CCS projects globally, capturing a total of around 50 MT per year, most of which is used for enhanced oil recovery.

³ Deborah Gordon et al. (2023) Evaluating net life-cycle greenhouse gas emissions intensities from gas and coal at varying methane leakage rates. Environmental Research Letters. Available: <https://iopscience.iop.org/article/10.1088/1748-9326/ace3db/pdf>

⁴ Lazard (2026) 2026 Levelized Cost of Energy+ Report, Available: <https://www.lazard.com/news-announcements/lazard-releases-2026-levelized-cost-of-energyplus-report-pr/>

Even in mature applications, CCS projects do not reach their target capture rates and have never achieved close to 100% capture. CCS has a particularly poor track record in the power sector. Approximately 90% of proposed CCS capacity in the power sector has failed at the implementation stage or was suspended early.⁵ There are only five examples of CCS-equipped power plants globally, and all of them are coal power plants (beyond demonstration projects).⁶ Where it has been employed, such as the Boundary Dam in Saskatchewan and Petra Nova, the technology has faced a variety of challenges. Equipping natural gas power plants with CCS is even more complicated than coal, given that carbon dioxide is far more concentrated in coal than natural gas. In fact, large-scale CCS capture on gas-fired power plants has never been commercially demonstrated.⁷

Furthermore, CCS for the power sector is more costly and complex than other applications due to the diluted CO₂ in the flue gas stream.⁸ For example, Capital Power cited economic reasons for abandoning their CCS plans at the Genesee Generating Station.⁹ Outfitting new or existing fossil fuel power stations with CCS costs significantly more than zero emission renewable energy technologies per tonne of CO₂ avoided.¹⁰ According to Bloomberg NEF, equipping gas-fired power plants with CCS increases the cost of electricity by 54%.¹¹

Put simply, CCS is not needed in the power sector and risks adding to affordability concerns as well as hindering the transition to a 100% renewable energy system.

Virtually every modelling scenario shows that between now and 2050 the vast majority of new electricity generation built in Canada will be wind and solar. These are the cheapest forms of new electricity generation and can be deployed relatively quickly and at scale.

⁵ Robertson, B. & Mousavian, M. (2022) The carbon capture crux: Lessons learned. Institute for Energy Economics and Financial Analysis. Available: <https://ieefa.org/resources/carbon-capture-crux-lessons-learned>

⁶ Global CCS Institute (2025) Global Status of CCS. Available: <https://www.globalccsinstitute.com/wp-content/uploads/2025/10/Global-Status-of-CCS-2025-report-9-October.pdf>

⁷ Wamsted, D & Schlissel, D. (2023) Proposed CCS projects need careful review for cost, technology risks. Institute for Energy Economics & Financial Analysis. Available: <https://ieefa.org/resources/proposed-ccs-projects-need-careful-review-cost-technology-risks>.

⁸ IEA (2022) Levelised cost of CO₂ capture by sector and initial CO₂ concentration, 2019

Available: <https://www.iea.org/data-and-statistics/charts/levelised-cost-of-co2-capture-by-sector-and-initial-co2-concentration-2019>

⁹ Environmental Defence (2024) Statement in Response to Another Failed Carbon Capture Project.

Available: <https://environmentaldefence.ca/2024/05/01/statement-in-response-to-another-failed-carbon-capture-project/>

¹⁰ Jacobson, M. (2019). The health and climate impacts of carbon capture and direct air capture. *Energy & Environmental Science*, 12, 2019, pp.3567-3574. <https://doi.org/10.1039/C9EE02709B>.

¹¹ Denning, L. (2024) A Giant Carbon Dump Gives Glimpse Into Net-Zero Future. Bloomberg. Available: <https://www.bloomberg.com/opinion/articles/2024-07-08/a-giant-carbon-dump-in-norway-gives-glimpse-into-net-zero-future?srend=all>

2. Financing the Build

Generational investments in electricity infrastructure

Environmental Defence agrees with the need to support generational investments in electricity infrastructure by developing long-term, sustainable financing mechanisms that protect ratepayers.

Similarly, we support extending the clean electricity ITC to transmission projects, where these projects are tied to developing the reliability of the Canadian grid and not to electrifying fossil fuel operations. High voltage interties can reduce the need for generation and for natural gas by allowing power to be dispatched across the country to where it's needed, regardless of where it's generated. **Intra-provincial transmission projects should prioritize decarbonizing residential and commercial grids, or industrial activities that grow the clean economy. To use ITCs for intra-provincial transmission projects specifically designed to electrify fossil fuel production is essentially a subsidy for the oil or gas industries, and should not be eligible for federal government funding or tax incentives.**

We In order for Canada to build a strong, modern, and resilient East-West electricity grid and enhance its economic resilience and security, Budget 2026 must deliver \$32 billion over five years, including:

- \$20.5 billion in investments in transmission, by amending the Clean Electricity Investment Tax Credit to provide an enhanced 50% Investment Tax Credits for interprovincial and interregional transmission projects, with an additional 10% for using Canadian content. Extending the Clean Electricity ITC to support critical major high-voltage intraprovincial transmission projects. Furthermore, the clean ITCs should be extended to at least 2040 to align with major project and investor timelines.
- \$6.5 billion for efficiency and demand-side management, such as initiatives that reduce customer bills, optimize grid and generation resource use and enable greater adoption of distributed energy resources.
- \$5 billion to advance Indigenous-owned and Indigenous-led clean energy projects through grants and Indigenous Loan Guarantees, including \$650 million in specific funding for clean energy in remote and Indigenous communities.

We caution Canada from supporting nuclear power, given that nuclear power is a more expensive option than renewable energy. Research we commissioned found that Ontario's nuclear heavy plan would cost \$100 to \$200 billion more than a more renewables focused portfolio that would meet Ontario's needs for dispatchable power and flexibility while growing capacity.¹²

¹² Environmental Defence Canada (2026) The Real Costs of Ontario's Nuclear Gamble. Available: <https://environmentaldefence.ca/wp-content/uploads/2026/06/Nuclear-Gamble-Report.pdf>

Energy-saving retrofits

Lastly, we are very supportive of the goal of retrofitting one million households and would suggest that this goal should be a bare minimum. We encourage the government to study what is achievable in this space and to work within its jurisdiction to see that, on a go-forward basis, households are moving to heat pumps as a matter of course when their HVAC equipment is in need of replacement.

We recommend that the strategy also lists natural gas alongside “propane, oil, and electric baseboard heating” in its examples of heating systems that should be replaced by electric heat pumps within its retrofits funding and programs. Research by the Canadian Climate Institute finds that heat pumps are more affordable than gas furnaces and air conditioners in the vast majority of cases across Canada.¹³

3. Increasing regional integration

We are supportive of greater collaboration and increasing regional integration.

4. Improving regulatory certainty and speed, without sacrificing clean electricity regulations

We are stridently opposed to amending the clean electricity regulations unless those amendments will strengthen the regulations and speed the decarbonization of Canada’s electricity system. This is the area of greatest concern in the entire discussion paper.

The proposed amendments to the Clean Electricity Regulations represent a dangerous and unacceptable rollback of Canada’s most important regulatory tool for grid decarbonization. Environmental Defence does not accept these proposed amendments as a reasonable compromise. We view them as a significant weakening that undermines the regulatory certainty needed for clean energy investment, delays the transition, creates stranded-asset risk, and damages Canada’s international climate credibility.

The Clean Electricity Regulations are not an optional policy instrument — they are the exercise of a core federal responsibility to protect the environment and human health from greenhouse gas emissions. Further, financing and regulation are complementary, not substitutes for one another. A government that funds clean electricity but simultaneously weakens the regulations that drive the transition to it is working at cross-purposes with itself.

¹³ Canadian Climate Institute (2023) Heat Pumps Pay Off: Unlocking lower-cost heating and cooling in Canada. Available: <https://climateinstitute.ca/reports/heat-pumps-canada/>

Clean energy investors need to know that Canada is committed to phasing out fossil fuel generation — that regulatory standards will drive the market toward clean technologies, not protect incumbent fossil fuel assets. Weakening the CER sends exactly the wrong signal.

The discussion paper positions natural gas as "strategic and essential" to Canada's electricity future. This is wrong on two counts — it is wrong as a matter of climate policy, and it is wrong as a matter of economics.

Independent analysis from Environment and Climate Change Canada, commissioned from five modelling firms and presented in October 2024, demonstrates that a near-zero emissions electricity grid by 2035 is achievable and economically viable across most of Canada. The modelling shows that all scenarios result in substantial emissions reductions under the CER, with cumulative reductions ranging from 182 to 588 megatonnes of CO₂ equivalent between 2025 and 2050 across the five models. The average cost of abatement across all models is \$58 per tonne over the 2025–2050 period — well within the range of cost-effective climate action and far below the social cost of carbon. All models built grids that respected the policy constraints of the CER without any rupture in the ability to supply energy and capacity. The modelling confirms that the primary driver of cost in achieving near-zero emissions is not the regulations themselves but the pace of transmission buildout and the availability of flexibility resources such as storage, interties, and demand response. The answer to grid reliability concerns is more investment in clean flexibility, not more gas.

As a matter of economics, the case for natural gas is collapsing. Wind, solar, and battery storage costs have fallen dramatically and continue to decline. Since 2009, solar costs have fallen 84% and onshore wind costs have dropped 56%. Battery storage costs fell 27% in the last year alone. These technologies are now among the fastest and cheapest ways to meet new electricity demand. Ontario's recent Long-Term 2 (LT2) procurement provides real-world market evidence that gas cannot compete. Ontario awarded 640 MW of battery storage contracts in the LT2 auction and rejected natural gas plant bids that were competing in the same process. This demonstrates that clean alternatives are now cost-competitive with gas on both energy and capacity — the market is already making the case that the CER's regulatory signal is aligned with economic reality, not against it. The argument that weakening the CER is necessary for affordability is therefore undermined by the market's own verdict.

One of the CER's most important functions — perhaps its single most important near-term function — was to deter the commissioning of new gas-fired generation. A clear regulatory signal that unabated gas cannot operate past 2035 makes investment in new gas plants financially unviable. The capital costs of a new gas plant cannot be recovered if the plant is forced to retire or retrofit within a decade of commissioning. This deterrent effect is not a bug in the CER's design; it is a feature. It is the mechanism by which the regulation drives investment toward clean alternatives.

The proposed amendments — by introducing offsets, extending flexibility for existing units, and creating near-term room for new units — destroy exactly this deterrent effect.

The consequences are already visible. Regulatory uncertainty is causing provinces to look to gas across the country. New Brunswick's Energy and Utilities Board recently approved a 500 MW gas/diesel plant at Tantramar, to be built and operated by U.S. company PROENERGY for 25 years, despite the CER being on the books. The regulator criticized NB Power for poor process but approved the plant anyway. This is what happens when the regulatory signal weakens. Two additional large gas-fired power plants proposed for New Brunswick are likely to be exempt from the new CER rules. Environmental Defence does not support commissioning any new gas-fired generation. Every new gas plant approved today locks in decades of emissions, creates stranded-asset risk, and delays the deployment of clean alternatives that are already cost-competitive.

The ECCC modelling confirms that new gas plants are not needed to maintain reliability in a near-zero grid. The modelling shows that grids can be built to meet all reliability requirements — planning reserve margins, operational reserves, and full-year energy supply — without new gas generation. The models achieve this through deployment of wind, solar, storage, interties, (and in some cases nuclear) and other non-emitting sources. Where existing gas capacity remains online, it is used sparingly for peaking and reliability services, not for baseload or mid-merit generation. The idea that Canada needs new gas plants to keep the lights on is not supported by the evidence. What Canada needs is more investment in the transmission, storage, and flexibility resources that the modelling identifies as the true enablers of a near-zero grid.

Federal Regulatory and Permitting Processes

There may be some merit to streamlining federal regulation and permitting processes but not if it compromises the environmental impacts of projects or means that due diligence isn't done concerning a project's impacts, or if it impacts the Crown's duty to consult First Nations and Indigenous peoples.

Furthermore, Environmental Defence Canada is extremely concerned about the proposed "Getter Major Projects Built" legislative, regulatory and policy reforms. We oppose this proposal in full and insist that the government does not move ahead with these reforms.

5. Managing demand and modernizing the system to ensure energy affordability

Environmental Defence supports the government's efforts to explore demand-side measures to help reduce energy bills, including incentivizing accelerated retrofits of large buildings; and using regulatory approaches to ensure large industrial end-users adopt active energy management practices.

Including "two-way" wiring and transmission infrastructure will support the ability of utilities and local distribution networks to make a greater use of distributed energy resources (DER) in their

jurisdictions. Enabling behind-the-meter BESS, electric vehicle fleets, rooftop and parking lot based solar, and other DER solutions will further help manage demand.

Energy affordability can be further addressed through a number of mechanisms, including by establishing a Home Energy Performance Fund, increasing support for the Canada Greener Homes Affordability Program, minimizing electricity rate impacts and reducing long-term electricity bills through Canada Infrastructure Bank financing of utility demand-side management, encouraging utilities to treat demand-side management as an alternative to more expensive energy supply by creating tools, resources and methodologies and crowding in demand-side management funding through federal program design.

Recognizing the crucial importance of energy efficiency and demand-side management in Canada's clean electrification pathways, we support and wish to highlight the detailed policy recommendations and thinking on demand-side management to the submissions to this consultation from the Pembina Institute¹⁴ and Efficiency Canada.¹⁵

6. Building capacity across the value chain

Environmental Defence is supportive of the federal government developing a comprehensive understanding of Canada's electricity supply chain. In particular, there are opportunities in the battery supply chain and in many components of the electricity supply chain that are or can be made with Canadian steel. Steel is essential to electrification: we need more steel than all other materials combined to build infrastructure needed for a clean energy future. However, Canada does not currently produce certain specialty steels critical to transmission infrastructure, nor do we adequately deploy our domestic steel production to support renewable energy supply chains.

Canada does not produce any grain-oriented electrical steel (GOES) or amorphous steel, which are necessary to build the transformer cores that make electricity possible. These speciality steels are in short supply across global supply chains and, crucially, North America only has one GOES manufacturer which is located in the United States. Without this key manufacturing capability, Canada's ability to electrify will hinge on sourcing these materials from elsewhere, while yielding that same market – nearly 500 million for GOES alone in 2025 – to other nations.

Developing manufacturing capacity for electrical and amorphous steels should be a central concern as the federal government seeks to better understand, and reinforce, our electricity supply chains.

¹⁴ Pembina Institute,
https://www.pembina.org/sites/default/files/2026-06/Powering_Up_an_Electrification_Strategy_for_Canada.pdf

¹⁵ Efficiency Canada,
<https://www.efficiencycanada.org/wp-content/uploads/2026/06/Input-on-National-Strategy-for-an-Electrified-Economy.pdf>

We also support developing domestic supply chains for steel, and other materials, that we already produce. At present, Canada only has one wind turbine manufacturing facility, in Trois Rivières Quebec, despite producing the necessary materials to build them, and despite Canada's steel industry requiring new sources of domestic demand. This is a challenge Canadian industries have overcome in the past with forward thinking policy from provincial decision-makers. In 2008, when the Ontario government passed the Green Energy and Economy Act, that Act included domestic content requirements for wind and solar power projects. The industry response was stunning. Announcements were made on a weekly basis about companies setting up shop in Ontario or diversifying their offerings to include renewable energy components. EDC tracked much of this. Of note are two reports, "Faces of Transformation" from 2010, and "Getting Fit" from 2016.

7. Ensuring the skills and labour needed

EDC is one of the founding members of Blue Green Canada, an alliance between labour and environmental organizations. Blue Green Canada (BGC) and BGC member, Pembina Institute, have submitted comments in regards to how this strategy needs to be integrated with the Sustainable Jobs Act and the Action Plan that Act requires.

8. Securing the North

EDC is very supportive of engaging with Indigenous governments and utilities. We offer a word of caution in regards to "opening up" the North. Canada's North is a unique and ecologically significant bioregion that is relatively intact from an ecological perspective. It is home to vast carbon sinks, large migratory herds such as the caribou, and its ecological integrity must be protected as Canada seeks to protect 30 per cent of land and water by 2030.

That said, it is important to get remote communities off of diesel and to ensure they have reliable, clean, and affordable electricity. Micro-grids combining batteries, solar and wind are especially promising for this. Geothermal heat and power offer another possibility.

Long-term predictable support for remote communities must continue, enabling communities to deliver on projects and initiatives they have begun and ensuring they have pathways to pursue future clean energy ambitions. Canada has made major progress in reducing diesel dependence in remote Canadian communities. Wah-ila-toos and its associated programs have been successful in delivering local economic opportunity and increasing energy security, and have supported nearly 500 community energy projects, laying the groundwork for long-term project success

Canada should study how best to address energy infrastructure in the North in partnership with Indigenous governments and communities.

About Environmental Defence Canada

Environmental Defence Canada is a leading Canadian environmental advocacy organization that works with government, industry and individuals to defend clean water, a safe climate and healthy communities.