



Submission to the Public Consultation

***Powering Canada Strong: A National Strategy for an Electrified Canadian Economy
to Natural Resources Canada***

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by

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Powering Canada Strong

Observations and analysis on the government's 'Nation building strategy' to develop a National Electricity Strategy ¹.

Areas for action: The government is seeking input in relation to seven focus areas.

1. Building the electricity system

To meet the challenge of future electricity demand, the government is proposing to “encourage technologies and efficiencies that reduce the emissions impact of natural gas.” However, the assertion that gas-fuelled electricity generation can be close to emission-free is simply untrue. Numerous studies have documented the failure of carbon capture and sequestration technologies to operate effectively.²

¹ On May 14, 2026, the Government of Canada released a discussion paper titled '[Powering Canada Strong: A National Strategy for an Electrified Canadian Economy](#)'. This document establishes a framework that explains how the federal government plans to support the build-out of the electricity system and the electrification of the Canadian economy.

² See, for example, the Institute for Energy Economics and Financial Analysis: The Carbon Capture Crux. September 2022. <https://ieefa.org/resources/carbon-capture-crux-lessons-learned>.

Desmog 25 September 2023. Fossil fuel companies made bold promises to capture carbon. Here's what actually happened. <https://www.desmog.com/2023/09/25/fossil-fuel-companies-made-bold-promises-to-capture-carbon-heres-what-actually-happened/>

Desmog. Cancelled Canadian CCS project deemed 'not economically feasible'. <https://www.desmog.com/2024/05/06/capital-power-generation-genesees-power-plant-canceled-canadian-ccs-project-not-economically-feasible/>

Renew Economy. World's largest CCS project hits new low on amount of carbon captured and stored. <https://reneweconomy.com.au/worlds-largest-ccs-project-hits-new-low-on-amount-of-carbon-captured-and-stored/>

Carbon Credits. 2023. Occidental petroleum quietly abandons biggest carbon capture plant. <https://carboncredits.com/occidental-petroleum-quietly-abandons-biggest-carbon-capture-plant/>

Canary Media. The carbon capture project that couldn't: Chevron misses targets for its huge Australia facility. <https://www.canarymedia.com/articles/carbon-capture/the-carbon-capture-project-that-couldnt-chevron-misses-targets-for-its-huge-australia-facility>

Carbon capture technology is capable of removing most of the CO₂ from the flue gas of a gas-powered generating station if a carbon capture unit (CCU) is installed. However, it should be understood that CO₂ needs be captured twice if the complete fuel cycle is counted. Once when CO₂ is separated from the extracted raw gas to produce pure ‘natural’ gas, and then again when the natural gas is burned in a generating station. This however is only part of the problem. The captured CO₂ then has to be compressed, transported by pipeline over quite possibly a considerable distance, and then pumped underground to be supposedly permanently sequestered. This process takes a considerable amount of energy and the construction of a great deal of infrastructure. The whole concept is an industry-financed fig leaf to hide the fact that the technology is technically flawed, economically bankrupt, and essentially irrelevant.

The ‘full potential’ of Canada’s electricity system can be achieved by focusing on the development of Canada’s substantial resources of renewable energy. Atlantic Canada has enormous potential for the deployment of wind power³. So too has Quebec, Ontario, and southern Alberta and Saskatchewan—where solar energy is also a major resource. And almost everywhere in Canada hydropower remains a potential source of electrical power.

Policies to shift the generation of electricity to renewables must be combined with other policies to extend and strengthen the national grid and to implement nation-wide programs of demand side management and energy efficiency in the transportation, industry, and building sectors. These policies are discussed below.

Not sufficiently mentioned in the Powering Canada Strong (PCS) document is the essential role of utility-scale batteries. Batteries are now an essential element of a modern integrated high-capacity grid system and should be installed at all levels across the network linked to both supply and demand. Utility-scale battery energy storage systems are essential for GW-scale solar and wind generating infrastructure. In addition, smaller kW-scale batteries should be compulsory in every new home—capturing low-cost electricity at night and releasing it during peak periods during the day. Solar energy is now available 24/7; coupled with batteries, it is no longer an intermittent resource.

The government is committed to achieving a condition of net zero emissions by 2050. In the scenario shown in the publication **Canada’s Energy Future 2026**, the role of renewable energy is front and centre. Focusing on electricity capacity and generation the report states:

In all scenarios, the mix shifts to include much more wind electricity. Wind, which at 40 TWh accounted for 6.5% of generation in 2023, grows to...40% in Canada Net zero. Natural gas generation without CCUS falls significantly in all scenarios even though its

³ Tidal power is also an emerging power technology in Atlantic Canada.

capacity remains near or above current levels. ...This signals a shift in the role of natural gas from being used primarily for providing on-demand power to ensure system reliability.”⁴

2. Financing the build

The PCS proposes ‘long-term sustainable financing mechanisms’ but does not suggest what these might be. But there are some obvious financial resources that can and should be accessed by the government.

The first is the exceptional profitability of Canada's oil and gas industry, much of it flowing to foreign — predominantly American — shareholders rather than being reinvested domestically. This is a legitimate, and largely untapped, source of financing. From 2021 to 2024, the four largest oil sands producers earned \$131.6 billion in operating profits, while paying out \$58.4 billion to foreign shareholders through dividends and share buybacks — nearly \$50 billion of it to American owners alone. Over the same period, the industry's effective tax rate averaged just 14.3%, among the lowest of any major Canadian sector. There is a straightforward case, on "polluter pays" grounds, for directing a larger share of these profits toward financing the electricity transition — with the largest emitters and the largest profit-takers asked to contribute first.⁵

The top one percent of the income and wealth distribution on a per capita basis are responsible for a larger fraction of greenhouse gas emissions than the bottom 50% and the middle 40%. It is not just wealth that is inequitable; it is the access to a clean environment and the freedom to pollute it. An emissions tax on the top 10 percent of Canadians in this category should be progressive – starting at 1 percent and rising to 3 percent for the wealthiest top 1 percent. This action has been proposed in considerable detail by several reputable economists ⁶. Canada should absolutely take immediate action.

⁴ See Canada's Energy Future 2026. Energy supply and demand projections to 2050, [p. 47-48](#). Figure R.5 Electricity capacity by technology, 2030 and 2050, all scenarios; and Figure R.6. Electricity generation by technology. 2023 and 2050, all scenarios. <https://www.cer-rec.gc.ca/en/data-analysis/canada-energy-future/2026/>

⁵ See [Exporting Profits](#) (Silas Xuereb, Canadians for Tax Fairness & Alberta Federation of Labour, October 2025). Also this source evaluating the profits of the industry: the [CBC's coverage of ARC Energy Research Institute](#) — a Calgary-based industry research group — writing in Feb 2023 put total Canadian oilpatch profits at roughly \$120 billion in 2022 and forecast \$78 billion in 2023, which is in the order of magnitude of the later Tax Fairness numbers.

⁶ See the reports and papers by Thomas Picketty and Lucas Chancel, "Global carbon inequality over 1990–2019," *Nature Sustainability* (2022) — [nature.com/articles/s41893-022-00955-z](https://www.nature.com/articles/s41893-022-00955-z)
Also Gabriel Zucman. <https://cleantechnica.com/2026/04/06/we-need-to-tax-billionaires-at-2-economist-gabriel-zucman-just-explained-exactly-how/>

Finally, many of the economic tools available to the government for some reason remain firmly unused in the toolbox. The government has the power to impose regulations, provide incentives, and manage disincentives. All three tools should have their own policy environment. Disincentives generate a revenue stream which can be directly focused on emission reduction and mitigation. These measures could include an increased excise tax on gasoline and diesel fuel, an increase in the cost of registering fossil fuel-powered vehicles, and restrictions such as low emission zones in urban areas which ICE (internal combustion engine) vehicles do not have access to without paying a fee. Urban air pollution has a cost. ICE vehicles should pay for their environmental impact. Polluting the environment is NOT a right.

The government proposes ‘energy -saving retrofits for up to one million homes’. This is inadequate. A national program of financing retrofits should be introduced. This has been done before but only on a piecemeal basis. Now it should be a national priority. The loan is attached to the home and is repaid over several years by the homeowner. All new construction should include integrated home batteries to reduce peak demand, vehicle to home bidirectional connections, and vehicle to grid capability.

Canada needs a nationwide high-voltage direct current grid supplemented by GW-scale batteries. This technology is available and proven. Realizing this potential will require the government to look outside the narrow policy framework favoured by industry, and to consider the full range of zero-emission and storage technologies now routinely available.

Finally, there is the tax on carbon. It should be more forcefully employed.

3. Increasing regional integration

All of the proposed actions should be implemented. Interprovincial interties are essential. There will never be a better time to pursue policies of ‘de-americanisation’.

4. Improving regulatory certainty and speed.

The actions proposed are all good. But actions speak louder than words. We have heard all this talk before.

A Crown Consultation Hub to coordinate federal indigenous consultation sounds like yet another institutional structure that will take months to establish and even longer to take action. Many of the proposed actions are merely general statements of good intentions. For instance, “amending the Clean Electricity Regulations to enable the electricity sector to play a stronger role in supporting growth and economy-wide, cost-effective emissions reductions” is about as useful as a new year’s resolution to ‘do better’. The government needs to set out detailed, concrete and actionable proposals so that these may be considered and evaluated by all the parties concerned.

On the subject of providing energy to remote communities, the huge advantage of wind power coupled with batteries is being systematically sidelined by the nuclear industry which is trying to persuade the government to deploy small modular reactors. This is a completely unrealistic initiative by the nuclear power industry which the government should reject out of hand.

5. Managing demand and modernising the system

Demand side management is one of the most powerful tools in the government's toolbox and should be an absolute priority. All provincial governments should introduce and manage time-dependent electricity tariff structures and other measures that flatten peak demand. Provinces should introduce legislation that makes kW-scale batteries in buildings and residences compulsory and set standards for energy efficiency. All independent electricity system operators should install GW-scale batteries across their grids and integrate their networks with adjacent provinces.

Distributed systems that generate electricity at the household level should be facilitated with tax breaks and other forms of financing. Rooftop solar, balcony solar, minigrid systems: they all contribute to reducing overall demand -- and flattening peak demand when coupled with batteries. And most importantly, projections for electricity demand growth out to 2050 should be conducted and reported by at least three independent agencies. Forecasts from the fossil fuel industry or even a single independent energy system operator should never be accepted at face value.

6. Building capacity across the value chain

The government proposed actions are mainly generalities. However, the final proposal to provide support for “the development and deployment of smart, clean energy technologies, such as advanced grid controls, automation, analytics and advanced energy storage, to modernise electricity systems including in the North”, should be strongly pursued—but with the understanding that ‘clean energy technologies’ does NOT include gas-fired power generation.

7. Ensuring the skills and labour needed

These proposals should be supported and financed. However, the trades and engineering professions not only need improved support for training (including removing the barriers that impede entry), but the issues that cause people to leave the sector should be addressed and remedied.

8. Securing the North

It is not clear what ‘addressing energy infrastructure’ really means. The reality is that nearly all remote northern communities have excellent wind resources and a couple of MW-scale

wind turbines coupled with batteries at each community (with the existing Diesel generators kept on as backup) would do the job perfectly well and at much less cost. Remote communities already manage variable demand with local diesel generators, and a growing body of research shows renewable-hybrid systems can do the same: modelling of four Nunavut communities found wind-solar-diesel hybrids meeting 55–68% of demand from renewables, cutting emissions over 55%, at costs below diesel-only baselines⁷.

Additional information on the limited efficacy of carbon capture

- The addition of a carbon capture unit (CCU) to a gas-fired generation station is a major undertaking in terms of both infrastructure and cost. For example, Fluor, a large engineering firm, has recently stated: *A carbon capture unit requires a large footprint. Overall plant footprint can be comparable to, and in some cases, larger than the natural gas combined cycle plant.*⁸
- Fluor also notes that a CCU requires utilities including power, steam, and cooling water. Utilities must decide whether to add capacity for power generation for the CCU or have the existing facility absorb the power demand. And whether to add auxiliary boilers for steam generation or pull steam from the existing natural gas combined cycle facility. Also, there is “significant waste heat rejection required by the CCU”. Options include air cooling, water cooling, or hybrid systems.⁹
- Carbon capture and storage does not generate a revenue stream for the utility. Unless of course the captured CO₂ is used for enhanced oil recovery (EOR). For example, in Canada, injection of CO₂ into long term storage (LTS) began in 2016. In 2023, approximately 1.1 million tonnes of captured CO₂ was placed in geological formations for LTS. However, EOR use of industrial captured CO₂ began in 2000 and in 2023 about 3.2 Mt of captured CO₂ was injected to support EOR operations in Canada. At 2023 year-end, a cumulative total of 8.3 Mt of captured CO₂ was placed in LTS and 51.13 Mt was injected for EOR. Using carbon dioxide for enhanced oil recovery leads to *more* greenhouse gas emissions--not less.¹⁰
- The industry habitually claims carbon capture rates of 90-95 percent. But in practice, capture rates are far lower. Rates for the Boundary Dam facility in

⁷ Source: "Optimization of hybrid renewable energy systems for remote communities in northern Canada" (2025).. <https://www.sciencedirect.com/science/article/pii/S096014812500391X>

⁸ Carbon Capture: Post-combustion carbon capture implications and opportunities in gas fired power generation. Energy Now May 2026. <https://energynow.ca/2026/05/post-combustion-carbon-capture-implications-and-opportunities-in-gas-fired-power-generation/>

⁹ ibid

¹⁰ See <https://www.canada.ca/en/environment-climate-change/services/climate-change/greenhouse-gas-emissions/sources-sinks-executive-summary-2025.html>.

Saskatchewan are around 65% and for the Shell Quest plant in Edmonton about 50% ¹¹

- Carbon capture and storage requires a means of transporting CO₂ from the site where it is captured to the site where it is pumped underground and stored. A pipeline is the most efficient way to move large volumes of CO₂ over long distances. So ‘low-emission natural gas’ requires pipelines. Lots of them.
- Upstream emissions are significant. A report by Carbon Direct states that gas-fired generating stations with a CCU use 20-30% more natural gas than units without a CCU -- adding 40 kg CO₂e for each MWh of electricity generated, plus another 40 kg CO₂e/MWh for every 1 % of methane leakage in the natural gas supply chain. Upstream emissions can therefore add 50-350 kgCO₂e/MWh to any natural gas - fired generator which, at the upper end, is in the same range as the carbon captured downstream by the CCU.¹²
- Gas-fired generating stations with CCUs cost more: due to the capital cost of the capture equipment, the increased fuel needed to run the capture process, other operating costs, and the cost of transporting and storing captured CO₂. Finally, Carbon Direct estimates that adding carbon capture increases the levelized cost of electricity by 50 -100% above the cost of power generation without carbon capture.¹³

In conclusion, natural gas-powered generating stations with carbon capture units have lower emissions than facilities without them. But far less than the industry claims when the upstream part of the cycle is counted. They are also more costly, more complex, require networks of pipelines, and will substantially raise the cost of electricity. Natural gas-powered electricity generation is NOT a low-emission technology. This is a fiction.

Only renewable sources of energy—solar energy, wind power, tidal and hydropower—are genuinely carbon-free. So too is nuclear power but the technology has the major disadvantage of being one of the costliest ways to generate electricity.¹⁴ There is absolutely no reason to favour nuclear over renewables, particularly when the management of radioactive wastes from nuclear power remains an intractable and increasingly difficult problem.

¹¹ See the SCAN! briefing paper: Carbon capture, Use and Storage. <https://seniorsforclimateactionnow.org/wp-content/uploads/2025/11/SCAN-Briefing-No.-1-CCS-Nov-8-2025.pdf>

¹² Carbon Direct. 3 March 2025. Carbon capture for natural gas power generation. https://cdn.prod.website-files.com/640fee7f8b52071e1af90f38/67f7c759411666116aa3e118_Carbon%20Direct%20Paper.pdf

¹³ Carbon Direct op.cit.

¹⁴ See the 2026 report on the levelized cost of energy by Lazard. This shows for new infrastructure (utility solar PV + storage and onshore wind + storage), the upper end of the cost range is less than even the lower end of the range for US nuclear power. <https://www.lazard.com/research-insights/levelized-cost-of-energyplus-lcoeplus/>. Only the marginal cost of power generation from existing nuclear installations is low.

SCAN! is pleased to submit these comments for your consideration. SCAN! asks to be proactively included in future consultations on this and other climate action issues.

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Seniors for Climate Action Now! (SCAN!) is building a pan-Canadian seniors' climate action movement for the benefit of generations to come. We are working with youth and other climate activists to create a democratic, just, and transformative movement to address the climate crisis.

<https://seniorsforclimateactionnow.org/>