

CANADA'S IMPENDING ELECTRICITY CRISIS  
AND HOW TO FIX IT

# BLACKOUT

HEATHER EXNER-PIROT

March 2026





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## Executive summary | *sommaire*

**Electricity is not a regular commodity or service.** It is the foundation of economic growth and material well-being, underpinning productivity, income, health, and quality of life.

Canadians have long enjoyed abundant electricity, with higher generation levels, lower prices, and a cleaner grid than their OECD peers. Affordable and reliable electricity has been crucial to the competitiveness of energy-intensive sectors such as steel, aluminum, pulp and paper, chemicals, and fertilizer. In Canada, electricity hasn't just correlated with growth – it has driven it.

Yet this long-standing surplus is now at risk. Demand is rising due to AI data centres, natural resource development, electrification, and population growth, while generation has fallen both in absolute and per capita terms.

The most obvious manifestation of this trend is that Canada recently became a net importer of electricity from the United States.

Investment in this critical input is flat. Burdensome regulations, market shifts, and climate policy uncertainty have hindered the development of new electricity supply. Over the past two decades, governments in Canada prioritized grid sustainability, even at the expense of reliability and affordability. Our electricity surplus has diminished because we became complacent. The sector now demands our attention – and we must respond intelligently.

Canada must act now to prevent a looming electricity shortage. This will require pragmatic climate policies, stable and predictable policy frameworks, and measures that attract private investment.

The decades of electricity abundance and affordability are coming to an end. Generation is down, exports have become imports, and investment is flat. At a time when electricity is increasingly scarce and its availability is a key competitive advantage, Canada's impending shortage is not just an affordability issue – it is also an economic and security crisis.

Canadians must push their politicians for change before the current supply conditions get even worse.

Key recommendations include:

- **Stability and certainty:** As energy becomes increasingly politicized, stability in Canadian electricity policy has eroded. Frequent changes to policies, strategies, mandates, and regulations – often annually – have prevented consensus on long-term goals and imposed real economic costs. Investors and project proponents need confidence that policy trajectories will persist beyond the next election. Achieving this requires durable policies developed in coordination with utilities and industry stakeholders, supported by strong provincial–federal collaboration.
- **Pragmatic climate policy:** Climate policy has shaped most electricity decisions in Canada over the past two decades. While electricity systems aim to balance reliability, affordability, and sustainability, federal policy has prioritized sustainability at the expense of the other two – despite most ratepayers placing reliability and affordability first. Canada’s grid is already largely clean; making the final 20 per cent non-emitting will be far more expensive than the first 80 per cent, and beyond what many ratepayers can or will fund. The Clean Electricity Regulations (CER) are therefore incompatible with reliability and affordability goals and risk creating scarcity. Although the Alberta–Canada MOU allows a potential CER carve-out, it depends on renegotiating industrial carbon pricing. A stable and competitive industrial carbon price – ideally \$80–90 per tonne through established provincial systems – is a more effective way to drive efficiency and technology adoption without overburdening customers or harming sector competitiveness.
- **Private sector attraction:** The scale of Canada’s electricity needs and challenges means that public sector spending cannot fill the gaps. For the country to achieve its electricity and economic goals, the private sector must have confidence that it can allocate capital in Canada in a reasonable amount of time, for a reasonable return on investment. It is not enough for Canada to decide that it is ready to grow; it must also compete. As such, policymakers should adopt policies that foster a competitive investment climate, including clear and predictable tax rules and incentives. The indicators of success for Canada’s electricity policy should be clear: growing private sector investment, absolute and per capita generation and transmission growth, and competitive, stable pricing compared with peer jurisdictions. [MLI](#)

*L'électricité n'est pas un produit ou un service courant. Elle est essentielle pour le développement économique et le bien-être matériel, servant de base à la productivité, aux revenus, à la santé et à la qualité de vie.*

*Le Canada a pendant longtemps bénéficié d'une électricité abondante, peu coûteuse et propre, ce qui le distingue favorablement des autres pays de l'OCDE. L'approvisionnement électrique abordable et fiable a été crucial pour la compétitivité des secteurs industriels énergivores comme l'acier, l'aluminium, les pâtes et papiers, les produits chimiques et les engrais. En effet, l'électricité ne s'est pas contentée de suivre la croissance économique, elle en a été le véritable catalyseur.*

*Pourtant, les surplus d'autrefois sont maintenant menacés. L'expansion rapide des centres de données d'IA, l'exploitation accrue des ressources, l'électrification et la croissance démographique font augmenter la demande, alors que la production diminue, tant globalement que par habitant.*

*En effet, le Canada est récemment devenu un importateur net d'électricité des États-Unis.*

*Les investissements dans ce secteur clé stagnent. Les réglementations contraignantes, les marchés changeants et l'incertitude politique ont ralenti le déploiement de nouvelles sources. Depuis deux décennies, les gouvernements privilégient la durabilité environnementale au détriment de la fiabilité et des coûts. La diminution de nos surplus résulte de notre complaisance. Il est crucial d'y prêter toute notre attention – et de faire preuve de discernement.*

*Le Canada doit prendre des mesures immédiates pour éviter les pénuries imminentes : des politiques climatiques réalistes, accompagnées d'un cadre réglementaire stable et prévisible et d'incitatifs efficaces pour attirer les investissements privés.*

*Les décennies d'abondance et d'abordabilité sont révolues. La production diminue, les importations dépassent les exportations et les investissements stagnent. En raison de la raréfaction croissante de l'électricité au Canada et de la perte prévisible de cet avantage concurrentiel clé, les pénuries imminentes ne se limitent pas à un enjeu d'abordabilité – elles posent un défi majeur pour l'économie et la sécurité.*

*Il est impératif que les Canadiennes et les Canadiens interpellent leurs représentants politiques pour empêcher une conjoncture encore pire. Les points à retenir sont les suivants :*

- **Stabilité et certitude** : *L'instrumentalisation grandissante de l'énergie a ébranlé les fondations de la politique électrique canadienne. Les changements fréquents apportés aux politiques, stratégies, mandats et réglementations – souvent annuellement – ont empêché la formation d'un consensus sur les objectifs à long terme et imposé des coûts économiques réels. Afin d'apaiser les craintes des investisseurs et des promoteurs, il est crucial de garantir la stabilité des décisions politiques au-delà d'un mandat électoral. Pour y parvenir, il est recommandé de collaborer avec les services publics et les parties*

*prenantes pour élaborer des politiques qui bénéficient d'un large soutien au sein des provinces et du gouvernement fédéral.*

- **Politique climatique réaliste** : *La politique climatique domine les décisions en matière d'électricité au Canada depuis vingt ans. Bien que les réseaux électriques visent à concilier fiabilité, abordabilité et durabilité, la politique fédérale a priorisé la durabilité à l'encontre des préférences de la majorité des contribuables, pour lesquels la fiabilité et l'abordabilité priment. Le réseau électrique canadien est déjà propre, mais la conversion des 20 % restants sera coûteuse et dépassera les capacités financières de nombreux contribuables. Le Règlement sur l'électricité propre (REP) est donc incompatible avec les objectifs de fiabilité et d'abordabilité et risque d'entraîner des pénuries. Le protocole d'entente Alberta-Canada permet une exemption, mais nécessite une révision du prix du carbone industriel. Un prix stable et concurrentiel (entre 80 \$ et 90 \$ la tonne) via des systèmes provinciaux éprouvés est une méthode plus efficace pour favoriser l'efficacité et l'adoption de technologies, sans surcharger les consommateurs ni nuire à la compétitivité du secteur.*
- **Mobilisation du secteur privé** : *Les besoins et les défis en électricité au Canada sont importants, ce qui signifie que les investissements publics ne suffiront pas. Afin d'atteindre les objectifs énergétiques et économiques du pays, le secteur privé doit pouvoir investir rapidement et anticiper un rendement adéquat. Pour le Canada, il ne suffit pas de se déclarer prêt. Il doit aussi être concurrentiel. Il est donc recommandé aux décideurs d'adopter des politiques favorisant un climat d'investissement concurrentiel, notamment au moyen de règles fiscales et d'incitatifs clairs et prévisibles. La politique canadienne doit intégrer des critères de réussite transparents : augmentation des investissements privés, développement de la production et du transport globalement et par habitant, compétitivité et stabilité des prix par rapport aux pays comparables. [MLI](#)*

## Introduction

Electricity is the backbone of modern economies, and Canada has been blessed with several extraordinary advantages: abundant hydro resources, nuclear expertise, and access to natural gas. However, electrification, critical minerals processing, liquefaction of natural gas, AI data centres, and advanced manufacturing all require a level of growth in reliable and affordable power generation that Canada has not delivered in decades.

Yet at precisely the moment demand is increasing, Canada's electricity systems are under increasing strain. After years of relatively flat load growth, utilities across the country are now confronting rising peak demand, aging assets, and tightening reserve margins. At the same time, the capital requirements facing provincial systems are unprecedented. Nuclear refurbishments, transmission expansion, grid modernization, and generation replacement will require tens of billions of dollars in new investment. These investments must be financed at a time when costs are higher and those costs will have to be recovered from ratepayers already sensitive to rising bills.

Layered onto these structural pressures are ambitious federal decarbonization regulations and evolving provincial market reforms. While the public still broadly supports the goal of reducing carbon emissions, the tension with affordability and reliability needs is growing. There is some misalignment between climate ambition, economic competitiveness, and system reliability.

This paper argues that Canada's electricity policies are entering a period of strategic vulnerability that must be addressed. It outlines how electricity production and distribution work in Canada, describes the major structural and policy pressures that are creating stress in the system, and offers suggestions for a more pragmatic, coordinated approach. Ultimately

the paper aims to impart a sense of urgency and give readers a sufficient understanding of the problem so that they can demand improvements from policymakers and governments.

## Energy is the Economy

Electricity is not a regular commodity or service. It is the foundation for economic growth and material well-being, underpinning productivity, income, health, and overall quality of life.

Canadians have long taken electricity abundance for granted. The nation enjoys lower-than-average electricity prices compared to its OECD peers, and consequently per capita use is very high. Electricity costs and access have been key to the competitiveness of many of Canada's energy-intensive industries such as steel, aluminum, pulp and paper, chemicals, and fertilizer. Electricity isn't just *correlated* with growth – in Canada it has been causal. While the sector is not the largest contributor to GDP, it is the first.

The surplus of electricity that Canada has long enjoyed is now at risk. While electricity use largely plateaued in Canada and most of the Western world in the first two decades of the 2000s – a result of manufacturing offshoring to China and efficiency gains at home – electricity demand is once again rising. This follows a period of rapid population growth, electrification of transport and heating, and data centre demand. Utilities are now hitting load records, and during heat waves and cold snaps are regularly approaching the limits of their capacity.

Unfortunately, this growing demand has come at the same time as generation has fallen in both absolute and per capita terms. The decline is due to a number of factors including assets being retired; drought conditions having an adverse impact on hydroelectricity output in British Columbia, Quebec, and Manitoba; and the refurbishment of nuclear reactors that has led to planned outages in Ontario.

New infrastructure is not being built quickly enough to compensate for the loss of existing generation capacity. Burdensome regulations, market

changes, and climate policy uncertainty have caused a large gap between the pace of the growth in demand on one hand, and the development of supply on the other.

The most obvious manifestation of this trend is that Canada became a net importer of electricity from the US for the first time in the modern era in March 2024. Far from a blip, this has become a trend: based on monthly data, from October to December 2025, Canada was a net importer (Canada Energy Regulator 2025a). This, too, seems unsustainable, as American electricity demand (Batra et al. 2025) and prices are growing even faster than those in Canada, primarily due to stronger data centre demand.

“ *Getting out of this hole will take a concerted effort, but the first step is to stop digging.* ”

Scarcity leads to higher prices. In the winter of 2026, many Canadians are likely to receive their highest utility bills ever. Regulated rates are outpacing inflation. Some utilities are rationing electricity, prioritizing some energy-intensive economic sectors (like manufacturing and resource development) over others (like data centres and blockchain/crypto operations). The forecast looks dire: the North American Electric Reliability Corporation, an independent, continent-wide authority responsible for monitoring, assessing, and enforcing reliability standards for the North American bulk power system, warned in its January 2026 long-term reliability assessment that Manitoba, Saskatchewan, Quebec, and the Atlantic provinces were at elevated risk of supply shortfall in extreme conditions (NERC 2026).

Getting out of this hole will take a concerted effort, but the first step is to stop digging. Electricity markets in Canada vary greatly, but almost all are facing urgent challenges. Most are facing load growth after years of flat demand. Customers are facing affordability challenges on many fronts, making rate increases politically sensitive. The balance sheets of many regulated utilities are under stress, which is precluding fast or significant growth. Other power suppliers, like Alberta's merchant market, are facing constant restructuring.

While the federal government and several provincial governments are making efforts to improve policy certainty and stimulate new generation, transmission, and distribution – for example with the proposed National Electricity Strategy – there is ongoing tension between sustainability goals on the one hand, and affordability and reliability on the other. Added to that is the reality that Canadian electricity markets are not currently as attractive a destination for capital as American ones, owing to burdensome regulations and policy uncertainty, so scarce electrical equipment, labour, and capital will continue to be pulled south.

Much has been written about Canada’s ambitions to double housing construction, double non-US exports, become the fastest growing economy in the G7, implement an ambitious defence industrial strategy, and become an energy superpower. But these goals cannot be achieved without abundant and reliable power. Electricity availability is likely to be a major bottleneck for economic growth and affordability in Canada and will inevitably become a bigger political issue in the years to come.

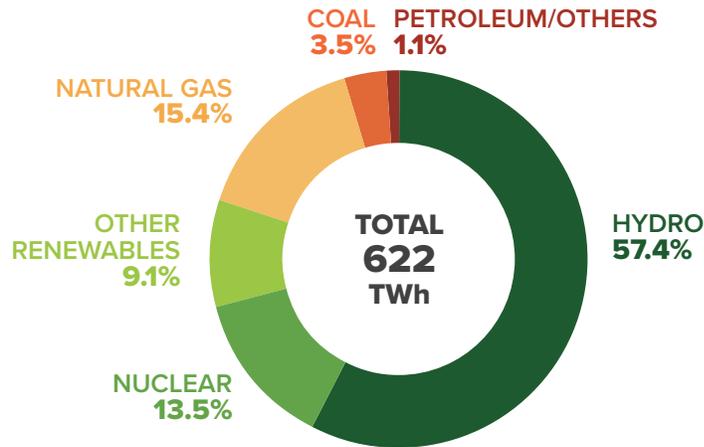
## **Electricity in Canada: An Overview**

Canada is blessed with abundant, relatively inexpensive electricity. As of 2024, Canada generated 622 terawatt hours (TWh) of electricity (Statistics Canada 2025a), the seventh-highest of any country. Canadians use more electricity per capita than any other large (top 15) economy, about 15,710 kWh, over four times the global average (Ember 2026).

Canadian electricity prices are among the lowest in the OECD (Global Petrol Prices 2026), with residential electricity prices reaching about \$0.17/kWh, or 74 per cent of the global average electricity price, and business electricity rates just \$0.145/kWh, or 65.71 per cent of the average price as of June 2025.

Canada’s grid is also low-emitting compared to its peers, with clean hydroelectricity, nuclear, and other renewables representing about 80 per cent of generation (see Figure 1) (Natural Resources Canada 2025a).

**FIGURE 1:** Canadian electricity generation by source



Source: Natural Resources Canada (2025a).

This inheritance has given Canada a competitive advantage and high quality of life, but it is at risk of being squandered. Per capita and absolute generation is declining, prices are increasing, our trade surplus has evaporated, and investment in new generation is weak.

### Electricity governance

In Canada, electricity generation and transmission is the exclusive jurisdiction of the provinces, as articulated in s. 92A of the Constitution which specifically identifies the “development, conservation and management of sites and facilities in the province for the generation and production of electrical energy.”

As a result, Canada has 13 different electricity systems. Most provinces rely on vertically integrated, publicly-owned corporations that manage generation, transmission, and sometimes distribution (see Table 1).

Alberta has the country’s only fully competitive market, although even there, transmission and distribution are regulated. Ontario has a hybrid mix, based on previous efforts to deregulate and then re-regulate, and works as a private market in form but not function. Nova Scotia and PEI have regulated private monopolies.

As a result of this patchwork, different electricity providers have different mandates and incentive structures, and as such, different policy preferences.

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**TABLE 1:** Electricity market types in provincial jurisdictions

Type of market	Jurisdiction
<b>Crown (government-owned) utility</b>	Hydro-Québec (QC) BC Hydro (BC) Manitoba Hydro (MB) SaskPower (SK) NB Power (NB) NL Hydro / Nalcor (NL) Qulliq Energy Corporation (QEC) (NU) Northwest Territories Power Corporation (NTPC) (NT) Yukon Energy (YK)
<b>Regulated private monopoly</b>	NS Power <ul style="list-style-type: none"><li>Privately owned by publicly-traded company Emera</li><li>Vertically integrated (generation, transmission, distribution)</li><li>Monopoly provider for almost all customers</li><li>System operator is Independent Electricity System Operator (IESO)</li></ul> Maritime Electric (PEI) <ul style="list-style-type: none"><li>Public single-buyer electricity system with privately owned, regulated distribution</li></ul>
<b>Competitive</b>	Alberta <ul style="list-style-type: none"><li>Generation is private</li><li>Transmission and distribution are regulated private monopolies</li><li>System operator is AESO</li></ul>
<b>Hybrid</b>	Ontario <ul style="list-style-type: none"><li>Generation partly competitive</li><li>Makes heavy use of contracts and policy-directed procurement rather than markets</li><li>Mix of private and Crown-owned providers</li><li>Transmission is regulated and mainly public (Hydro One, provincially owned but corporatized)</li><li>Electricity system operator (IESO)</li></ul>

Source: Author

To add complexity, the federal government retains authority over nuclear energy, over interprovincial and international trade (i.e., transmission across jurisdictions), and has shared authority over the environment. There is a perception within some provinces that the federal government has used that shared environmental authority as a Trojan horse to overreach into the provinces' exclusive jurisdiction over electricity. This has created significant regional political tension as well as uncertainty for industry.

## Rates

In general, the cost of delivered electricity in Canada is increasing; it is up 16.9 per cent since 2021. The average cost of delivered electricity in Canada reached a new high in May 2025 of 144.3 based on an index where 2014 = 100 (see Table 2). That said, prices are down on average from record highs in 2023, which were driven by a massive surge in prices in Alberta's deregulated market. Prices in that province have come down since as the system added new generation.

Figure 2 lists an estimate of residential electricity rates in Canada as of July 2025, although such comparisons are affected by methodology choices.

Rate increases are a standard feature of regulated utilities and can normally be expected to increase with inflation. Higher demand, chronic underinvestment, and supply chain inflation are leading many utilities to increase electricity rates beyond the general rate of inflation. These factors can also lead to lower revenues, which provincial government owners must then compensate for in other ways.

Electricity utilities are natural monopolies providing an essential service. As such, the price at which they sell their product is typically regulated and approved by an independent regulator that (1) balances an obligation to serve customers with reliable power within a defined geographic area, (2) covers operational and maintenance costs, and (3) provides a regulated return on the utility's invested capital. In Canada, the average regulated Return on Equity (ROE) is about 9 per cent (Concentric Energy Advisors 2024).

Table 3 shows the most recent regulated rate increase for major Canadian regulated utilities. For comparison, Canada's headline inflation rate averaged 2.1 per cent in 2025.

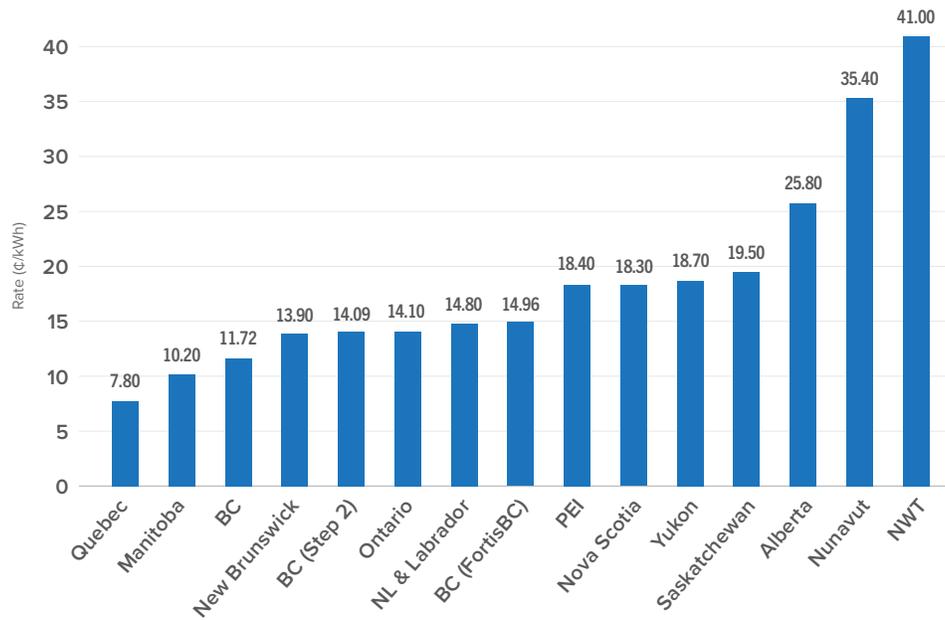
These rate increases have been exacerbated by an increase in costs for electrical equipment. Since December 2019, the electrical equipment, appliance, and component manufacturing price index has gone up by 53 per cent (Statistics Canada 2026b).

**TABLE 2:** Average cost of delivered electricity in Canada (2014 = 100)

<b>2021</b>	114.3
<b>2022</b>	123.9
<b>2023</b>	136.2
<b>2024</b>	125.3
<b>2025 (January to November)</b>	133.6

*Source: Statistics Canada (2026a)*

**FIGURE 2:** Residential electric rates in Canada as of July 2025 (cents per kilowatt hour)



**TABLE 3:** Most recent rate increases for major regulated Canadian utilities (as of January 2026)

Regulated utility	Rate increase per year	Period
Manitoba Hydro	4%	2026
Hydro Québec	Residential: 3% Commercial and industrial: 4.8%	2026–28
BC Hydro	3.75%	2026–27
SaskPower	3.9%	2026–27
Ontario Energy Board	29%	2026
NB Power	9.7% 4.75% (not yet approved)	2024–25 2026
NS Power	3.9% (not yet approved)	2026–27
PEI Maritime Electric	7.4% (not yet approved)	2026

Sources: Manitoba Hydro (Undated); Hydro-Québec (2025); BC Hydro (2025); SaskPower (2026a); Ontario Energy Board (2025); NB Power (Undated); Nova Scotia Power (2026); Prince Edward Island Regulatory and Appeals Commission (2026).

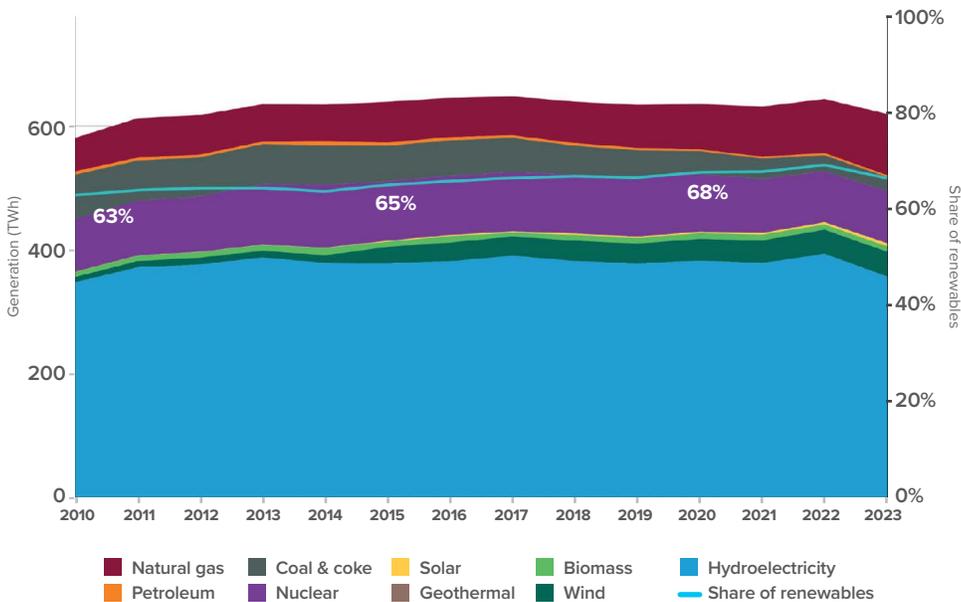
## Generation

Canada generated a total of 622.2 million megawatt-hours (MWh) of electricity in 2024, a slight decline from the previous year (down 0.2 per cent, or 1.2 million MWh) (Statistics Canada 2025b). Electricity generation peaked in Canada in 2017 at 649.4 million MWh and on average has been flat since 2008 (see Figure 3), even though the population grew by about 24 per cent over that time.

Although demand for electricity is growing, the forecasted growth in generation over the next five years is weak and will be accounted for wholly by intermittent renewables, the majority of which will come from wind. While renewables have their place in the energy mix, their power generation fluctuates based on weather and time of day, rather than conforming to electricity demand. This fundamental mismatch creates reliability, stability, and economic challenges for power grids, which are designed for constant, controllable base-load generation (see Sepulveda 2024).

In fact, Canada’s Energy Regulator (CER 2025b) is forecasting that dispatchable capacity (i.e., sources of electricity that can adjust according to demand) will decline in Canada by 1.2 per cent by 2030 (see Table 4).

**FIGURE 3:** Canadian electricity generation by source



Source: Canada Energy Regulator (Undated).

**TABLE 4:** Canadian Energy Regulator current and forecasted electricity capacity, by source, 2025 and 2030 (planned) (MW)

Source	2025 (MW)	2030 (MW)	% increase
Wind	17,691	23,897	35
Biomass	2,694	2,698	0.1
Coal & coke	2,768	2,016	-27
Hydro	84,045	84,247	0.2
Natural gas	22,611	23,744	5
Nuclear	14,502	12,303	-15
Petroleum	5,775	5,775	0
Solar	4,415	6,752	53
<b>Dispatchable total (biomass, fossil fuel, hydro, nuclear)</b>	<b>132,395</b>	<b>130,783</b>	<b>-1.2</b>
<b>Intermittent total (solar, wind)</b>	<b>22,106</b>	<b>30,649</b>	<b>39</b>
<b>TOTAL</b>	<b>154,501</b>	<b>161,432</b>	<b>4.5</b>

*Note: Geothermal generation is minimal (20 MW) and so not included  
Source: Canada Energy Regulator (2025a); author's calculations.*

## Exports

Canada has long enjoyed a healthy electricity trade balance, exporting excess hydroelectricity to the United States. Grid systems are interlinked continentally north-south, as opposed to east-west across Canada, owing to natural geographic boundaries and population densities (see Figure 4), which makes it easy to direct excess electrons to American markets. Quebec, Ontario, BC, and Manitoba typically lead in exports.

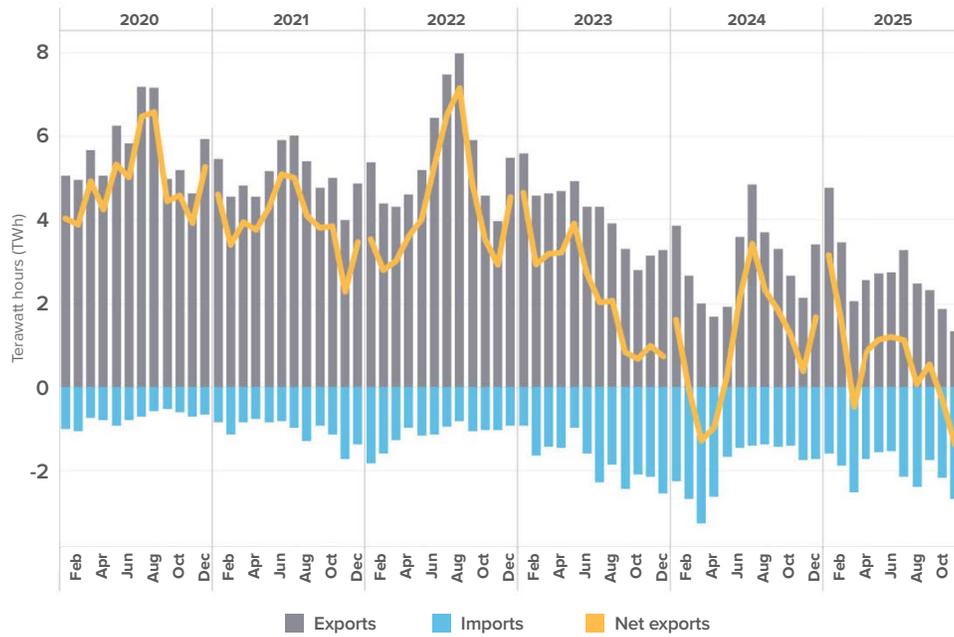
In 2016, Canada sent as much as 64 TWh in net electricity exports annually to the US. However, that number has steadily dwindled due to a combination of drought and the growth in domestic demand. Canada became a net importer of electricity for the first time in modern history in Spring 2024. By the end of 2025, Canada had become a regular net importer of electricity (see Figure 5). In 2025 both BC Hydro and Hydro-Québec were net importers – a previously unthinkable outcome.

**FIGURE 4:** North American selected electricity power producers, trade entities, and interconnections, 2024



Source: EIA (2024).

**Figure 5:** Export and import volumes of electricity 2020–2025, monthly



Source: CER (2025).

While Canada is now starting to become a net importer of electricity, it continues to maintain a positive trade balance, reaching \$1.43 billion in 2025 (Canada Energy Regulator 2025a) as it sells electricity at higher prices than it buys. This is economically positive, but may prove to be a political liability given American sensitivities to trade imbalances.

## Investment

Capital expenditures in electric power infrastructure are growing moderately (Statistics Canada 2026c). In 2014, amid the oil sands boom, expenditures were \$18.9 billion. In the last pre-COVID year, 2019, investment had declined to \$18.6 billion. More recently it has rebounded, growing to \$23.4 billion in 2023, the latest year available.

Private spending has been outpacing public spending in recent years. Between 2019 and 2023, public spending growth in electric power infrastructure increased by 20 per cent, from \$13.8 billion to \$16.6 billion (Statistics Canada 2026c). Meanwhile, private spending increased by twice that rate: 42 per cent, from \$5.4 billion to \$7.7 billion.

With the Site C hydroelectric dam in British Columbia and the Darlington refurbishment project in Ontario now complete, the only electricity projects currently being constructed in Canada valued at over \$1 billion are the Bruce Power refurbishment and Waasigan transmission project, both in Ontario (Electricity Canada Undated), although the Pickering refurbishment project, also in Ontario, will soon be added to the list. The number and value of electricity projects in Natural Resource Canada’s annual Major Projects Inventory, a snapshot of planned and constructed projects over a 10-year period, has remained flat over the past decade (see Table 5). Accounting for population growth and inflation, the value of investments in upcoming electricity projects has declined.

**TABLE 5:** Electricity generation and transmission projects in the NRCan Major Projects Inventory

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
<b>Number of projects</b>	184	155	197	152	173	159	176	179	182	188
<b>Value of project (\$ billions)</b>	\$113	\$108	\$117	\$111	\$115	\$109	\$102	\$106	\$97.4	\$118.9

Sources: Natural Resources Canada (2025b); Energy and Mines Ministers’ Conference (2016).

## Natural Gas

SaskPower's Aspen Power Station, near Lanigan, Saskatchewan, is the only natural gas-fired electricity generation project currently being built in the country (SaskPower 2026b). The last major natural gas-fired electricity generation facility to be completed was the 900 MW, \$1.5 billion Cascade power project in Edson, Alberta, which came online in March 2024.

The Alberta-Canada Memorandum of Understanding (MOU) signed in November 2025 with its promise of exemptions for natural gas electricity generation projects from the federal government's Clean Electricity Regulations triggered a small wave of natural gas project proposals. Both the 300 MW Marshdale project and the 300 MW Salt Springs project in Nova Scotia were proposed by Nova Scotia's Independent Electricity System Operator in December 2025, as was the 460 MW Flipi project in Alberta proposed by TransAlta.

In its Throne Speech of November 2025, the Manitoba government also announced that it would be pursuing a \$3 billion combustion turbine facility at the existing Manitoba Hydro generating station in Brandon's east end, with the goal of producing up to 750 MW of power (Manitoba 2025).

The 405 MW Napanee Generating Station Expansion in Ontario, proposed by Atura Power (a subsidiary of Ontario Power Generation) was previously approved, but no construction has begun at the time of writing.

## Hydroelectricity

The hydroelectricity picture is no better. In 2021, the NRCan Major Projects Inventory identified 58 planned hydro projects or projects under construction worth \$39.2 billion (Natural Resources Canada 2025b). By 2024, that had declined to 58 projects worth \$30.4 billion, a drop in value of 22 per cent. The recent completion of Site C in BC will bring the value of planned projects in the next inventory list down even further.

Although hydroelectricity is the primary source of Canada's abundant and clean electricity endowment, in recent times major hydroelectric generation projects have ended in financial catastrophe.

Site C received environmental approval in 2014 and was commissioned in 2025. Its costs nearly doubled from their original projections, from \$8.8 billion to \$16 billion. While this has sparked trepidation in pursuing new projects, BC

still has a deficit in generating capacity along with strong industrial demand, so in 2026 is expected to announce a new hydroelectricity project.

In Manitoba, the Bipole Three transmission line and Keeyask generating station projects took over 15 years to build and were almost \$4 billion over budget before their completion in 2022 (Manitoba 2022). In that time, Manitoba Hydro's debt tripled to more than \$23 billion. By 2022, Manitoba Hydro's borrowing made up over 40 per cent of the provincial government's total gross borrowing (Manitoba 2022). That legacy has constrained the utility ever since, limiting its ability to return revenues to provincial coffers as it had done in years past. For 2025–26 the utility is projecting losses of more than \$400 million (Dilello 2026).

In Newfoundland and Labrador, Muskrat Falls took 14 years from the commencement of the environmental assessment in 2006 to commercial operation in 2021, while coming in \$6 billion over budget. The project was such a disaster that it triggered a commission of inquiry (Commission of Inquiry Respecting the Muskrat Falls Project 2020) and necessitated a \$5.2 billion bailout by the federal government to ensure that ratepayers did not have to absorb the entire cost overrun (CBC News 2022).

## Nuclear

Nuclear has regained momentum in Canada and around the world as countries seek energy security, reliability, and growth. In Canada almost all nuclear generation takes place in Ontario, which has pursued several expensive but successful refurbishments of its legacy CANDU fleet. The province, via Ontario Power Generation, is also building small modular reactors at the Darlington site, planning four 300 MW GE-Hitachi BWRXs (a different type of small modular reactor), as well as a new large reactor (design yet to be determined) at the Wesleyville site. While the nuclear build-out is delivering essential generation capacity, it entails substantial upfront capital costs and has contributed to Ontario's rate increases.

This year the rate increase in Ontario for electricity is a stunning 29 per cent. To reduce the impact on ratepayers, the Ontario Electricity Rebate, which appears as a credit on power bills, will rise to 23.5 per cent of the pre-tax charge. The Ontario government has subsidized electricity bills for many years following the price shock that resulted from the Wynne government's renewable energy policies in the 2010s (*Maclean's* 2016). The cost to Ontario

taxpayers of electricity cost-relief programs was \$6.4 billion in the 2025–26 budget, and will almost certainly be higher next year (McClean 2025).

New Brunswick (which already hosts a nuclear reactor), Saskatchewan, and Alberta have active nuclear project plans. The federal government will likely need to backstop such projects, in one form or another, for them to go ahead.

## The Policy Puzzle

The decline in electricity generation and infrastructure development in Canada is attributable to multiple factors. Foremost among them are drought conditions that have reduced hydroelectric output, retirement of assets, phasing out of coal generation, pressures on utility balance sheets, and regulatory burdens.

A handful of policies have contributed disproportionately to the regulatory burden. They include enhanced Indigenous consultation and accommodation requirements over the period, and, after 2019, the need for large projects to go through federal environmental assessments under the Impact Assessment Act. But perhaps no regulation has been as challenging for the sector as the Clean Electricity Regulations (CER).

Introduced by Environment and Climate Change Canada in 2023 and finalized in December 2024, the CER set federal performance standards to achieve a near-zero emissions electricity grid by 2050 (a change from the initial 2035).

The regulations set limits on carbon dioxide emissions from almost all electricity generation units that use fossil fuels beginning in 2035, phase out coal-fired generation, and impose strict limits on emissions from natural gas sources. The CER provides compliance options such as emission reductions at source, carbon credit purchases, and direct investment in clean generation projects. While the CER gives incentives for creating infrastructure for renewables and storage, it also introduces higher capital costs, regulatory complexity, and market uncertainty. With large hydro and nuclear projects becoming too expensive for governments and investors to afford, too long-term, or simply unavailable for many jurisdictions, the CER removed the last

best source of firm (i.e. always available) power additions available to many jurisdictions: new natural gas-fired generating units.

The compliance mechanism associated with the Clean Electricity Regulations is particularly punitive: as the regulations were established under the authority of the *Canadian Environmental Protection Act* (CEPA), violating them carries the risk of criminal prosecution and imprisonment, not merely administrative fines.

Electricity Canada, the industry association representing Canada's publicly and privately owned utilities and producers and distributors, warned in its submission on the draft Clean Electricity Regulations in November 2023 that:

Because of the stringency of the proposed rules, and the lack of feasible compliance mechanisms, in some provinces it is unclear if compliance with these proposed regulations is possible at any price.

This stringency and complexity of the rules creates a risk of premature asset retirements. Individual facilities may no longer be commercially viable under the CERs as drafted. The risk of criminal liability for non-compliance exacerbates these challenges. Owners of generation units, especially in open electricity markets where there is no obligation to participate, may just opt to decommission facilities. (Electricity Canada 2023, 3)

The final regulations did not address their concerns. Writing after the final CER was announced in December 2024, the association asserted that:

Electricity Canada and its members participated in countless technical consultations with Environment and Climate Change Canada during the development of these regulations. Throughout, our members and their respective jurisdictions have provided substantive data indicating what can be realistically achieved. We are disappointed that a national standard that would meet the needs of all Canadians was disregarded.

Simply put, the Government of Canada has opted to advance a regulation that will leave key Canadian jurisdictions behind. (Electricity Canada 2024)

The two regions most susceptible to the consequences of the CER are Alberta and Saskatchewan. Unlike most other provinces, the two Prairie provinces have limited hydroelectric potential, but with abundant fossil fuels, over the decades their electricity generation mix naturally built up around coal and natural gas.

*“The decline in electricity generation and infrastructure development in Canada is attributable to multiple factors.”*

In its response to the final text of the CER, the independent Alberta Electric System Operator (AESO) concluded that the regulations “pose a significant risk to the reliability and affordability of Alberta’s electricity system in coming years” (AESO 2023).

It assessed that \$30 billion in additional capital and operating costs would be required to meet the CER from 2024 to 2049, resulting in wholesale electricity prices being 35 per cent higher than they would otherwise be (AESO 2023). These high costs would result in less than 1 megatonne (MT) of additional annual emissions reductions from Alberta’s electricity grid, because “achieving compliance with the CER while maintaining a reliable power grid would require rapid adoption of technologies that are either currently economically unfeasible or not yet commercially available.”

For its part, the Government of Saskatchewan chose to essentially ignore the CER. In its October 2025 Saskatchewan First Energy Security and Supply Plan it asserted its authority over electricity as affirmed in s. 92A of the Constitution, and declared its intent to extend the life of up to 530 MW of existing coal-fired power assets beyond 2030 and as far out as 2050:

Saskatchewan will continue to use coal-fired generation as part of an all-of-the-above approach to energy security. Ending coal-fired generation by 2030 would risk the reliability and affordability of the provincial electrical system. Extending the life of our coal-fired assets will ensure

that we have reliable baseload power as a secure bridge to nuclear power generation. (Saskatchewan 2025, 5)

Saskatchewan had this option available to it because its power is produced by a Crown utility, SaskPower. As such, its decision-makers would be extremely unlikely to face criminal charges, even for non-compliance, and might instead be subject to administrative enforcement, reporting requirements, or political accountability.

For the private generators in Alberta, no such luxury exists. The real threat of criminal prosecution for serious CER violations precludes them from violating the regulations.

### **The Server Strain**

Canada's electricity crunch comes just when a surplus could have been directed to productive capacities. An LNG construction boom, increased oil and gas extraction, significant new mines and expansions in BC, Saskatchewan, Ontario, Yukon, Quebec, and Nunavut, and the implementation of a defence industrial strategy all require significant new generation and transmission. Canada will not reach its goals to double non-US exports without more and affordable electricity.

But the biggest opportunity is in data centres, and the cost of missing out is not only an economic risk, but a security one as well.

Data centres are currently the biggest driver of investment in the world, having captured more than one-fifth of global greenfield investment (i.e., all new physical investment projects starting from scratch, across all economic sectors) in 2025 (UNCTAD 2026). The Dell'Oro Group, an independent market research firm, forecasts that global data centre capital expenditures will reach \$1.2 trillion by 2029 (Dell'Oro Group 2025), not including grid-level electrical infrastructure spending.

In the United States, S&P Global found that data centre and AI-related investments accounted for 80 per cent of US private domestic demand growth in the first half of 2025 (S&P Global 2025), making it the dominant contributor to economic growth in that country. Likewise, consensus estimates for capital expenditures by the top hyperscalers (i.e., top cloud service providers) are upwards of \$527 billion for AI and data centre investments in fiscal 2026 (Hicks 2026).

There is no more important source of investment in the world today, but Canada has been largely on the margins and appears to be attracting a mere fraction of what the US is capturing. Tellingly, there are no authoritative assessments on data centre investments available for Canada, though one analytics firm, Mordor Intelligence, estimates data centre construction in Canada in 2026 at about \$5 billion (Mordor Intelligence 2026).

Cooler weather and access to land and water should make many Canadian locations attractive for data centre investment. One of the major reasons the nation has lagged in such investments is that regulated utilities, which are dominant in Canada, are unattractive for hyperscalers, who prefer deregulated or merchant markets, for the following reasons:

- Regulated utilities typically set rates through cost-of-service models, whereas deregulated or merchant markets allow large consumers to secure power purchase agreements (PPAs) at rates tied to wholesale prices, which are often significantly cheaper.
- Regulated utilities are typically much slower, and follow long permitting, regulatory, and rate-recovery processes.
- Regulated utilities may have rigid tariffs and limited ability to offer customized contracts, making it harder for data centres to optimize costs.
- Regulated rate structures are often influenced by public policy decisions, such as prioritizing residential or labour-intensive customers, or sustainability goals, adding uncertainty.

Canada has only one merchant power market in Canada: Alberta. Concomitantly, Alberta has been leading the country in proposed data centre investments.

Historically, Toronto and Montreal have been the other data centre hubs in Canada. Ontario continues to seek and attract data centre investment, with many large Canadian companies in the region interested in co-locating to the suburbs outside Toronto to reduce delays in network communication.

Montreal has been an attractive destination for data centres because of its large base of clean hydropower and lower cost structures. However, in February 2026 Hydro-Québec announced it would charge new data centres larger than 5 MW double what it charges other large power users, equal to an average of 13¢/kW (Hydro-Québec 2026). This is no doubt related to the

novel challenge of a scarcity of power in Quebec, which, as mentioned earlier, was a net electricity importer in 2025.

Similarly, while Vancouver would otherwise be an attractive data centre destination, British Columbia, alongside BC Hydro, announced in January 2026 it would launch a competitive process for artificial intelligence (AI) and data centres to access clean electricity through Bill 31, the Energy Statutes Amendment Act, and new regulation; in other words, it will pick and choose energy-intensive projects based on public policy priorities (British Columbia 2026). The process does not apply to industries that BC has prioritized such as mining, liquefied natural gas (LNG), forestry, manufacturing, or hydrogen for domestic use.

Electricity is now being selectively rationed in Canada, with data centres facing enhanced scrutiny. This is a problem because data centres are not only at the forefront of global capital investment, but they are also increasingly integral to national security. They are critical infrastructure, essential for the smooth functioning and productivity of an advanced economy, but they are also drivers of economic and military competitiveness. Reliance on foreign infrastructure to train models, store sensitive datasets, or deploy AI systems makes countries vulnerable in much the same way that relying on competitors or adversaries for oil, natural gas, or critical minerals does.

As of November 2025, Canada's total AI/AI-relevant compute capacity (measured in floating-point operations per second, or FLOPS) was roughly 158 petaFLOPS (PFLOPS) – about 2 per cent of the 6,961 PFLOPS in the US (Top 500 2025). The practical implication is that Canadian AI firms, researchers, and companies typically rely on US-based cloud and computing services for training and running AI models.

This is not simply a function of American dominance; Canada also lags behind peers such as Japan, Germany, and France on a per capita basis (Dobbs and Hirsch-Allen 2024).

The federal government acknowledged the need for data sovereignty by announcing a Canadian Sovereign AI Compute Strategy in October 2025 (Innovation, Science and Economic Development Canada 2025). Stunningly, while the strategy focuses on compute capacity, data centres, supercomputing infrastructure, and access to AI compute, it does not include planning for electricity supply, grid impacts, or energy policy. This is in sharp contrast to the American approach, where such considerations are explicit (White House 2025).

For its part, in December 2024 Alberta introduced its *AI Data Centre Strategy: Powering the Future of Artificial Intelligence*, which touts its power capacity, cooling advantages, and competitive tax and regulatory environment (Alberta 2024). The province further established an AI data centre concierge program. Alberta looks to be the best hope for Canada to meaningfully participate in the data centre investment boom and retain a level of national data sovereignty.

### Canada-Alberta MOU

The catch in the *AI Data Centre Strategy* plan was that as long as the Clean Electricity Regulations were in place, Alberta was not going to be able to compete against American jurisdictions for high levels of data centre investment. AI data centres are unusually electricity-intensive because of how AI models are trained and run, and the physical limits of moving and cooling heat. They need to be adjacent to abundant and affordable power, and seek 99.99 per cent reliability (52 minutes of downtime a year) or even 99.999 per cent reliability (5 minutes). With no large hydro or nuclear backstop, gas is the only scalable, dispatchable, financeable option available to Alberta in the near-term, and the CER precluded new investments.

The Canada-Alberta MOU of November 27, 2025, was an attempt to address this. While many observers focused on the northwest oil pipeline provisions, its high-level objectives included:

- Increasing electrical generation for consumer and industrial use on Alberta’s electricity grid, including meeting the needs of AI data centres, while simultaneously reaching net-zero greenhouse gas emissions for the electricity sector by 2050; and
- Creating electricity and energy policies that address consumer affordability, electricity grid stability, economic competitiveness, and long-term competitive certainty, and that attract Canadian and foreign sources of private sector capital investment (Prime Minister of Canada 2025).

It sought “construction of thousands of megawatts of AI computing power, with a large portion dedicated to sovereign cloud for Canada and its allies” and “construction of large transmission interties with British Columbia and Saskatchewan” (Prime Minister of Canada 2025).

In the MOU, Alberta further committed “on or before July 1, 2026, [to] implement a policy framework to incentivize large investments in data centre development, including incentives for Canadian sovereign computing.” In return, Canada committed to:

... suspend immediately the Clean Electricity Regulations (CER) in Alberta pending a new carbon pricing agreement, which includes the electricity sector, administered through Alberta’s TIER program to be negotiated by the parties on or before April 1, 2026. Upon completion of the new carbon pricing agreement and factoring all other measures to the satisfaction of both parties, Canada will place the CER in Alberta in abeyance. (Prime Minister of Canada 2025)

The power sector enthusiastically received the suspension of the CER. Capital Power CEO Avik Dey, for example, proclaimed that “to be able to attract data centres and, in particular, larger projects, we have to be able to build new generation in Alberta. This signals that material companies and significant capital are progressing on the path of establishing data centres in the province” (Varcoe 2025).

Two weeks later, the company announced it had entered into an arrangement to negotiate a 250 MW electricity supply agreement with an investment-grade data centre developer in Alberta with an expected 2028 start date, likely using its natural gas-powered Genesee Generating Station west of Edmonton for such a project (Krugel 2025).

But the Alberta-Canada MOU came with a caveat, even a contradiction; while the CER was “suspended immediately,” the suspension was “pending a new carbon pricing arrangement.”

The carbon pricing arrangement is perhaps the most complex and contentious part of the MOU, and many other aspects of it – the Pathways project, the bitumen pipeline, the CER carve out – depend on a satisfactory negotiation. Prime Minister Carney emphasized industrial carbon pricing in the 2025 federal election, Budget 2025, and the indeterminate Climate Competitiveness Strategy as a cornerstone of his climate policy (Immigration, Refugees and Citizenship Canada 2025).

The MOU committed Canada to:

Acknowledge Alberta’s approach to regulating heavy electricity generation emitters through Alberta’s Technology Innovation and Emissions Reduction (TIER) program for Alberta to provide long-term certainty and time needed by industry and innovators to develop the needed CCUS, direct air capture, nuclear infrastructure and other emissions technologies necessary to achieving a net-zero power grid by 2050. (Prime Minister of Canada 2025)

And for both parties to:

Work collaboratively to design and commit to globally competitive, long-term carbon effective prices, carbon levy recycling protocols, and sector-specific stringency factors for large Alberta emitters in both the oil and gas and electricity sectors through Alberta’s TIER system. The TIER system will ramp up to a minimum effective credit price of \$130/tonne. The parties will conclude an agreement on industrial carbon pricing on or before April 1, 2026. (Prime Minister of Canada 2025)

Alberta had just committed in May 2025 to freeze the carbon price at \$95 per tonne of emissions to provide “predictability,” “stability,” and “certainty” to industry (Alberta 2025a). The jump to \$130/tonne was thus a concession to the federal government, inasmuch as Alberta’s position prioritized economic growth and the federal position prioritized emissions reductions. But when and how the price would hit \$130/tonne remained to be determined.

A week after the MOU was signed, the Alberta government made amendments to its Technology Innovation and Emissions Reduction (TIER) through Order in Council 369/2025 (Alberta 2025b), based on stakeholder consultations held in June 2025. An announcement was made in September 2025 (Powell, White, Kennedy, and Wainer 2025) that introduced “investment credits” as a new compliance pathway, allowing regulated facilities to meet their TIER obligations through direct capital investment in eligible emissions-reducing projects. The Order also permits the reactivation of previously retired emission offsets, emission performance credits, and sequestration credits where supported by qualifying investment credits.

This gave companies a more flexible compliance pathway and encouraged them to build things (like emissions-reducing infrastructure). For large industrial projects, like data centres tied to new power generation, this meant developers could invest in emissions-reducing projects instead of simply paying compliance costs, making Alberta's carbon policies more palatable.

Critics saw it as undermining the TIER carbon market, and federal Environment Minister Julie Dabrusin criticized it in an X post on December 6, 2025:

In the Memorandum of Understanding signed last week, Alberta committed to strengthen its TIER carbon market system including raising its effective carbon credit price sixfold, as well as advancing ambitious climate measures to support our shared goal of net zero by 2050. As we enter negotiations with Alberta, that remains our expectation. We will not support measures that undermine Canada and Alberta's climate objectives. We will work collaboratively with Alberta to address our concerns, strengthen industrial carbon pricing, and ensure better functioning markets. (Dabrusin 2025)

For its part, Environment and Climate Change Canada (ECCC) put forth a discussion paper on December 19, 2025, setting out its approach to strengthening the industrial carbon price. While acknowledging that "policy uncertainty about the price trajectory and the longevity and stringency of existing systems creates investment uncertainty," the paper proposed a fundamental change to the current pricing system, intervening to ensure market prices are "close to the minimum national carbon price, with some level of discount due to transaction cost of buying and selling credits" (Environment and Climate Change Canada 2025, 6, 11). This is in stark contrast to the current state of affairs, where actual market prices for compliance credits have fallen much lower than the federal benchmark, usually in the \$18 to \$55/tonne range.

For many observers, requiring systems to ensure more demand for compliance credits than supply in order to reach as close to the federal benchmark of \$130/tonne as possible turns the system from a free credit market into a tax. As the Canadian Association of Petroleum Producers described it,

the proposal would “constrain provincial systems, increase compliance costs, eliminate free credit markets, and repeal programs that incentivize emission reduction projects” (CAPP 2026).

Electricity Canada further noted that:

Many provincial industrial carbon pricing systems are well established within their jurisdiction. Industry has adapted to these rules and made business decisions based on these frameworks. The government must work collaboratively with the provinces and territories if any changes to the federal benchmark are to be made ... Carbon pricing should incentivize investments in emission reductions and spur the adoption of clean technologies ... It should not create undue affordability pressures for ratepayers as lower carbon generation technologies are adopted ... Long-term investments that have been made in good faith under existing rules should be respected. (Electricity Canada 2026a)

The competing goals and policies lobbied by both parties since the MOU was signed have damaged confidence that an agreement on industrial carbon pricing could be concluded on or before April 1, 2026. In the interim, uncertainty remains high and many proponents are in purgatory waiting for governments to sort out their carbon policies before they can allocate capital.

### **Alberta Market in Flux**

While Alberta can laud its distinct advantages as it seeks to attract data centres and infrastructure build-out in an era of rapid growth, it has created its own set of policy challenges and uncertainty for market participants, which deter investment.

Before the 1990s, Alberta’s electricity system looked like others in Canada. In the mid-1990s, it began an ambitious program of electricity restructuring. The 1996 *Electric Utilities Act* triggered deregulation. It separated generation from wires, with transmission and distribution remaining regulated monopolies. It created the Alberta Electric System Operator (AESO) to operate the grid and run the market and the Alberta Utilities Commission (AUC) to independently regulate it. And it introduced a competitive wholesale “energy-only” market,

where generators only get paid for generating electricity, not simply for being available to do so (i.e., having capacity).

The system has seen a mix of successes and challenges. It rapidly converted from coal to natural gas based on incentives in the Carbon Competitiveness Incentive Regulation (CCIR), later replaced by Technology Innovation and Emissions Reduction (TIER); attracted the lion's share of Canadian investments in solar and wind energy between 2019 and 2023, buoyed by its open market structure, corporate offtake agreements (long-term, legally binding contracts between a producer and a buyer), and lack of government procurement bottlenecks; and now it is in a position to take the lead on attracting data centres (Pivnick 2023).

But the restructuring program has also produced a lot of volatility and price spikes. Successive governments restructured the market, with the Notley government directing AESO to move to a capacity market in 2016, only to have the shift cancelled by the Kenney government in 2019.

Uncertainty around the capacity market design led to a lack of investment, which ultimately led to high prices. In 2022/23, Alberta faced tight supply conditions and costly natural gas, resulting in record high wholesale prices as well as several grid alerts at times when demand was threatening to exceed supply. This renewed the debate about whether the energy-only model could ensure enough reliable power, and sparked more market changes. The province finally directed the AESO to develop a Restructured Energy Market (REM) in March 2024, the most significant restructuring of its electricity market in decades, including major changes to Alberta's transmission policies (AESO 2024).

At the time of writing, Alberta had not yet received ministerial approval for the REM ISO rules, and implementation of the restructuring has been pushed to at least the middle of 2027.

Even for data centres, Alberta's policies contain contradictions. While the province has been strategic and deliberate in its intentions to attract data centres and while it has set a goal of attracting \$100 billion in investment in data centres in five years, it has been forced to negotiate how it will do so very carefully due to political vulnerabilities. It does not want another electricity price shock similar to the one that occurred in the province in 2022/23, or a reliability shock akin to the shortfall that resulted from record cold temperatures and record demand in January 2024 (Runge and Lakhani 2024).

Significant amounts of new generation have come online in Alberta in the past two years such that the province has a surplus of power. This surplus is an attractive feature on a continent where excess electricity is scarce. The AESO has seen transmission service requests of large load projects of over 16 GW (Morawski, Bouffard-Nesbitt, and Jackson 2025). For context, Alberta’s current peak load is approximately 12 GW. To balance reliability and economic growth, the AESO set an interim limit of 1200 MW for new large load connections in June 2025. In Phase 1 of Alberta’s Large Load Integration Program these were fully allocated to two projects: a Pembina/Kineticor project in Strathcona for 970 MW and the Keephills Data Centre project for an initial 230 MW. Engagement on Phase 2 has begun (AESO 2025).

The province also announced a levy of 2 per cent on computer hardware for data centres of 75 megawatts or more that will start on December 31, 2026. The levy is fully creditable against Alberta’s corporate income tax and is intended to apply only to grid-connected data centres, meaning that those that “bring their own power” are exempt. However, due to the practical reality that large data centres seek the redundancy of a grid connection to meet their 99.99 per cent-plus reliability thresholds, the uptake by those supplying their own power will likely be limited.

All told, while the province is attractive in a Canadian context, it has given investors and producers conflicting signals.

“Scaling electricity generation, transmission, and distribution will require the private sector to choose to invest and build electricity infrastructure in Canada.”

### **Perspectives from Producers on Competitiveness and Sustainability**

To gauge the perspectives of independent (or non-utility) power producers (IPPs) on the electricity investment landscape in Alberta and Canada, we conducted structured interviews with representatives from six companies in January 2026. While many provinces have Crown utilities, many still use or contract to IPPs. In Ontario they are prominent and in Alberta they are

ubiquitous. Scaling electricity generation, transmission, and distribution at a level needed to meet not only AI and data centre demand, but population and industrial growth as well will require the private sector to choose to invest and build electricity infrastructure in Canada. Understanding how the private sector perceives the challenges to do so is essential for the various levels of government to address the deficit in new builds.

While all companies interviewed have operations in Alberta, all but one operate in other jurisdictions as well, including Canada, the United States, and elsewhere. The following themes emerged from the interviews:

- *Growth potential:* Electricity demand is growing rapidly, not only due to well-understood requirements from data centres, but also due to population growth and the need to replace aging assets. The pace of growth is up for debate, but not the direction. Pretty much everywhere needs new and more generation, transmission, and distribution. This is positive for IPPs.
- *Uncertainty:* Despite the opportunity, there is an inordinate amount of risk for a stakeholder investing in electricity infrastructure in Alberta and Canada. The main uncertainty arises from anticipated changes in carbon policy at the federal level that are as yet undetermined and politically contentious. Another key uncertainty comes from Alberta constantly rejigging features of its electricity market. Regulated markets are less risky but still face major challenges: they attempt to limit rate increases for financially stressed customers, but as a result defer necessary investments that will have to be made at some point in the near future. Some interviewees noted that past electricity price shocks have caused some provincial governments in Canada to fall, so the issue of electricity supply is deeply political.

Interviewees warned that uncertainty itself increases costs: policy risk gets priced into the cost of capital of projects that do get built, and they are more expensive as a result. Many other projects simply do not go ahead because the level of uncertainty makes them unfinanceable: the potential project costs arising from policy preferences are too opaque to be modelled.

- *Misalignment:* Interviewees lamented the constant misalignment between the federal government and provinces, in particular the

Alberta government, as a major source of uncertainty. Not only do priorities between the two levels of government compete, especially between emissions reduction on the one hand (federal) and affordability and reliability on the other (provincial); but policies often do, too. Producers find that they cannot satisfy both levels of government at once while remaining economically viable.

Misalignment also happens between governments and their oppositions, meaning that IPPs must account for changes in government in their calculations. This has been apparent in government support for particular projects, market structures, and carbon policies. One interviewee noted, for example, that while the federal Liberals are promising to strengthen industrial carbon pricing, the federal Conservatives have committed to scrapping it altogether. A fundamental feature in the modelling of a project business case is, therefore, volatile since projects are often permitted and constructed over the course of one election cycle, and inevitably operate over the course of multiple governments.

- *Sustainability*: All interviewees indicated that sustainability was still a core mandate of their businesses. The consensus was that carbon pricing was an important and acceptable tool to give companies an incentive to reduce emissions, and they credited carbon pricing for catalyzing the transition from coal to natural gas in Alberta. Many IPPs have assets that have benefited from carbon pricing, i.e., they have generated credits and have made investment decisions based on an assumption of carbon pricing.

However, there was broad frustration among the interviewees with federal policies, including the Clean Electricity Regulations. Some said that their customers were not willing to pay a premium for a net-zero grid. Others noted that carbon pricing had helped move electricity generation from coal to natural gas and had stimulated investments in renewables, but that most of the gains had been made: Alberta no longer uses coal for power generation and the wave of renewables has already oversaturated the province. Renewables have created over 7.5 GW of solar and wind capacity, but they provide very limited generation during high winter loads.

Producers noted that they could not move to other sources of firm generation with current technologies: nuclear would require drastically higher carbon prices to justify a switch, battery storage could only play a small role, and carbon capture was prohibitively expensive. As a result, interviewees noted that planned increases in the federal benchmark price of carbon to \$130/tonne would simply be passed on to customers, rather than meaningfully reduce emissions.

- *Competitiveness*: Interviewees did not see Alberta, and Canada more broadly, as competitive for capital with peer jurisdictions, especially in the United States. They noted that Alberta has the challenges of (1) being in the midst of a full market restructuring (REM); (2) choosing bespoke, complex, unique, and untested market features; and (3) being a small and “islanded” energy market with almost no high-voltage transmission lines connecting it to the larger and liquid Western Electricity Coordinating Council (WECC) market (WECC 2026). Interviewees described policy uncertainty in Alberta as “extreme.”

IPPs were consistent in wanting to see more certainty and consistency demonstrated not just over one or two years, but over five years and longer. While all accepted that carbon pricing was here to stay, they expressed a preference for there to be a set price – ~\$80/tonne was often highlighted as a sweet spot – and then let the market sort out how to factor in that price over several years. Annual increases of \$15/tonne per year were seen as counterproductive, as no company could develop new technology, then finance and build projects incorporating that technology in such a short timeline. IPPs need a “soak time” for market efficiencies to reach fruition at a particular price.

Interviewees described an effective carbon price of \$95/tonne as a ceiling, after which business competitiveness faced severe and negative impacts.

Because of the skepticism that governments would seek stability and predictability, let alone achieve those goals, interviewees were concerned that electricity price hikes would continue to outpace inflation, and that producers would bear the brunt of customer frustration.

## Creating Conditions for Electricity to Grow

At a time when affordable and reliable electricity is not only an economic advantage, but a security prerogative, Canada has found itself in a position of declining generation and exports, and weak investment. All Canadians should treat this as a crisis. As electricity rates continue to rise and strain household and government budgets, it could well become one.

In 2024, the federal government, led by then Energy and Natural Resources Minister Jonathan Wilkinson and then Environment and Climate Change Minister Steven Guilbeault, released a Clean Electricity Strategy in December of that year that is closer to being the problem than the solution (Natural Resources Canada 2024). It forecasted, for example, that between 140 and 190 GW of additional clean electricity generating capacity would be needed by 2050 but said their modelling “suggests that the incremental cost of ensuring that the build out is largely non-emitting would be small” and that the “impact of the CER on electricity rates will be minor or even neutral” (Natural Resources Canada 2024), a conclusion that no independent power producer would share.

The fact is that Canada’s principal goal guiding electricity policy for the past two decades has been to reduce emissions. Ensuring reliable and affordable electricity has taken a back seat. When those policies were implemented, there was enough abundance in the system that the normal concerns of regulators and producers could fall into the background. That is no longer the case.

The Carney government, which includes senior advisors and Cabinet members with direct experience in the electricity sector, seems better equipped and motivated to tackle the issue than the previous Liberal government, and at the time of writing had announced the imminent release of a National Electricity Strategy. The extent to which it addresses the nuts and bolts of our current dilemma – that the country must find a way to create the conditions to generate, transmit, and distribute more MW at a lower cost, versus investing public dollars in expensive and politically motivated vanity projects with no business case – will determine if, and how fast, we in Canada can extract ourselves from our electricity deficit.

While electricity clearly falls under provincial jurisdiction, and federal climate and regulatory policy has overreached into the sector in ways that have

stymied investment and generation growth, most provinces share the blame for the situation they now find themselves in, and have managed their electricity systems poorly. It is ironic that many provinces are now encouraging the federal government to intervene in the electricity sector through a National Electricity Strategy. Federal funding and financing will be needed for many provincial utilities to get back to abundance, or even sufficiency.

For several years now, the electricity sector has been stressing the urgency with which Canada must address its energy needs (Electricity Canada 2026b). Its warnings have gone largely unheeded, such that the Canadian public must now demand that governments do whatever is needed to build more electricity infrastructure and bring costs down. While stakeholders and associations will need to deal with specific permitting, regulatory, and legislative changes, the Canadian public should call for government policy changes that lead to three broad outcomes: policy certainty, climate pragmatism, and private sector investment.

### **Stability and Certainty**

As energy has become politicized in Canadian society, stability in electricity policy has suffered. It is now common for new policies, strategies, mandates, and regulations to be enacted or changed almost annually, at both the federal and provincial levels. The policy pendulum on energy and climate has been swinging wildly, leaving policy-makers of all parties unable to achieve general consensus on goals and directions. The situation has helped create the unfortunate circumstances in which we now find ourselves. Due to their very nature, electricity systems prioritize reliability, long life assets, and technical complexity, and because of this need long-term predictability to function optimally.

In order to foster an environment in which projects can attract investment and be built in a timely and efficient manner, policy-makers must find a way to work with utilities and industry stakeholders to create policies that the electricity sector can accept and execute in the long term. It will no longer work to push policies *on* the electricity sector; policies need to be developed *with* them, as partners, accepting that while interests may not always perfectly align, everyone will benefit from getting more reliable power to market, more quickly, and more cheaply.

In a similar vein, it would be enormously helpful if electricity policy, and adjacent environmental and regulatory policy, was developed in consultation

with opposition parties. If that is untenable, the electricity industry must make an effort to brief or educate opposition parties on their plans and advocacy. This, too, requires that the generation, transmission, and distribution sectors have similar policy requests and similar messaging.

Even if a current political party does not agree with all of the electricity sector's policy preferences, it is important that prospective proponents and investors can see that a particular policy trajectory will continue beyond the next election; long supply chain lead times mean that most large projects will be built over years, and thus across successive governments, irrespective of approvals and permitting.

Anything that investors – or the general Canadian public – sees as radical or controversial is very unlikely to produce good outcomes or be sustained over time. Canadians should expect electricity policy to be apolitical and moderate, guided by independent institutions with a clear mandate.

### **Pragmatic Climate Policy**

Climate policy has driven most electricity policy in the past two decades. Many in the electricity sector believe that they have done a lot in that time to reduce national emissions: between 2000 and 2021, emissions from electricity production decreased 60 per cent (Natural Resources Canada 2023), more than any other sector in the Canadian economy, largely because of the successful phase-out of coal. The electricity sector contributed over 100 per cent of Canada's emissions reductions between 2005 and 2023; the sector's emissions decreased by 67 Mt compared to Canada's total emissions decrease of 65 Mt.

Politicians often invoke the triad of reliability, affordability, and sustainability as the overarching objective for electricity systems. And yet most recent federal policy has prioritized the sustainability pillar, even at the expense of reliability and affordability. Canada's commitment under the Paris Agreement to reduce emissions by 40 to 45 per cent below 2005 levels by 2030, and achieve net zero by 2050, was explicitly legislated in a way that made other policy objectives subordinate to those goals, even in areas of provincial jurisdiction (Environment and Natural Resources Canada 2022).

There is a vast disconnect between what utilities and power producers have assessed as possible and what federal policymakers have insisted be achieved. While almost all producers have deployed renewables at one level or another, there are practical and economic limits to the role solar and wind

and battery storage can play in Canada's electricity systems, and practical and economic limitations to how fast nuclear and hydro can be deployed at a scale that displaces natural gas and coal. Canada's grid is already dominated by clean energy; making the last 20 per cent non-emitting will be far more expensive than it was for the first 80 per cent – and it is beyond the capacity or will of Canadian ratepayers to pay for it.

Companies interviewed for this paper expressed an unwavering commitment to reducing emissions, but not at any cost to their customers. Those we interviewed still see a carbon price as the best way to encourage companies to reduce emissions. But they also want to see predictability in price, and pricing systems. The new level of uncertainty wrought by the Canada-Alberta MOU, and from the competing federal and provincial positions and goals with regards to carbon pricing announced in its wake, are actively deterring investment decisions and allocation of capital into Alberta and Canada.

Interviewees with an opinion stated that an ideal carbon price is in the \$80/tonne range. At this price, the industry has an incentive to employ efficiencies and technology adoption without those adaptations overly burdening customers or destroying competitiveness. If renewable and battery storage prices really do go down at the pace anticipated by their advocates, then private power producers and public utilities will naturally gravitate to them.

### **Private Sector Attraction**

Canada's national electricity strategy will be judged not by how much money is invested in electricity in the coming years, but by how much value it yields. Independent power producers do not have the luxury of subsidies, control over rate hikes, or access to government balance sheets when they make investment decisions. A key indicator of success will therefore be the extent to which the private sector sees Canada as a desirable place to invest and produce power.

This is doubly true as the scale of Canada's electricity needs and challenges mean that public sector spending cannot fill all the gaps. Competing priorities from defence, transportation infrastructure, and industrial policy for manufacturing will also require federal spending. For the country to achieve its goals, the private sector must have confidence that it can allocate capital in Canada in a reasonable amount of time, for a reasonable return on investment.

Of course, some costs are beyond the control of policymakers and producers. As electricity demand skyrockets, especially in the United States,

there will be growing competition for electricity equipment and labour. The current market was built on the assumption that there would be a long period where annual demand growth was less than 1 per cent, and it will take time to scale up.

Greater uncertainty or fewer profits in Canadian projects and manufacturing will manifest in capital, capacity, and labour preferring the American market. It is not enough for Canada to decide that it is ready to grow; it must also compete.

As such, Canadians must encourage policymakers to adopt policies that foster a competitive investment climate, including clear and predictable tax rules and incentives.

## **A Goldilocks Solution**

The electricity abundance and affordability that Canada has enjoyed for decades are ending. Generation is down, exports are now imports, and investment is flat. This comes as electricity is increasingly scarce and its availability a competitive advantage. Canada's impending electricity shortage is not just an affordability crisis; it is an economic and security one as well.

While electricity policy was largely driven by emissions reductions objectives for the past two decades, adequacy, reliability, and affordability are resurging as priorities. Governments that fail to address the issue will be punished at the ballot box: voters are ratepayers.

This paper has sought to outline the growing crisis in Canadian electricity production, describe the policy trajectory that contributed to this state of affairs, identify shifts in policy direction that Canadians should advocate for, and understand how to gauge policy improvement, or lack thereof.

Canada's electricity surplus diminished because we became complacent and took the resource for granted. The sector now demands our attention, and for the sake of all Canadians, we had better respond intelligently. **MLI**

## About the Author



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