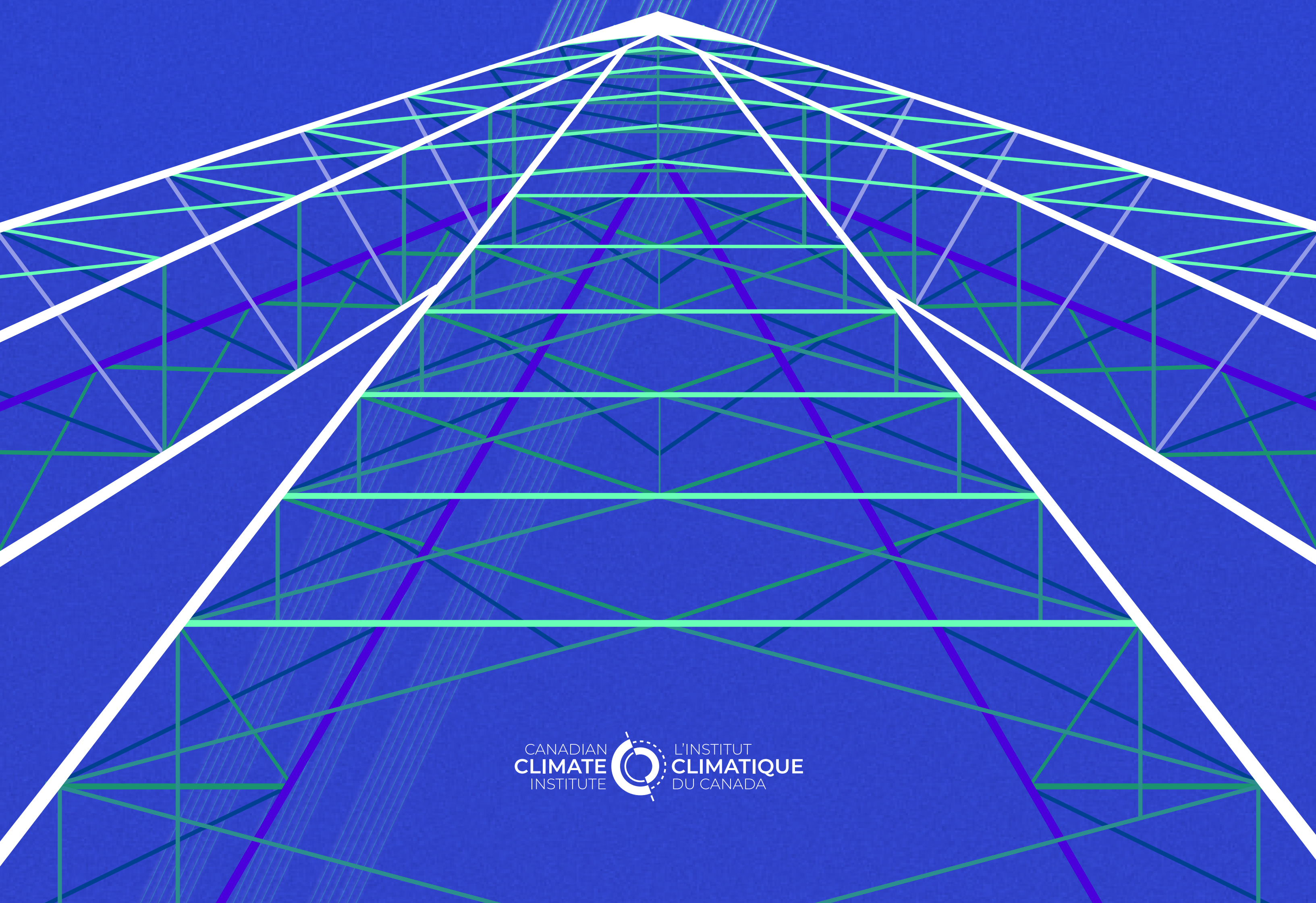
POWER PLAY

HOW TO SUPERCHARGE CANADA'S CLEAN ELECTRICITY ADVANTAGE

June 2026



CANADIAN CLIMATE INSTITUTE
L'INSTITUT CLIMATIQUE DU CANADA

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Table of contents

Executive Summary

Overview

Abundant clean power at competitive rates gives Canada a critical advantage in the global race for investment. Yet that advantage is not guaranteed—provinces can sustain and build on it only if governments act now to prepare the electricity grid for what is coming. While electricity is primarily—and rightfully—provincial responsibility, the expansion of Canada's electricity systems is also increasingly a national economic issue with national implications, and one that calls for co-operation.

This report maps where Canadian electricity systems—across planning processes, market design, and policy—are leading internationally and where targeted action can put Canada ahead. Well-designed systems drive both investment in the electricity system to deliver low-cost power and even larger investment in industry that consumes that power.

At this moment of geopolitical instability and trade disruption, Canada's governments are rightly focused on nation-building projects and export diversification. Expanding the country's clean electricity systems is a critical enabler of both.

Action is also increasingly urgent. After years of stagnation, electricity demand is already rising sharply, driven by electrification and unprecedented demand from new sectors such as artificial intelligence. Costs of quick-to-build renewable electricity technologies—including solar panels, wind turbines, and batteries—have fallen dramatically over the past decade. But electricity infrastructure, markets, and policies are heavily regulated and optimized for yesterday's technologies, which leaves Canada vulnerable to missing out on the full scope of investment opportunities ahead. This inertia requires decisive government action to overcome.

This report examines how Canadian provinces can expand clean electricity generation quickly and reliably while maintaining competitive rates for industrial users. Our analysis benchmarks four Canadian provinces (Ontario, Alberta, Quebec, and British Columbia) against six international jurisdictions (Germany, United Kingdom, Norway, New South Wales, Washington, and Texas), and compares across six dimensions: energy planning, planning for flexibility, transmission planning, electricity procurement, industrial rate modernization, and climate policy certainty. Together, these metrics assess a jurisdiction's preparedness to attract investment in wind, solar, and battery projects that supply electricity, as well as the industrial projects that demand it.

Drawing on those findings, this report identifies how the federal government can support provinces as they seek to deliver low-cost power and compete for international capital. Two subsequent publications will identify what each of the four Canadian provinces can do to enhance their own competitiveness.

Findings

Several insights emerge from our analysis:

Like many international peers, Canadian electricity systems are underplanning for industrial growth. Regulatory frameworks are better designed to guard against overbuilding electricity systems than to recognize the economic cost of underbuilding when demand is rising. Our analysis shows that, even if only half of current electricity grid connection requests from large industrial projects proceed, most Canadian provinces will be left with significant gaps to their electricity plans, and risk constraining future industrial growth. System operators in Ontario and Quebec are closest to planning for the industrial demand in their queues over the next decade. British Columbia recently upgraded its plan, though some gap remains. Alberta has the largest gap but also has a structural strength: as an open electricity market, private generators could respond to new demand quickly if the system plan anticipates growth and the surrounding services generators need (including transmission and reliability).

Canada's hydro-led jurisdictions have a competitive advantage in system flexibility. System flexibility is essential for a modern grid to maintain competitive electricity rates. This becomes more important as electricity demand and peak demand grow, and as more variable generation is added to the system. Hydro-led jurisdictions such as B.C. and Quebec start from a position of advantage—their reservoirs can flex across hours, days, and seasons to balance supply and demand. In contrast, non-hydro jurisdictions such as Alberta and Ontario need to proactively build system flexibility rather than inherit it. Canada's international non-hydro peers are already doing this, expanding flexible capacity (through batteries and connections to neighbouring grids) faster than their peak demand has grown.

Canadian provinces can invest in transmission to avoid wasting large amounts of electricity as their renewables shares grow. Adequate planning for transmission is essential with more decentralized wind and solar on the grid. Adding solar and wind power without sufficient grid infrastructure risks wasting electricity. International peers show that high shares of wind and solar can be integrated without substantial waste when system operators plan, permit, and build both transmission and system flexibility in advance. In some Canadian provinces, however, transmission investment is lagging. In Alberta, for example, transmission has not kept up with growing wind and solar additions.

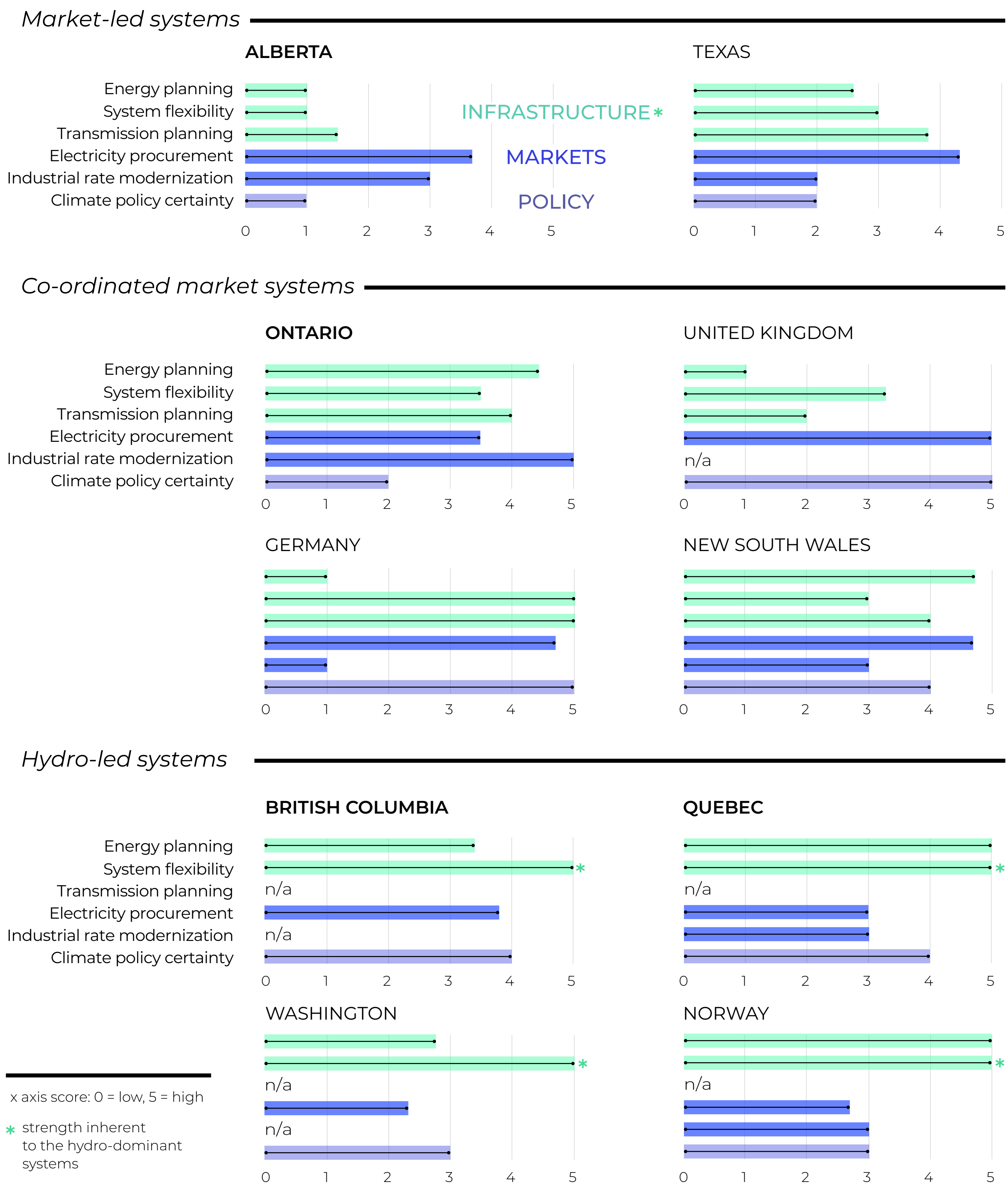
Improving procurement and market access are major opportunities for Canadian jurisdictions. Investors in wind, solar, and battery projects look for clear entry pathways for their projects, bankable revenue models, and scalable access to customers. While Alberta's market-led system has natural advantages for market access, provinces such as B.C. and Quebec would benefit from continuing their recent efforts towards more predictable competitive procurement schedules over longer timelines.

Canadian provinces have a head start on industrial demand flexibility. Industrial investors want competitive electricity costs in both the near- and long-term. Well-designed incentives for reducing or shifting peak demand can lower bills for participating customers and reduce system costs. Canadian markets such as Quebec, Ontario, and Alberta already use such tools more than many international peers, but there is still room for growth in this undertapped potential across all provinces, especially as industrial demand grows.

Climate policy certainty varies across Canada. Unpredictable policy changes can weaken investor confidence and make jurisdictions less competitive for clean-energy capital. Hydro-rich provinces such as B.C. and Quebec generally offer stronger and more durable clean-electricity policy signals through legislation, and in Quebec's case linkage to California's carbon market. In line with the majority of international peers, all four Canadian provinces have implemented industrial carbon pricing. Alberta's new agreement with the federal government could improve investor certainty in the long-term path for its carbon pricing but at the cost of weaker incentives to invest in electrification and low-carbon electricity.

Figure A illustrates provincial results relative to international peers.

Jurisdictions need to focus on improving different conditions to be prepared for the future grid



Recommendations

We make the following four recommendations for Canada's federal government (subsequent publications will identify recommendations at the provincial level):

1 • The federal government should support new co-operative processes for interprovincial energy planning focused on information-sharing and goal-setting in the short-term and new intergovernmental institutions in the longer-term. Regional co-ordination must be provincially anchored if progress is to occur on the ground, but provincial leadership can be supported by a practical federal-provincial framework that creates a shared evidence base (including on electricity implications of federal strategies on sectors such as artificial intelligence and critical minerals), and supports fair distribution of costs and benefits.

2 • The federal government should selectively deploy the national balance sheet to support anticipatory grid build-out to realize nationwide benefits. Projects that deliver net benefits for Canada as a whole have a reasonable case for federal funding and risk-sharing. Canada should scale up existing successful financing solutions, such as the Canada Infrastructure Bank, while ensuring equitable access, including via Indigenous loan guarantees and capacity-building resources. Direct federal funding beyond risk-sharing will sometimes be justified to fund transmission (for example, when national benefits are high but place undue cost on local ratepayers). A national test could support more consistent application of such federal support, recognizing the range of national economic and security benefits.

3 • To build long-term policy certainty for clean electricity investors, the federal government should move forward with flexible Clean Electricity Regulations that anchor expectations for new supply to be predominantly clean. Doubling Canada's grid by 2050 requires investors, utilities, and supply chains to make long-term commitments today. Strong, flexible Clean Electricity Regulations that recognize a real but limited role of gas in peak management can be durable enough to provide the planning horizon investors need to choose Canada as the destination for their clean electricity capital.

4 • The federal government should make electricity system flexibility a strategic priority across programs and use federal investment tools to scale industrial demand flexibility. Specifically, the federal government should embed flexibility as a priority in existing federal electricity, infrastructure, and innovation programs, such as electricity Investment Tax Credits, Smart Renewable and Electrification Pathways Program, and Canadian Infrastructure Bank investments. It should also wield tax tools such as capital cost allowances to mobilize investment in clean behind-the-meter solutions such as on-site storage and controls that enable users to shift their demand away from peak periods. Together, these measures would give industrial electricity users greater choice in how they manage their energy use, while reducing pressure on the grid.

Introduction

Two large, irreversible changes are transforming the global economy simultaneously. How Canada prepares for those changes will play a major role in whether it succeeds economically in the years to come.

First, electricity demand is rising in economies around the world, and demand is projected to continue growing with the electrification of industry, households, and transport worldwide. After years of stagnation, demand from industry in particular is soaring, driven by data centres and electrification of sectors such as mining and manufacturing.

Second, renewable electricity technologies—including solar panels, wind turbines, and batteries—are experiencing drastic cost reductions. Falling prices are driving record investment levels in their deployment, which reduces their costs even more.

At the intersection of those two trends lie significant economic opportunities for those jurisdictions that are prepared to seize them. Jurisdictions that act early and decisively will gain a substantial, lasting advantage given the long life of electricity infrastructure. Access to clean power at competitive rates is required by industrial customers to continue to expand operations—and it is that industrial investment, from both existing and new customers, that secures jobs and regional economic growth. In this way, attracting competitive investment in the large-scale buildout of low-cost, renewable electricity systems can catalyze broader industrial investments. And that's particularly important in this moment of geopolitical instability, when Canada should do whatever it can to drive growth and economic security.

Yet electricity infrastructure, markets, and policies are typically hindered by substantial inertia. They are optimized for yesterday's electricity systems and technologies, not the step changes in technology and scale that can mobilise innovation and investment in today's power sector. Canada also has a wide diversity within its borders when it comes to electricity markets, which can make change complicated and time-consuming, but no less urgent.

This report considers the four largest Canadian electricity systems (Alberta, British Columbia, Ontario, and Quebec) and a selection of international comparators (U.K., Texas, Germany, Norway, New South Wales, and Washington state) to get a better picture of best practices for mobilizing investment in clean power in order to meet growing demand from large industrial users. It benchmarks performance across these jurisdictions on six dimensions that collectively measure the extent to which Canadian provinces are equipped to handle changes coming to electricity systems everywhere and to compete internationally in the emerging age of clean power. The six metrics are: energy planning, planning for flexibility, transmission planning, electricity procurement, industrial rate modernization, and climate policy certainty.

Based on that analysis, the report makes recommendations for how Canada's federal government can work with provinces to create abundant, reliable electricity systems with competitive rates to drive the nation's economic growth. Two subsequent publications will outline what each of the four provinces we examined can do to strengthen their own positions.

Section 2 sets the report's context and **Section 3** outlines its methodology, while **Sections 4** to **9** unpack the findings of our comparative benchmark analysis for all 10 jurisdictions across each of the six metrics, highlighting implications of these results for policymakers. **Section 10** discusses the importance of different metrics for Canada's diverse electricity systems, and **Section 11** concludes with recommendations for the federal government.

More detailed information about the report methodology is avaiable in the **Technical Report**.

2 Context

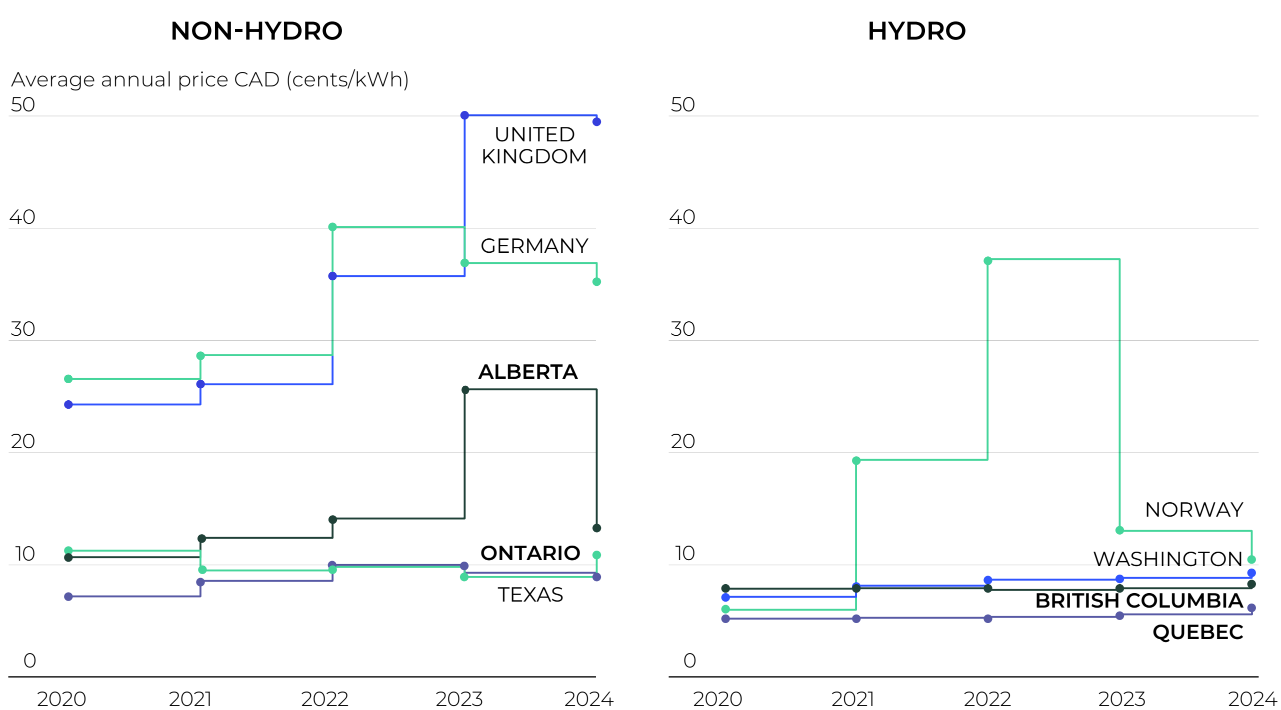
To set the stage for our comparison of provincial electricity systems, let's first set the context. What are the links between electricity and economic growth? How are electricity technologies and systems changing? And how can we assess how well provinces are prepared for these changes?

2.1 Canada's economy thrives on low-cost electricity

Access to reliable, low-cost power is an engine of economic growth. It has been a competitive advantage for Canada in the past thanks to the country's large energy resources and investments in hydropower and nuclear generation (**Figure 1**). Canada's low-cost electricity also remains a competitive advantage for industry retention, keeping industries afloat as they face increasing construction costs and trade tariffs (Butts et al. 2025). For electricity-intensive sectors with tight margins, even small cost savings can be decisive for their bottom line.

By contrast, in countries such as Germany and the U.K., gas prices still have an outsized impact on wholesale electricity prices and this has contributed to higher electricity rates, especially in recent years (Stráský et al. 2025).

Fig 1 • Canadian hydro provinces mostly offer competitive electricity rates for industrial consumers

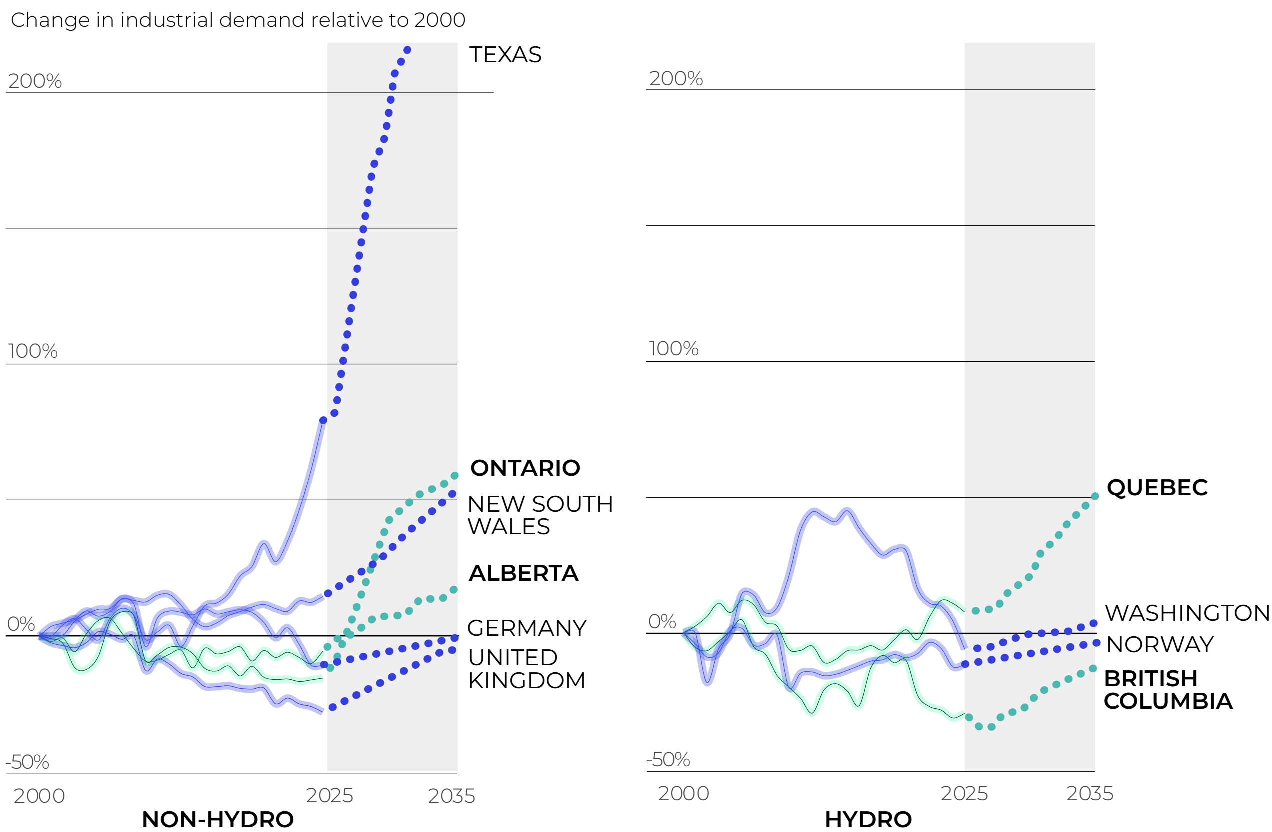


All industrial retail electricity rates are nominal and not adjusted for inflation. New South Wales is not shown due to limited public data. For sources and further details, see ***Technical Report****.*

Canada now has the opportunity to build on what already works well and turn this legacy into an engine of sustained growth and global competitiveness. As demand for electricity is projected to increase over the next decade due to the electrification of transport and industry, as well as the growing power demands of the digital economy, Canada's previous abundance of clean generation capacity risks turning into a shortfall in many provinces, including Ontario, Quebec, and British Columbia (Harland 2025a; Government of Ontario 2022, Coulton 2023, Canadian Press 2023).

Growing and modernizing Canada's electricity systems to meet surging demand while keeping rates low will help unleash investment and growth in Canada's resource, manufacturing, and technology sectors. Today, industrial users wait in long queues to connect to the grid, and major projects may turn to other jurisdictions (Canadian Press 2024). According to a 2026 study, the Canadian economy is at risk of missing out on $110 billion to $220 billion in potential capital investment and 40,000 to 80,000 jobs due to insufficient supply of clean electricity (Dunsky Energy + Climate Advisors 2026). These opportunity costs will only increase in the future as data centres, critical minerals processing facilities, and battery producers make crucial decisions about where to deploy capital.

Fig 2 • Breaking from the past, electricity plans all assume increasing industrial demand over the coming decade—but with strong variation



Dashed lines (2025-2035) reflect industrial electricity demand growth assumed in each jurisdiction's baseline system operator electricity plans. For sources and further details, see ***Technical Report****.*

Canada's largest provinces—and leading international peers—are planning for significant increases in industrial demand over the coming decade (**Figure 2**), and meeting this demand requires investment in new generation (CER 2026). Simultaneously, they are all stepping up investment in transmission capacity to transport electricity to customers. But large, rapid grid expansion comes with a risk: when system growth leads to significant rate increases, Canada's competitiveness for new industrial investment suffers, and so does the profitability of existing industries, putting jobs and communities at risk. Resource planning is typically shaped by regulatory incentives that tend to favour caution, cost containment, and protection against near-term rate increases over the opportunity for economic growth (see **Section 4**).

Canada must mobilize efficient investment in electricity system expansion—keeping industrial rates competitive while unlocking the broader private industrial investment that grid expansion makes possible.

2.2 Wind, solar, and batteries can meet growing demand at low costs—under the right conditions

Renewables are emerging as fast-to-deploy (see **Box 1**), low-cost options for new generation, even after taking into account the necessary grid upgrades to manage their variable supply.

Wind, solar, and battery costs have fallen dramatically over the past decade and this trend is expected to continue, as global deployment scales further. Since 2009, solar electricity costs have fallen by 84 per cent and onshore wind by 56 per cent, while battery costs declined 27 per cent in the last year alone (Lazard 2025, Bloomberg 2026). These trends have led to year-over-year increases in global solar, wind, and battery investment. When paired with storage, the economics and system value of renewables improves significantly (BloombergNEF 2026). Batteries can absorb abundant generation when solar and wind are at their peak output, and feed that power to the grid when it needs it the most, up to eight hours later (Al-Aini 2025).

BOX 1 • WHAT ABOUT NUCLEAR AND NATURAL GAS OVER THE COMING DECADE?

This analysis focuses on investment in wind, solar, and battery technologies as a safe bet to meet the growing demand for power (Fulghum et al. 2026). Other generation options such as nuclear power or natural gas continue to play a role to varying degrees. But at this moment, the Canadian economy requires access to more electricity—and fast. Wind farms, solar farms, and battery storage are quick to install compared to new natural gas and nuclear power plants. They are also more modular, enabling a staged build-out of new supply to match growing demand.

Short construction times not only accelerate access for industrial users but can attract financing since capital is at risk for a shorter duration. Already in 2019, the International Energy Agency identified a growing market appetite for energy projects with short time to market. The analysis shows that the average power generation construction time of renewables like wind and solar was consistently below that of thermal power from 2010 to 2018, and is trending downward (Blasi, Toril 2019). In 2018, the construction time for renewables was just below two years—less than half the time required for thermal power plants.

Global turbine supply shortages prolong lead times for new gas power stations. It currently takes over five years from ordering a large natural gas turbine to its delivery, and order books are full through 2027 (Clark 2025; Noble 2026). These realities led to the cancellation of plans for multiple new gas power plants in Texas, even though the projects were eligible for low-interest loans through the Texas Energy Fund (Plautz 2025). At least one project proponent cited "equipment procurement constraints" as a key reason for development delays and, ultimately, its cancellation (De Caluwe 2025). While turbine supply will eventually catch up to demand, it may take many more years to clear the backlog—years that are critical for Canadian growth and competitiveness.

Construction times for nuclear plans can vary depending on type, location, and experience, but average six to eight years for reactors historically, although this does not include what can be a lengthy planning and consultation stage before construction (Ritchie 2023). Combined with the high upfront capital costs, securing private financing for new nuclear plants is challenging, requiring significant public support (Frank 2025). Small modular nuclear reactors are a more recent development and also fall outside of the timeframe of this report (from now to 2035), with the exception of Canada's first such reactor (IESO 2024a).

Canada's hydro grids also carry a rare and durable advantage: the ability to store energy across days, weeks, and even seasons (Jaccard 2026). This capability—born of mid-century hydro megaproject investment—is an invaluable complement to variable renewables. When wind and solar generation fluctuates with weather, hydro reservoirs can be operated flexibly to balance the system, effectively acting as a long-duration battery at grid scale.

However, compared to peer jurisdictions, Canada has lagged behind other countries in adding wind and solar to the grid over the past decade (**Figure 3a**) (CANREA 2026). Alberta was the only province that saw rapid growth in these resources, but this investment was brought to a near halt following the introduction of policy restrictions and weak market conditions in 2023 (**Figure 3b**).

Fig 3a • Canada lags behind other countries adding wind and solar to the grid

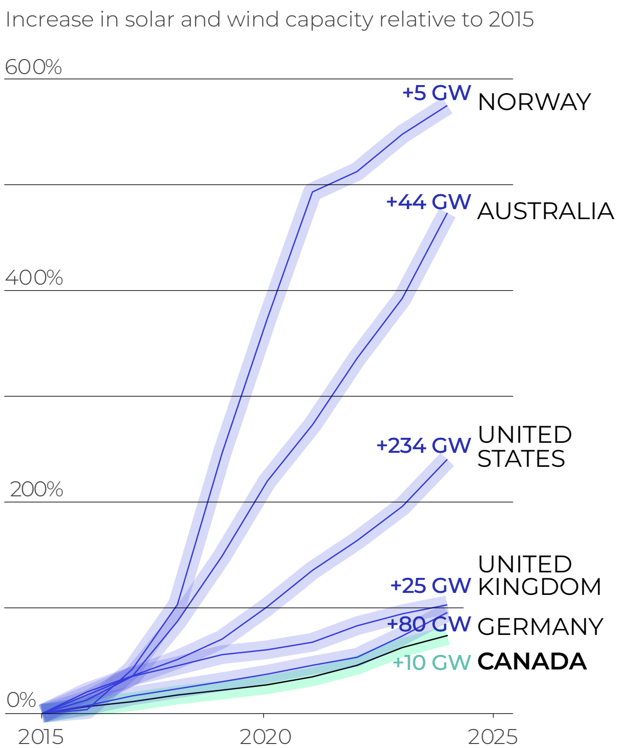
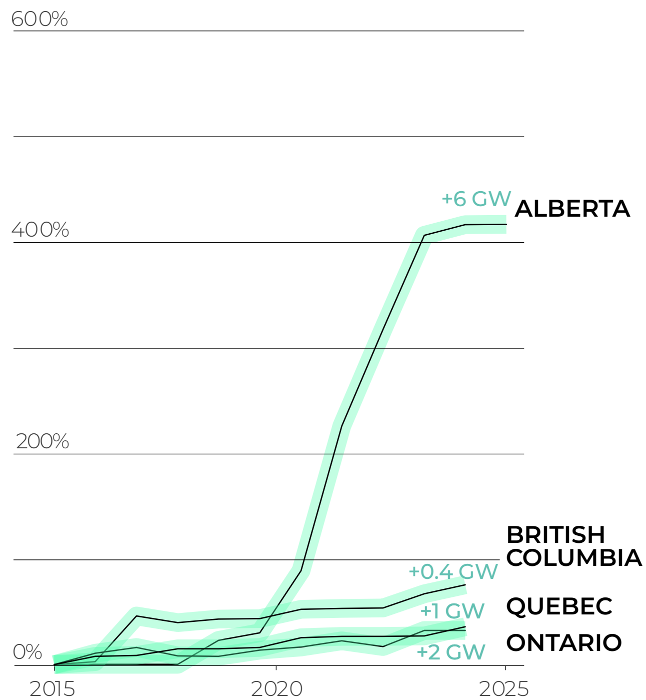


Fig 3b • Wind and solar grew rapidly in Alberta but progress stalled due to restrictive policies combined with weak market conditions



Country-level analysis is based on annual data from Ember. Canadian provinces data from Statistics Canada table 25-10-0022, and Alberta Electric System Operator (AESO). For further details see ***Technical Report****.*

What's holding back investment is that Canada's electricity systems are not yet organized to harness the new cost competitiveness of renewables to meet growing industrial demand, attract investment, and drive clean economic growth. In many ways, Canadian electricity grids have been slower to adapt, especially when it comes to the use of large-scale batteries or utilization of provincial interties, while many leading economies around the world are reinventing their grids (Al-Aini 2025; Harland 2025b; DCCEEW n.d.; European Commission n.d.a., REsurety 2025). Outdated approaches and policies can get in the way of Canada capitalizing on its clean electricity advantage.

2.3 Indigenous Nations are playing an increasingly important role in building Canada's electricity system

Across the country, many First Nations, Inuit, and Métis governments and corporations hold equity in electricity projects. Collectively, Indigenous partners have equity stakes in more than 546 projects, representing approximately $260 billion in infrastructure (IEM n.d.a.). By generation type, First Nations partners held equity stakes in approximately 31 per cent of hydro, 30 per cent of wind, and 19 per cent of solar projects as of 2024, representing the largest source of asset ownership outside of Crown corporations and utilities (von der Porten et al. 2024). However, even as Indigenous partnerships and ownership expand, significant differences persist among First Nations, Inuit, and Métis governments and corporations in terms of financial resources, human capacity, and organizational capabilities. Many of these differences have been shaped by historical and ongoing structural inequities (Hoicka et al. 2021). To be successful, electricity planning and development approaches will need to uphold Indigenous self-determination and support community-defined priorities and strengths.

Provinces across Canada are already embedding Indigenous ownership as a standard practice. B.C., for example, included explicit Indigenous ownership requirements in its call for power while Ontario and Quebec are bringing First Nations in as equity owners in major transmission projects (BC Hydro 2025). Ontario's recent Long-Term 2 Request for Power resulted in all 14 selected projects having 50 per cent or more First Nations equity ownership (IESO 2026a). Ontario's Watay Power line and Quebec's Hertel-New York line are other notable examples (Wataynikaneyap Power n.d.; Hydro-Québec n.d.c.).

Recent Indigenous Perspectives case studies published by the Canadian Climate Institute (including *Unlocking Canada's Stranded Renewable Energies, and Exploring Indigenous-Led Distributed Energy Systems in New Brunswick*) also document how Indigenous communities across Canada are choosing to participate in Canada's electricity grid development (Canadian Climate Institute n.d.; Busch et al. 2025; Woods et al. 2025).

Looking forward, Indigenous partnerships can further unlock up to $17 billion in investable capital for generation and transmission projects over the 2023-2033 period (von der Porten 2025; Fantauzzo 2023). Financing such projects can be enabled by tools like provincial and federal loan guarantees and the Canada Infrastructure Bank's Indigenous Equity Initiative (IEM n.d.b.; Canada Infrastructure Bank n.d.; Fantauzzo 2023). Organizations such as the Indigenous Power Coalition are actively exploring how to make this a reality, advancing Indigenous economic participation while accelerating the development of clean electricity infrastructure (Indigenous Power Coalition n.d.).

2.4 Unlocking investment in clean electricity can supercharge growth

To convert clean-power potential into economic growth, Canadian governments must set the right conditions for capitalizing on the falling costs of wind and solar generation paired with battery storage to meet growing industrial demand. Even in Canada's hydro provinces, growing demand will require diversification of electricity sources including an increase of renewables in their generation mix.

Although electricity is firmly in provincial jurisdiction, electricity build-out has national implications because it enables prosperity and resilience for Canada as a whole at a time of economic uncertainty. Moreover, the federal government is responsible for policy areas that shape electricity outcomes, including the regulation of greenhouse gas emissions, as well as interprovincial and international trade. It also leads on federal fiscal policy, a powerful instrument to influence these and other issues relevant to electricity markets. In response to the recent rupture in Canada's trade relations with the U.S. and high levels of geopolitical uncertainty, Canadian governments should pursue a bold growth agenda, based on major projects and trade diversification. Abundant, clean power at competitive rates will be key to getting major projects off the ground, retaining existing industry, leveraging economic efficiency through electrification, and building new trade relationships around the globe.

3 Methodology

This report identifies how Canadian governments can set the right conditions for building abundant, reliable, and rate-competitive clean electricity grids that drive economic growth and competitiveness.

Research presented in this report addresses two questions: What conditions enable Canadian jurisdictions to grow and modernize their electricity systems quickly and at lowest cost to accelerate clean economic growth?

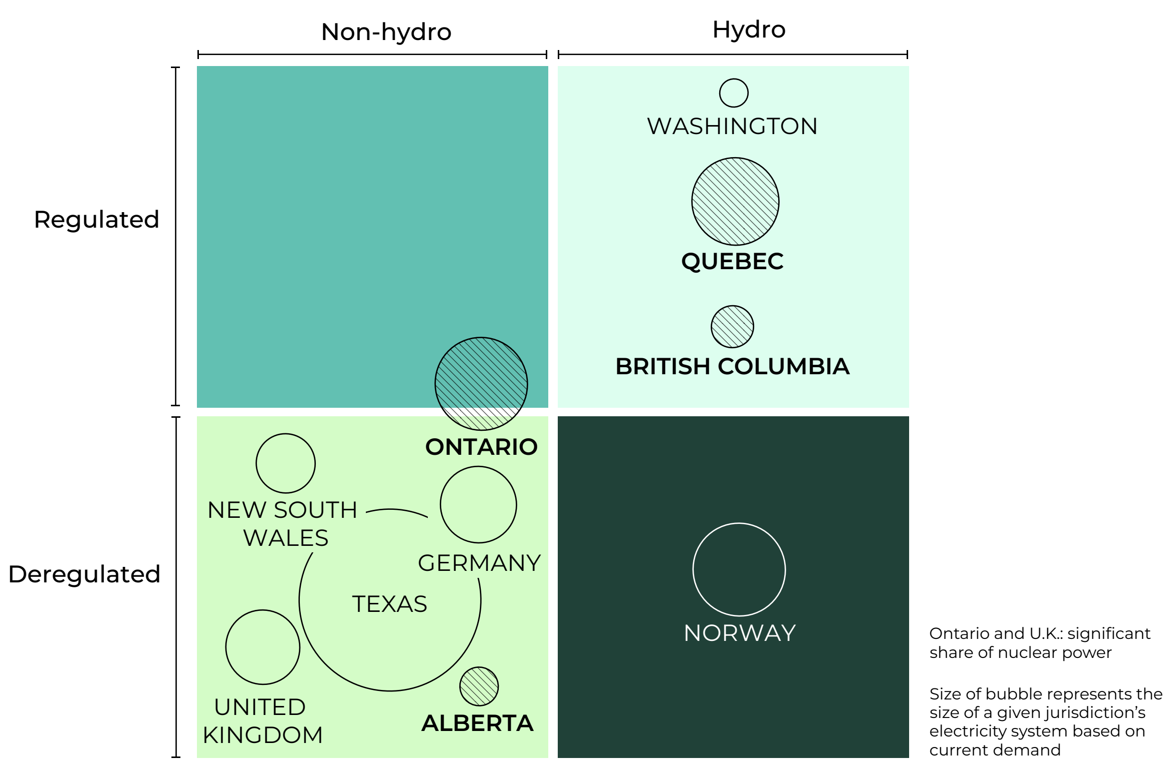
What can the federal government do to support provinces in creating these conditions for the benefit of Canada's economy, acknowledging that electricity is largely in provincial jurisdiction?

The accompanying **Technical Report** provides more detail on the methods and sources used for this report.

Subsequent publications will speak directly to findings for provincial governments and how their actions can set up conditions for success. Policy options that are exclusively provincial jurisdiction will be covered in those publications, and are excluded from this report.

We answer these questions through a benchmark analysis that compares the performance of four Canadian provinces (Ontario, Alberta, Quebec, British Columbia) and six international jurisdictions (Germany, U.K., Norway, New South Wales, Washington State, Texas) across six dimensions. Together, these factors influence a jurisdiction's attractiveness for investment in both wind and solar projects and industry in the emerging age of clean electricity. We chose these international jurisdictions because of their comparability to Canadian markets in terms of market structure (regulated vs. deregulated) and energy mix. The four Canadian provinces make up over 75 per cent of all current industrial electricity demand across Canada and represent a broad sample of attributes from provincial electricity systems.

Fig 4 • Jurisdictions have different electricity-generation sources and market structures



We identified six key conditions related to infrastructure, markets, and policy that make a jurisdiction attractive to clean energy investors and industrial electricity users based on document review and interviews with 36 investors and electricity experts (see **Appendix A** for more information). In choosing the six conditions, we also considered their impacts on outcomes (in particular, competitive rates) and the extent to which government policy can influence them. We identified metrics that are proxies for these six conditions to measure and compare them across the different electricity systems. Our choice of metric was typically constrained by limited data availability. Moreover, many of them look at historical performance to draw conclusions about the future. Finally, the six selected metrics have relevance across the board but with differing importance across jurisdictions (see **Section 10**).

We assessed the performance of jurisdictions for each metric using a five-point scale (1-5) where a higher score represents higher performance. The summary of results for each metric is provided at the end of **Sections 4** to **9**. The accompanying **Technical Report** provides a full assessment methodology for each metric.

Comparing Canada's largest electricity markets to international peers across these six metrics enabled us to identify effective government actions for building electricity systems that support economic growth.

Fig 5 • Benchmarking metrics

INFRASTRUCTURE	MARKETS	POLICY
Is there enough grid infrastructure to deliver low-cost electricity from distributed renewables to industrial projects?	*Is there a market for renewables and energy storage investors? Are there rate incentives to support industrial customers' long-term competitiveness?*	*Is there a stable policy environment that reduces risks for investors?*
1 / ENERGY PLANNING	**4** / ELECTRICITY PROCUREMENT	**6** / CLIMATE POLICY CERTAINTY
2 / PLANNING FOR FLEXIBILITY	**5** / INDUSTRIAL RATE MODERNIZATION	
3 / TRANSMISSION PLANNING		

4 Energy planning

Planning is essential for well-managed electricity systems. In some jurisdictions, planning processes create a competitive advantage in preparing for load growth and technological change.

Many jurisdictions in this study centrally plan and procure power, but not all jurisdictions do so. In Texas and Alberta, for example, most new generation is built in response to competitive market signals rather than through central procurement by a single buyer—but this does not mean planning is absent. System operators still forecast electricity demand to know what transmission to build and what services are required to maintain reliability, as well as to understand if market rules need to evolve to ensure investment occurs in the right places.

4.1 Why energy planning matters for investment

All jurisdictions in this study are anticipating rising industrial electricity demand over the coming decade (**Figure 2**). But given the historical trend of modest growth, system planners in developed countries have typically been conservative in their assumptions of future demand growth (U.S. Energy Information Administration 2025). In regulated electricity systems, that caution is reinforced by a long-standing regulatory mandate to ensure rates are just and reasonable: utilities earn a regulated rate of return on capital assets, which can create an incentive to overbuild, hence oversight is required by the regulator.

We heard from multiple experts (see **Appendix A**) that competition between existing industries and new market entrants for limited available supply is increasing. With increased demand, the allocation of limited additional new supply will become harder.

Industrial electricity demand also does not exist in a vacuum, but in the context of total demand from all sectors. Decisions that prioritize industrial demand can create trade offs with other sectors (such as buildings and transportation) that are also seeking additional power due to population growth and electrification.

Electricity plans that adequately reflect expectations about future demand are crucial for investors in both electricity generation and industry.

- For industrial investors, credible plans provide assurance that sufficient supply will be available, helping to keep rates competitive by building the most cost-effective system, and avoiding incremental costs driven by reactive investments.
- Without adequate supply planning, grid connection timelines—which historically operated on a first-come, first-served basis —have stretched from months to years. More recently many jurisdictions have shifted to follow a first-ready approach (Brijs et al. 2025).
- Tight supply in Quebec and B.C. is already forcing allocation of scarce electricity between industrial customers (Government of Québec 2024; Canadian Press 2023). This creates a rationing dynamic that risks deterring new industrial investment.
- For renewables and energy storage investors, robust planning enables reliable expectations about the size and timing of the upcoming market opportunity, while providing greater confidence that the overall system will be able to integrate their assets with the grid.

This report focuses on the electricity grid, but it is also worth highlighting that limited power supply has encouraged industrial customers to seek their own sources of electricity (Swinhoe 2026, Energy Abundance Development Corporation 2025) or purchase directly from a generator (where market rules allow). While this may help some projects move forward and is encouraged in some provinces (Government of Alberta n.d.), it is not a direct substitute for energy planning and does not always reduce the need for system build-out (users may still rely on the grid to provide backup power and reliability services). These arrangements can also make planning more uncertain if system operators have less visibility into underlying demand, connection needs, and the extent to which large loads will continue to depend on shared network infrastructure. For the purposes of this report, these off-grid sources of electricity demand were largely considered beyond scope.

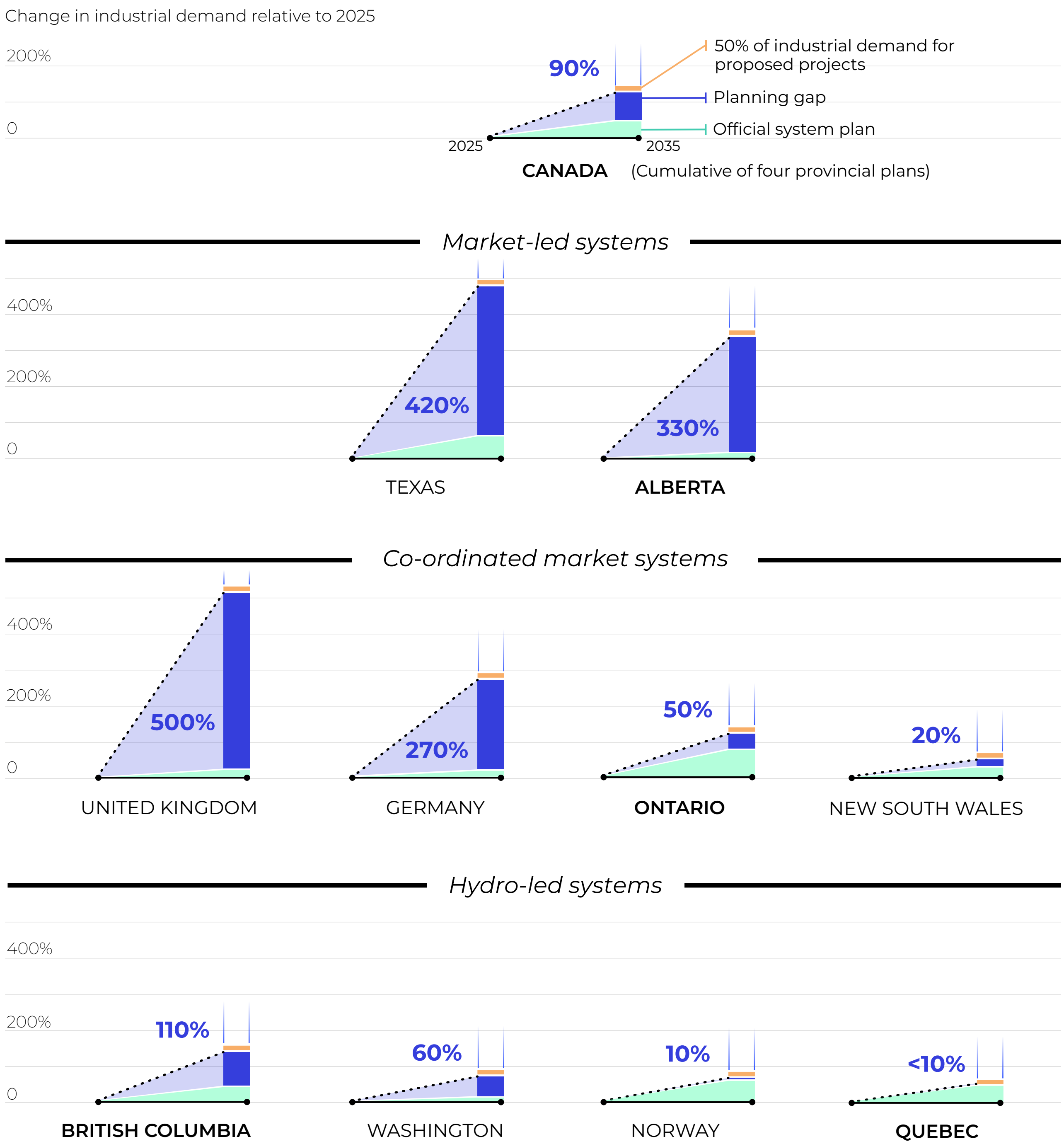
Preparing a jurisdiction's electricity plans for the emerging age of clean electricity means internalizing the economic risk of underbuilding. Cautious planning can lead to planning gaps, allocation challenges, and foregone economic revenue right when it is needed most.

4.2 Performance across jurisdictions

To compare jurisdictions' preparedness for growing industrial demand in their energy planning, we measured the gap between two indicators of future demand: the electricity requirements linked to industrial projects requesting to connect to the grid; and the industrial demand projections included in a jurisdiction's current electricity plan (see also **Figure 6**). A larger gap indicates cautious planning relative to demand. We chose to measure this gap relative to only 50 per cent of total demand from all projects in the interconnection queue because these waitlists can include some speculative, duplicative, or early-stage projects that are unlikely to materialize. Other jurisdictions, such as Texas, historically have used a similar threshold for data centres (see the **Technical Report** for information about methodology).

Fig 6 • Most jurisdictions are not planning to build enough new electricity for future industrial power demand

Canadian provinces range widely in their electricity planning gaps, from nearly sufficient to significantly short



"Official system plan" shows the projected increase in industrial demand included in each jurisdiction's baseline electricity plans to 2035. The line on top of the bar shows the level of demand growth in 2035 if half of the load from current proposed industrial projects proceeds (project list as of December 2025). The planning gap bar is the difference between the two. The number for Canada represents the sum of the largest four provinces shown and 75 per cent of national industrial demand. For sources and further details, see ***Technical Report****.*

Our findings indicate that most jurisdictions are currently not planning to build enough new electricity for future industrial power demand in their connection queues. Even if only half of the total demand from all industrial projects requesting to connect the grid are built, jurisdictions will still face supply shortfalls. The greater the gap between demand projections in the plan and the demand linked to industrial projects in the queue, the higher the risk of underbuilding. As mentioned earlier, underbuilding still matters even in systems that have open access to add electricity generation because it influences transmission and reliability service build out.

Large projects, including (but not limited to) data centres, dominate system demand requests today across the board (ERCOT n.d.; AESO n.d.c.; AEMO 2025). But it is clear that planners are making different assumptions about what share of projects will ultimately proceed, even in the same sectors or at equivalent stages of development (see the **Technical Report** for more information). So, while load queue rules may explain some of the differences between jurisdictions in this proxy, there are underlying differences at play.

Regulators and system operators all try to adjust their planning given this increase in demand. As one example, the U.K.'s load demand connection queue exceeded the most ambitious demand forecast, underscoring the need to reform the connection process (Ofgem 2025a).

Some jurisdictions such as Ontario and New South Wales, have a smaller planning gap (i.e., they are planning for a future of high industrial electricity demand more closely aligned with the demand of projects currently in their queues). Based on our analysis, their queues are typically more sectorally diverse than in other jurisdictions, which are dominated by data centres—a large but uncertain new load.

Quebec also has a small gap but its industrial demand project list is less transparent and we cannot rule out selection bias. The province is currently under tight supply constraint—it has a well-publicized allocation process and some projects may not choose to join the queue knowing there is a low chance of success (Government of Québec 2024).

Table 1 overleaf summarizes the results across the jurisdictions and provides context for the major drivers of this planning gap in each case.

Table 1 • Jurisdictions' performance in energy planning

JURISDICTION	COMMENT	INCREASE*	SCORE (1-5)
Market-led systems			0 1 2 3 4 5
ALBERTA	Higher share of data centres in the load queue but modest system plan growth	19%	
TEXAS	Higher share of data centres in the load queue impacting the queue size with high system plan growth	68%	
Co-ordinated market systems			
U.K.	Higher share of data centres in the load queue	29%	
GERMANY	Slow processing of the growing queue. System plan growth is small relative to a large industrial base	9%	
ONTARIO	Data centres represent nearly half the load queue but the official plan has high planned growth	74%	
NSW	The reference plan tracks close to proposed project queue	29%	
Hydro-led systems			
WASHINGTON	Data centres dominate the queue while system plan assumes much lower demand	10%	
BRITISH COLUMBIA	The project queue is dominated by industrial projects that have higher certainity than data centers. Load forecast was revised upward (Sandve 2026)	32%	
QUEBEC	The queue lacks transparency. Only included projects under review. High growth system plan	43%	
NORWAY	The reference plan tracks close to proposed project queue. High growth system plan	55%	

* In official system plan

4.3 Findings

Implications for policy emerge from this comparison of energy planning:

- **Risks of supply constraints are real.** Industry wants timely access to power yet provinces are not planning for the level of demand that looks increasingly likely given growth of data centres and acceleration of electrification. Planning choices around industrial demand are increasingly material and becoming more so. As projects become larger, they act as on-off switches that can quickly change the trajectory of overall electricity system needs, depending on when (or whether) they power up. In Alberta, the system operator had to introduce interim limits of 1,200 megawatts (MW) (10 per cent of peak demand) on new large loads to maintain grid reliability (AESO 2025).
- **At the provincial level, electricity planning is often cautious.** Many Canadian systems are led by Crown utilities, some with mandates tied to economic

development (Dix 2025). But utility plans still pass through regulatory processes designed to protect ratepayers from overbuilding and rate shocks. What often sits outside that lens is the cost of underbuilding: the investment, jobs, production, and tax base that never arrive because electricity is unavailable, delayed, or uncompetitive. Regulators have developed tools to identify imprudent spending, but not parallel tools to value foregone growth. And because regulators do not make economic policy, broader growth objectives usually need to be set clearly by governments. Ontario's market is structured differently, yet it faces the same regulatory gap. Ontario recently changed the mandate of its regulator to weigh growth more explicitly within its regulatory framework, alongside affordability, reliability, and consumer protection (Wren et al. 2025).

- **Even in market-led systems that do not centrally procure generation, such as Alberta and Texas, conservative demand forecasts can still constrain system growth.** When system operators underestimate future electricity needs, they may underinvest in transmission and reliability services. That, in turn, limits where and how quickly new generation can connect.
- **The full benefits of grid expansion extend beyond provincial boundaries.** In a provincially bounded planning framework, many of the wider benefits of building ahead—industrial competitiveness, grid reliability and resilience, emissions reductions, national economic benefit and energy security—are not fully captured, even when they create clear national value.
- **Interprovincial benefits create a case for federal involvement.** When grids expand to enable prospects for accelerated economic growth, local ratepayers are put at some risk while all people in Canada and all Canadian businesses benefit from economic spin-off effects that extend beyond provincial borders, which further fosters a stronger tax base for governments. Policy can help reduce the risk of overbuilding, better account for the cost of underbuilding, and support investments whose benefits extend beyond any one province (Harland, Sudhakar 2026). This is in both the provincial and national interest, and is increasingly necessary to support economic growth in a diversifying economy.
- **The role of Indigenous governments in energy planning cannot be ignored.** Indigenous governments—and Indigenous-owned corporations—are not peripheral stakeholders but central actors in energy planning given the rights-based requirements for consent, increasing ownership of clean electricity infrastructure, and the location of these infrastructures on Indigenous lands (The Wah-ila-toos Indigenous Council 2024, Indigenous Clean Energy 2020, IEM n.d.a). Recognizing this role is also important to avoid repeating past harms: energy systems have repeatedly infringed on traditional territories without providing corresponding benefits, and low energy rates for Canadians are, in part, a consequence of uncompensated displacement of Indigenous Peoples (von der Porten 2024).

5 Planning for flexible grids

Electricity systems must keep supply and demand in balance at all times. Flexibility is the ability of the system to adjust as conditions change: when demand rises, or when wind or solar output falls, for example (IEA Wind 2025). All electricity systems must be able to meet peak demand but systems with greater flexibility can do so with less overbuilding of generation because they can ramp up supply or reduce demand on the timescale required.

System flexibility can come from various sources (see Figure 7), including flexible generation (e.g., hydropower and fast-ramping gas plants), interconnections with neighbouring grids, storage (e.g., grid-scale batteries), and demand response measures (DeHan et al. 2026; Johnson et al. 2024). In this report, however, industrial demand flexibility is considered separately (see Section 8) because it is uniquely relevant to economic growth and industrial competitiveness. It is not only a source of system flexibility; it is also a mechanism through which industrial customers can reduce costs, respond to price signals, and improve the business case for investment.

Jurisdictions take different approaches to planning for flexibility and/or incentivizing flexibility within their market design.

5.1 Why flexibility matters in electricity systems

A modern and competitive grid is one that is flexible. If a system can shift, store, import, or reduce electricity use when conditions change, it can rely less on building out additional capacity that is only used for the few highest peak hours of the year.

Overall more flexible electricity systems can help to keep rates competitive by:

- Reducing the need for overbuilding generation and grid infrastructure to meet infrequent peaks (Shah, Pal 2026).
- Improving utilization of existing infrastructure (Hledik et al. 2026).
- Enabling integration of lower-cost renewables (Simon, Anadon 2025).

At the same time, increasing flexibility helps to:

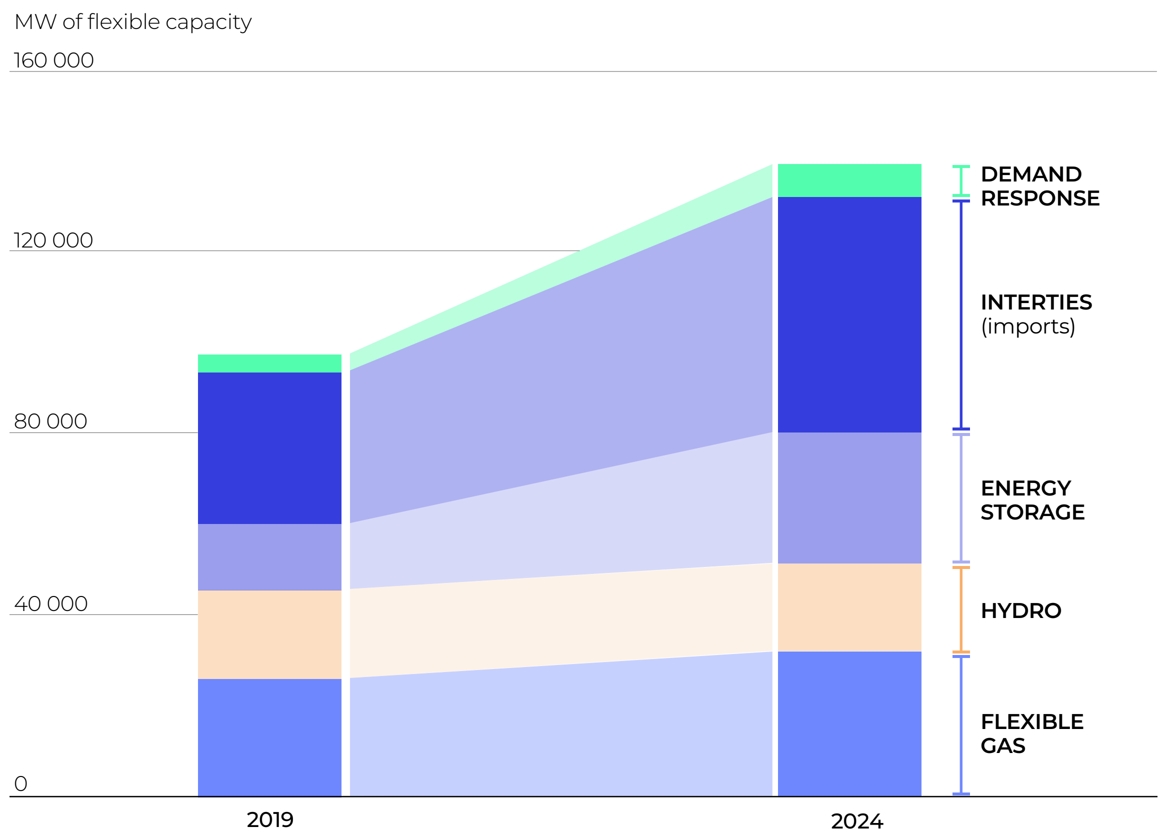
- Balance variable supply across the grid and more easily maintain system reliability and security (Çam et al. 2026).
- Increase availability of supply for customers (some flexible options, such as batteries and demand response, can relieve constraints and make room for new customers faster than traditional buildout).

The most flexible systems in North America are in Quebec and British Columbia. These systems start with a comparative advantage of hydro dams that can flex to accommodate variations in wind and solar output, as well as changes in customer demand across hours and days. They can even act as buffers between seasons with smart operational management. These systems do not need to increase grid flexibility in the same ways as their counterparts, although maintaining flexibility still matters in other ways as these jurisdictions benefit financially from storing and trading power when prices are high (Jaccard 2026).

Jurisdictions without such a natural flexibility advantage have to work to establish flexibility in their systems and make policy choices about what that entails. For this metric, we therefore focus on non-hydro jurisdictions where governments must take action to increase system flexibility.

Analysis of the six non-hydro jurisdictions in our study showed that since 2019, jurisdictions have substantially grown their flexible capacity and have done so primarily via energy storage (batteries) and increased interconnection with neighbours (**Figure 7**).

Fig 7 • Non-hydro grids have increased flexibility and done so primarily via batteries and interties



*Breakdown of the total flexible capacity by source across six non-hydro jurisdictions for years 2019 and 2024. The capacity used is adjusted for availability. The approach we used for flexibility data was informed by analysis done by the Pembina Institute (Pickup et. al 2025). For sources and further details, see **Technical Report**.*

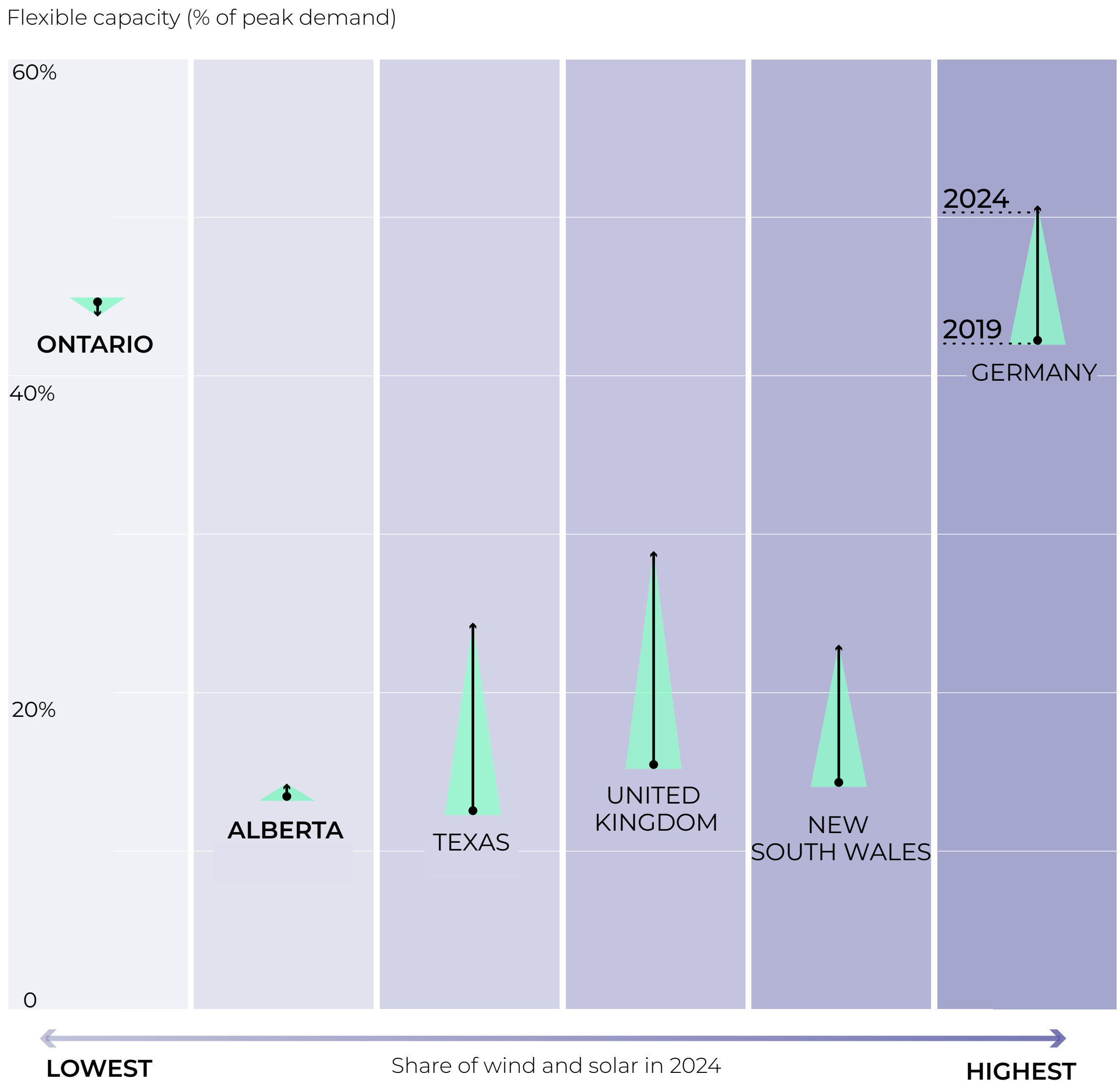
5.2 Performance across jurisdictions

Flexibility will increase in importance for electricity systems in the future as electricity demand and peak demand grow, and as more variable renewable generation is added to the system. Systems should aim to grow their flexibility if they are to keep pace with these changes and realize competitive electricity rates (Trabish 2025; Gafaro et al. 2026). Work by the IEA on electricity markets makes the case that systems must evolve to unlock stable and long-term investment in flexibility under these evolving conditions (Aussant et al. 2025).

To compare the jurisdictions' performance on flexibility, we measured the growth in a system's flexibility relative to its peak demand over the past five years (**Figure 8**).

Fig 8 • Non-hydro jurisdictions outside of Canada have significantly improved flexibility relative to peak demand

Alberta and Ontario have different levels of flexibility, but both can improve as peak demand grows



This chart illustrates the change in system flexibility (of all forms) relative to peak demand. The capacity of each flexibility type used here reflects what is operationally available, not the theoretical capacity. For sources and further details, see ***Technical Report****.*

Jurisdictions see markedly different trajectories in terms of the flexibility of their systems. International peers have expanded the flexibility of their electricity systems faster than increases in peak demand, which enables greater integration of wind and solar while reducing the need for costly peak infrastructure additions. By comparison, Canadian jurisdictions remained largely static.

Jurisdictions took different paths to achieve more flexible electricity systems—by increasing connection with neighbours (e.g., Germany), developing internal flexibility via battery storage (e.g., Texas), or both (e.g., U.K.). Germany's interconnection push since 2019 was driven by the need to improve security of supply, and capture the price and flexibility benefits of a more connected European power system (IEA 2025).

By contrast, Texas grew its flexibility via its market and tariff design, transparent price signals and fast connections for batteries that rewarded flexible behaviour within the state (Public Utility Commission of Texas n.d.; Modo Energy 2026; Al-Aini 2025; Robertson et al. 2025). Market updates in 2025 only further strengthen the case for Texas to continue its domination of U.S. battery investments (Gilman 2025). Alberta lags by comparison, though it is moving towards stronger price signals with market reform.

Ontario's 2023 electricity trade agreement with Quebec helped to at least maintain Ontario's level of flexibility relative to peak demand, even as its demand grew over the period (Government of Ontario 2023). Looking forward, Ontario's trajectory looks set to point upwards with the Oneida Energy Storage Project (2025), an uptick in battery procurement, and stronger price signals through its electricity market (IESO 2025).

Jurisdictions such as the U.K. and Germany show that with system flexibility it is possible to have a high share of renewables and manage periods of low wind output while maintaining grid reliability (Çam et al. 2025). Of our comparator group, Germany had the highest share of renewables at 61 per cent in 2024, with the U.K. at 48 per cent. These levels of renewable penetration would once have been widely seen as difficult to manage, but these examples show that he challenge is not renewables but whether system flexibility evolves alongside them.

"The challenge is not renewables but whether system flexibility evolves alongside them."

Meanwhile, expanding renewable generation has exerted downward pressure on Germany's high electricity prices in recent years (Liebensteiner et al 2025).

Table 2 below summarizes the flexibility results across the jurisdictions and provides context for the performance in each case.

Table 2 • Jurisdictions' overall performance in flexibility planning (non-hydro jurisdictions only)

JURISDICTION	COMMENT	SCORE (1-5)
Market-led systems		0 1 2 3 4 5
ALBERTA	Modest increase in both demand and usable flexibility. Alberta has much room to improve with import intertie capacity and increasing deployment of batteries	
TEXAS	Improved flexibility largely through massive deployment of battery storage (~8GW) that compensated for the grid being relatively isolated, with minimal import capacity through interties	
Co-ordinated market systems		
U.K.	Added 4.8 GW of import intertie capacity and 3.7 GW of battery storage, but the U.K. has underinvested in wires that connect supply and demand within its grid	
GERMANY	Invested heavily in interties, increasing its import capacity by over 9 GW and adding 1.2 GW of battery storage, allowing the grid to be better utilized despite a high share of wind	
ONTARIO	Despite adding import capacity, Ontario's flexibility is barely keeping pace with increasing demand. Higher starting flexibility. Leads Canada in battery procurement (IESO 2024b)	
NSW	Despite adding capacity of solar, NSW added 1 GW of intertie import capacity and over 400 MW of battery storage, with more battery deployment planned as costs decline	

5.3 Findings

Implications for policy emerge from this comparison of flexibility planning:

- **System flexibility is critical for keeping rates manageable while ensuring reliability and availability.** Grid flexibility is just as important as new generation capacity because it can help reduce the need for new build-out and, therefore, lowers system costs. Currently, several jurisdictions have an opportunity to significantly scale up flexibility and flexibility planning to realize these benefits.
- **Systems have a variety of technical options for creating flexibility with different lead times.** While transmission lines to increase import capacity are built, batteries and demand response can be deployed in less time. Agreements to increase utilization of existing interconnections occupy a middle ground as they take time to negotiate. A comprehensive flexibility strategy considers all options and their relative costs and benefits.

- **Growing system flexibility in step with renewable generation requires deliberate policy choices.** Provinces can procure flexible capacity (e.g., Ontario) or strengthen rules and markets to value flexibility (e.g., Texas). They can negotiate trade agreements on the use of existing interties, including at peak times (such as the Columbia River Treaty between British Columbia and the U.S. or the 2023 Quebec-Ontario Trade Agreement) (Government of Ontario 2023). They can invest in new interconnections with neighbours.
- **Regional trade via interconnections is a major driver of increased flexibility, but only where policy enables it and allows systems to use it.** Much of the increase in flexibility of electricity systems over the past five years in our analysis was attributable to interconnections with neighbours. European policies have notably set targets for interconnection (15 per cent by 2030) and established cost-sharing rules and funding for such projects (European Commission n.d.b). But at the same time, other jurisdictions (including some hydro provinces) have self-sufficiency requirements that can limit the realization of benefits that come from interconnection.
- **The federal government has tools to help support flexibility.** Supporting inter-provincial electricity trade is the clearest role. Investment Tax Credits already apply to both interties and battery storage. Given Canada's pronounced regional and seasonal differences in electricity demand and supply, support for longer-duration flexibility through stronger interties, but also innovation in medium- to long-term storage solutions, is particularly valuable.

6 Transmission planning

Meeting the growing demand for power in a timely manner and at low cost requires more than building new generation.

Transmission infrastructure is critical: it gets electricity from where it is generated to where it powers industrial growth (Golshan 2026).

But building large new transmission lines within and across jurisdictions is capital-intensive.

6.1 Why transmission planning matters in electricity systems

Unlike generation, transmission infrastructure is regulated and centrally planned across all jurisdictions in this study. A single co-ordinated network is inherently more efficient than competing sets of wires, which naturally gives rise to regional monopolies—whether publicly or privately owned (Mulder, Woerdman 2021). While some jurisdictions introduce competition in the procurement of transmission lines (as seen in the U.K.), the question of whether or not to build a line is still a central decision (Ofgem 2025b).

System planners need to manage structural changes in the location and size of both demand and supply. Traditionally, planning for transmission lines centred around connecting a few large power plants with the grid, but in the future, systems will run on large numbers of decentralized wind and solar farms that deliver electricity to increasingly large users (e.g., data centres, electrified mines, and steel plants). This focus on more dynamic spatial planning is most notably seen in the co-ordination done by European Network of Transmission System Operators for Electricity (ENTSO-E), including a 10-year network development plan that models costs and benefits to the region as a whole (ENTSO-E n.d.a.).

Inadequate transmission planning and ineffective management of transmission infrastructure can become costly for the entire system. The results are supply bottlenecks and high rates of wasted power (called curtailment), leaving industrial users wanting and sometimes reliant on fossil fuel power supply while they await connection. Inadequate transmission infrastructure also hurts wind and solar generators (Romack et al. 2022). Bottlenecks reduce dispatch volumes and revenues, and often coincide with local price suppression. This erodes renewable project economics and weakens forward investment signals.

Other tools are generally complementary to, but not a substitute for, major new transmission investment, particularly for large industrial loads (Çam et al. 2026). For example, grid optimization and management, dynamic line rating, and improved system flexibility can all help use existing and new transmission lines more efficiently (Tsuchida et al. 2023). This can unlock incremental improvements in capacity and congestion.

Getting transmission planning right will help attract investment by:

- ◊ Reducing total system costs by reducing curtailment and enabling access to the lowest-cost generation across regions, thus keeping electricity rates low (Pfeifenberger et al. 2021).
- ◊ Increasing effective supply by delivering stranded or remote energy to load centres, which improves utilization of existing assets thus ensuring availability of supply.
- ◊ Improving investment certainty for wind and solar by reducing congestion risk and supporting stronger, more predictable project economics.
- ◊ Enabling new demand and industrial growth via timely grid access at competitive prices.

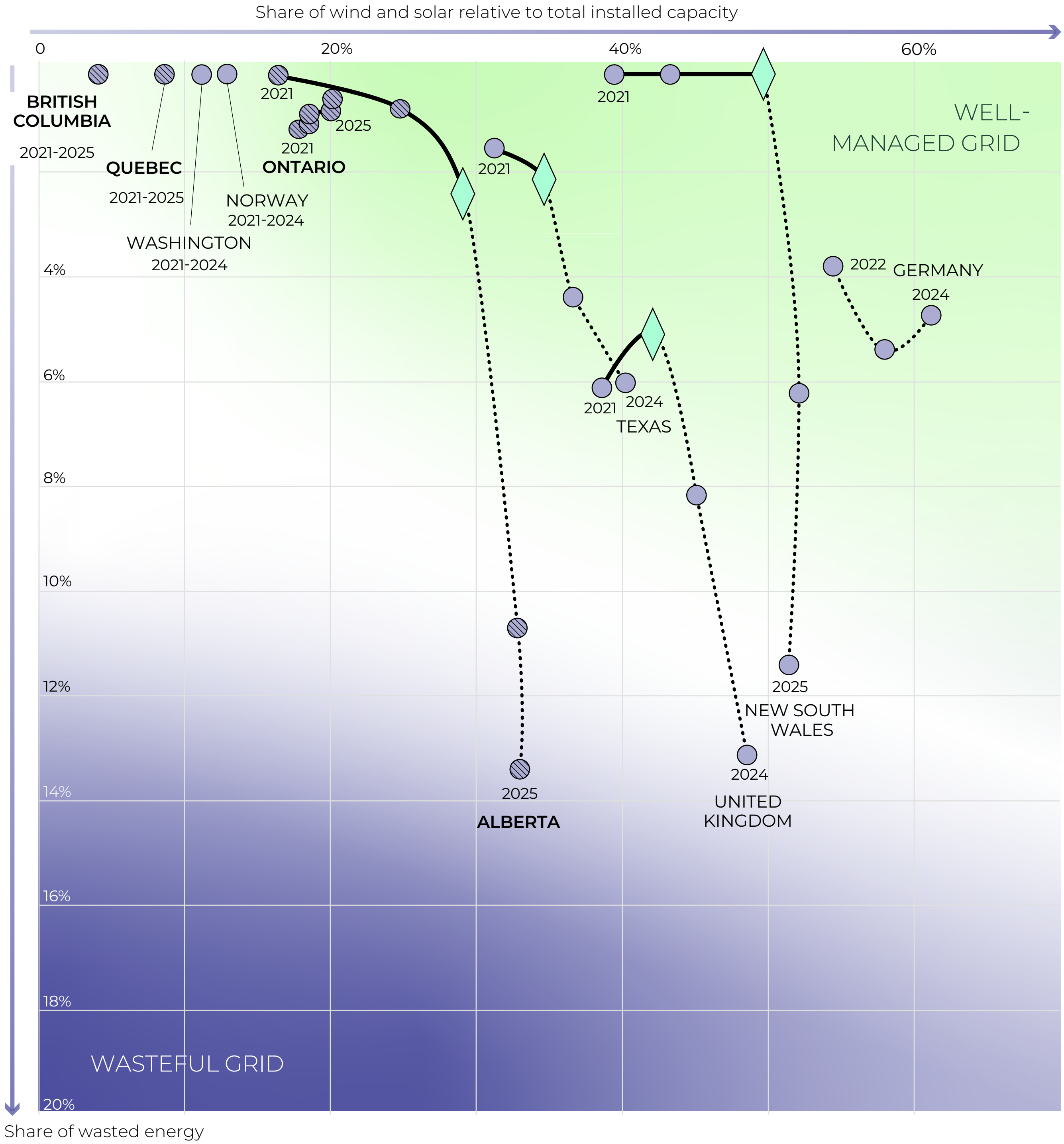
6.2 Performance across jurisdictions

To compare jurisdictions' performance to date on transmission planning, we measure a jurisdiction's wasted energy (curtailment) in relation to the growth in wind and solar capacity over the past five years. Without adequate transmission infrastructure and system management, increasing shares of renewables tend to lead to rising curtailment and physical bottlenecks as renewable power is generated but cannot be distributed on the grid. As shown in **Figure 9**, many systems exhibit a structural inflection point beyond which wasted energy increases rapidly, as new renewable generation bumps up against system constraints, including a lack of sufficient transmission infrastructure.

Our analysis finds that this inflection happens at different moments for different jurisdictions. The inflection point is not simply a matter of how much wind and solar a jurisdiction has built. It also cannot be explained by geography alone— jurisdictions with tipping points earlier and later both have electricity generation located far from major demand centres. Research into each jurisdiction points to one key factor: how well the grid has been planned and developed to move electricity to where it is needed. Hydro-led jurisdictions in this study have lower amounts of wind and solar and have yet to reach their inflection points.

Fig 9 • Grids that add wind and solar without enough transmission wires risk hitting inflection points for wasted energy

Canadian provinces can invest in transmission to avoid hitting the inflection point as their renewables shares grow



Each dot represents a year of data from 2021 to 2025 unless otherwise noted. Systems typically reach an inflection point where adding more variable renewables increases wasted energy unless supported by grid investment. Jurisdictions in the "well-managed grid" zone have managed this transition more successfully than those in the "wasteful grid" zone. For sources and further details, see ***Technical Report****.*

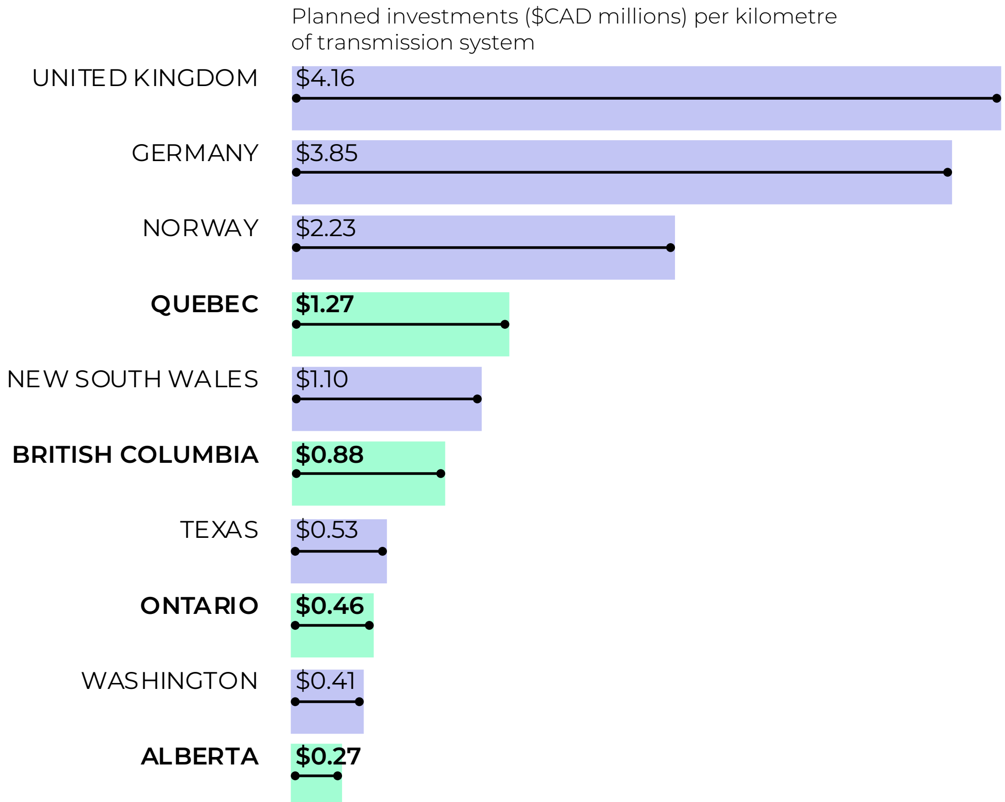
Jurisdictions that do relatively well here reduce waste by planning transmission early and at scale. For example, Competitive Renewable Energy Zones in Texas, Germany's federally planned north–south electricity highways, and New South Wales' Renewable Energy Zone model (Power Up Texas 2020; Bundesnetzagentur 2026; Government of New South Wales, n.d.). The U.K. performs reasonably well in limiting curtailment relative to its level of wind and solar capacity, but does so at a high cost, with transmission constraint costs amounting to roughly C$3 billion per year (NESO 2025).

Table 3 • Jurisdictions' (historical) performance on transmission planning

JURISDICTION	COMMENT	SCORE (1-5)
Market-led systems		0 1 2 3 4 5
ALBERTA	Highest share of congestion with moderate level of solar and wind penetration	
TEXAS	Despite large renewable deployments, congestion levels have remained manageable. The share of solar and wind remained moderate due to increase in gas generation	
Co-ordinated market systems		
U.K.	U.K.'s grid increased share of wasted energy due to lack of transmission capacity connecting wind in the north to demand centres in the south	
GERMANY	Large investments in interties that allow for import from other countries increased the German grid's flexibility and allowed for a more optimized grid that has very high share of wind generation	
ONTARIO	Ontario remains at the lower end of solar and wind penetration and has not had to address wasted energy	
NSW	The inflection point where congestion started didn't occur until solar and wind reached 50% of installed capacity	

Looking ahead, transmission investment commitments over the next decade also give us an indication of the scale of resources the different jurisdictions are putting towards this challenge (**Figure 10**). The U.K., Germany, and Norway lead the pack in transmission investment when adjusted for system scale (Holmlund 2025, Statnett 2025).

Fig 10 • Jurisdictions are stepping up transmission investment over the next decade, with Europeans leading the pack



Transmission investment planned over the next decade, normalized by the size of the transmission system for each jurisdiction. Kilometers here refers to circuit-kilometers, which accounts for the actual infrastructure in use, not just the map distance. For sources and further details, see ***Technical Report****.*

6.3 Findings

Implications for policy emerge from this comparison of transmission planning:

- **Some jurisdictions are planning and building transmission ahead at scale.** These jurisdictions designate high-value renewable zones or bulk-transfer corridors, assign shared network capacity to them, and then use access rules, long-term network plans, and accelerated approvals to get the grid built before all projects are committed. This moves away from the traditional "generation first, then transmission" model. Texas and New South Wales in particular have shown that building transmission early in strategic zones can unlock solar and wind potential, even where there is a geographic mismatch between resources and demand—provided there is political willingness to build proactively (Clean Energy Investor Group 2025; Jang 2020).

- **High shares of solar and wind generation do not automatically lead to more wasted (curtailed) energy.** Wasted energy is determined by system planning and design, and in particular sufficient transmission. Because of the speed at which solar and wind can be built relative to the time it takes to build transmission lines, there is a structural lag that requires transmission buildout to be anticipatory. Transmission investment cannot respond fast enough to market signals.

- **Improving transparency around provincial grid capacity and congestion is an immediate, low-regret step.** Providing clear signals helps investors understand where new renewable projects can connect, reducing development risk and helping to avoid costly curtailment and bottlenecks in the grid. Examples include locational pricing that show where supply is constrained (as seen in Texas since 2010 and Ontario since 2025) and regularly updated connection maps that show where new generation and large electricity users can most efficiently connect to the grid (as seen in Alberta, Quebec, and the U.K.) (ERCOT 2026; IESO 2026b; AESO n.d.b.; Hydro-Québec n.d.a.). System operators also use geographically specific guidelines to either restrict or incentivize where generation is built based on needs of the grid. But while these tools improve visibility and decision-making, they complement rather than replace the need for transmission investment under conditions of rising electricity demand (revealing rather than necessarily resolving underlying constraints).

- **In other places, regional and national governments provide greater support to states and provinces in building out cross-border transmission.** Unlike the EU, which has a mature 10-year development plan to study costs and benefits across regions, or the U.S., which has a federal regulator with a mandate to address interregional co-ordination failures, Canada continues operating without any comprehensive federal cost-allocation framework (ENTSO-E n.d.b). The federal government has, however, recently stepped towards support for intra-provincial transmission in some cases, such as the North Coast Transmission line in B.C. This project was referred to the Major Projects Office and has some early support from the Canada Infrastructure Bank (Baker 2025).

7 Electricity procurement

Investors in wind and solar projects typically compare electricity procurement conditions across jurisdictions to maximize expected risk-adjusted returns.

They look for markets that provide regular opportunities to invest, sufficient project volumes, and predictable prices for the electricity they produce. Although the relative importance of these procurement conditions varies across market structures, jurisdictions that offer a combination of these three elements are better positioned to attract investment, increase competition, and secure lower-cost clean electricity.

Procurement and market access are central policy levers. Governments shape investment conditions by setting the pathways through which new electricity projects can reach customers, including centralized procurements, corporate power purchase agreements, and merchant wholesale markets. These choices affect who can participate, how easily projects can enter the market, and how much price certainty investors have.

7.1 Why electricity procurement matters for investment

Across both open-access and procurement-based market types, experts (see **Appendix A**) emphasized that predictability in market access rules is crucial for investor confidence (Hochberg, Poudineh 2018). In the Canadian context, smaller procurements held at regular intervals are especially valuable. Knowing that another procurement round will take place soon helps developers navigate Indigenous partnerships that may take longer to build and helps Indigenous communities with limited resources become project proponents.

We also heard from our engagement interviews (see **Appendix A**) that price certainty is a key driver of investment. Mechanisms that provide stable prices for electricity reduce exposure to market volatility and lower financing costs (Ason, Dal Poz 2024). Both open-access and procurement-based jurisdictions can be attractive to investors if they offer price certainty. Contracts with lower-risk counterparties such as public utilities, system operators, or arms-length organizations can provide greater price certainty and support more favourable financing terms due to their stronger credit profiles and longer contract durations (Baker McKenzie 2015). However, their terms can be inflexible, whereas corporate (PPAs) may offer more room for negotiation along with price certainty. Giving developers more ways to sell power attracts a broader pool of developers and allows them to submit more competitively priced procurement bids, resulting in improved outcomes for ratepayers.

The Canadian context is fairly unique for this metric. The high degree of government ownership in the electricity system in Canada shapes how new generation enters the market; in any case, it clearly distinguishes Canada from other jurisdictions worldwide, and also differentiates some provinces, such as Alberta and Ontario, within Canada (Pineau 2019). Canada also stands out for the scale of Indigenous ownership and partnership within its independent power sector.

7.2 Performance across jurisdictions

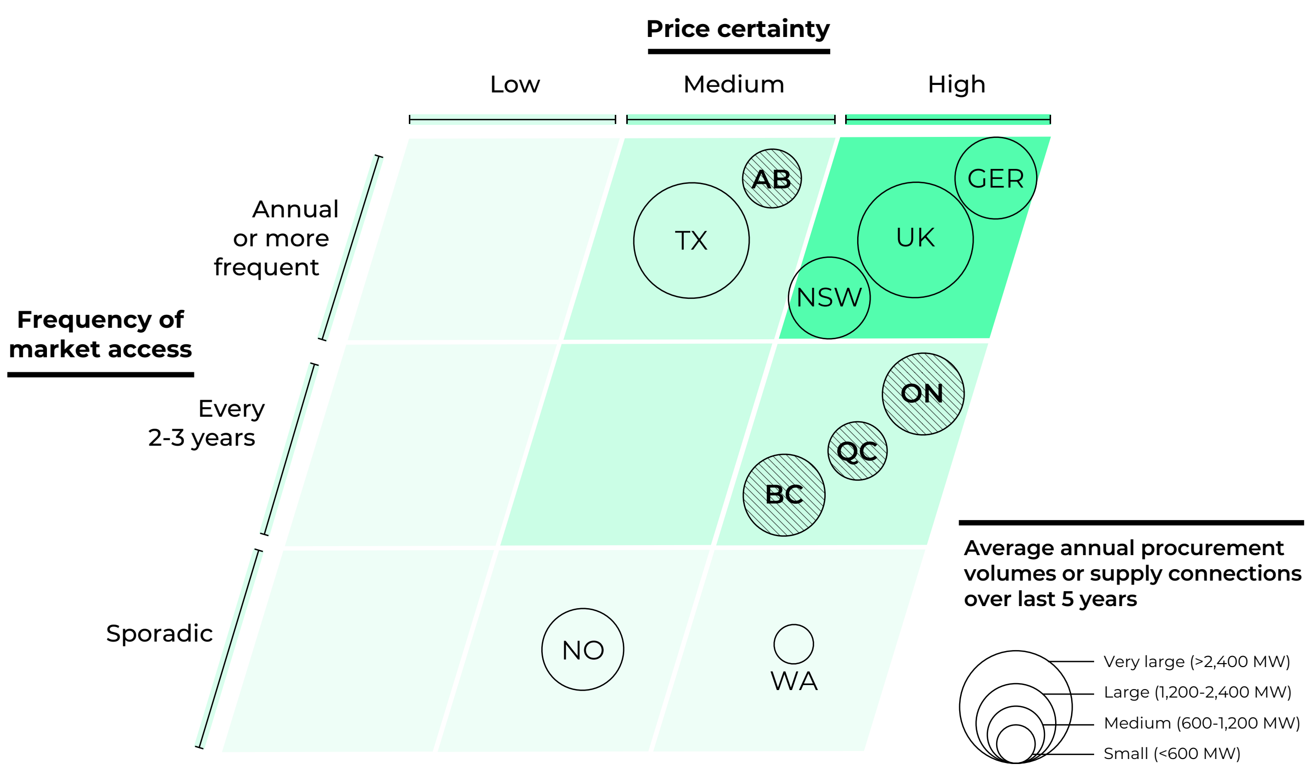
We measured the procurement market attractiveness in three ways: market access for renewable generators, market volume and price certainty. Procurement market attractiveness uncovers how effectively a jurisdiction structures electricity procurement conditions to make its market attractive for investment in renewable generation.

Both open-access and procurement-based markets can attract independent power producers, though they offer different risk profiles (**Figure 11**). In open markets such as Alberta and Texas, investors can enter whenever they secure a grid connection. However, price certainty is lower, so investors typically seek corporate PPAs to stabilize revenue (Business Renewables Centre Canada 2026). These corporate agreements also allow industrial buyers to lock in rates and hedge against volatility, with credit-worthy industrial buyers sometimes supporting electricity project financing directly. These contracts tend to be shorter and carry more risk than the long-term utility- or government-backed contracts available in procurement-based systems.

In procurement-based markets, investors access longer and more secure contracts (such as power purchase agreements from crown utilities) but they must wait for competitions to be announced (Ferroukhi et al. 2015). Their ability to invest depends on those competitions being regular and predictable.

Fig 11 • Attractive electricity markets offer investors frequent market access, large volumes, and contracts with high price-certainty

Canadian jurisdictions can offer investors a competitive package one or more of these conditions



The shaded zones indicate the overall market attractiveness for solar and wind generators across price certainty (the extent to which the generator can predict the price they will receive over the project lifetime) and market access over the past five years. For sources and further details, see ***Technical Report****.*

Markets also have the option to deploy policies that improve price certainty, such as contracts for difference (Kröger et al. 2023). The U.K., Germany and New South Wales, for example, offer two-way contracts for difference combined with annual (or more frequent) procurement rounds of substantial size.[1] As a result, these jurisdictions excel on this metric.

Canadian jurisdictions lag behind their comparator jurisdictions in market volume. This reflects both the fragmented nature of the Canadian electricity system and the fact that many provinces have only recently begun to significantly scale up their procurement targets. However, Canada's two largest electricity markets are beginning to catch up. After a nine-year pause, Ontario restarted its procurement in 2025 (Government of Ontario 2024), launching the largest energy procurement in its history with a target of 1,350 MW. The procurement has proven successful, delivering costs roughly 21 per cent lower than the province's previous renewable energy contracts (Government of Ontario 2026). Quebec has similarly announced its largest-ever procurement for wind power targeting between 1,500 MW and 3,000 MW (Hydro-Québec 2026).

1 . Two-way contracts for difference keep electricity prices stable by protecting generators when market prices fall below a fixed price, while requiring them to pay back gains when prices rise above it. Alberta Renewable Electricity Program similarly offered two-way contracts for difference, with procurement rounds in 2016 to 2019, which were consistently oversubscribed, though the program was discontinued in 2019 following a government decision not to continue additional rounds (Hastings-Simons et al. 2022; AESO n.d.a).

Table 4 • Jurisdictions' performance on procurement for renewable electricity investment

JURISDICTION	COMMENT	MARKET VOLUME	SCORE (1-5)
Market-led systems			0 1 2 3 4 5
ALBERTA	Generators do not have to wait for a tender to build. Price certainty via corporate PPAs	Medium	
TEXAS	Generators do not have to wait for a tender to build. Price certainty via corporate PPAs	Very large	
Co-ordinated market systems			
U.K.	Annual procurement calls with contracts for difference agreements	Very large	
GERMANY	Procurement calls multiple times a year with contracts for difference agreements	Large	
ONTARIO	Restarted and moved to annual procurement calls until 2028. Successful projects will have contracts for difference agreements	Large	
NSW	Procurement calls multiple times a year with contracts for difference agreements	Large	
Hydro-led systems			
WASHINGTON	Procurement calls on an as-needed basis with a mix of price-certainty mechanisms attached to them	Small	
BRITISH COLUMBIA	Procurement commitment every two years (though recently more frequent). With utility-PPAs	Large	
QUEBEC	Procurement calls every two years with utility PPA attached to them	Medium	
NORWAY	Procurement calls on an as-needed basis with a mix of price-certainty mechanisms attached to them	Large	

7.3 Findings

Implications for policy emerge from this comparison of procurement market attractiveness:

- **Canada's markets show up as separate isolated markets, rather than a coherent total.** To compensate for this fragmentation and increase the potential market volume for investors, provinces can better co-ordinate between one another on timing of competitions and common expectations.

- **Predictable, regular procurement realizes competitive bids.** Other international markets have had time to establish procurement processes, with some starting initial renewable energy procurement in 2018 and maintaining regular procurement cycles since (e.g., Germany) (Bundesnetzagentur 2017). In contrast, Canadian procurement-based jurisdictions (i.e., B.C., Ontario, and Quebec) have only recently started more predictable and frequent procurement rounds (CanREA 2025). The historically sporadic nature of procurement has contributed to relatively smaller market volumes in Canadian jurisdictions, although this will likely improve as procurement frequency ramps up.
- **Price certainty tools can deliver value for taxpayers too.** Two-way contracts for difference are being used in the U.K., Germany, and New South Wales to both stabilize investor revenues and return excess profit to the public (Watson, Bolton 2024).
- **Canada stands out for the scale of Indigenous leadership and ownership within its independent power sector (CER 2023).** Many of the successful bids across Canadian procurement-based jurisdictions are delivering projects with a meaningful Indigenous equity stake, with participation rates as high as 50 per cent becoming increasingly the norm (von der Porten et al. 2025).

There is relatively less of a role in market setup when it comes to the federal government, although federal policies can sometimes impact procurement—such as expectations around domestic content, trade tariffs, and support to remove financial barriers surrounding Indigenous equity, including via the Indigenous Loan Guarantee Program (Government of Canada 2026; Bellissimo, Melo 2025; Government of Canada 2025).

8 Industrial rate modernization

Electricity rates for industry are a significant driver of investment, both for attracting new customers and for retaining existing ones that rely on competitive prices to preserve their global competitiveness. Provinces that can grow electricity systems while maintaining low rates have an advantage in attracting investment.

Incentives for industry to reduce their use at peak times, either via avoided charges on their electricity bills or rewards for flexible behaviour, are one way industrial users can reduce their expenses while decreasing system costs and pressure on electricity rates in the medium-long term.

This work focuses on the primary industrial incentive program used by each jurisdiction, noting that it exists within a broader landscape of policies and programs (see **Technical Report** for further details).

8.1 Industrial rates and flexibility

Industrial customers want competitive electricity rates both up-front and over the long term since major industrial investments are hard to relocate (Government of Ontario 2019). In consultation with experts for this research (see **Appendix A**), we heard that a rapid build-out of new supply, while necessary to meet increasing demand, raises significant concerns about keeping rates competitive.

One way to manage this tension is by improving how efficiently the existing system is used. Electricity systems are dominated by fixed-cost infrastructure, including capital-intense generation and transmission assets, which must be paid for regardless of how much energy is consumed. This is increasingly true as systems add wind and solar, where fuel costs are negligible but upfront capital costs are high.

Within this approach, industrial demand flexibility is a distinct and underutilized lever that can reduce the need to build out new supply. While broader system flexibility includes many sources (see **Section 5**), large industrial loads represent the most immediate and scalable form of flexible demand (Hledik et al. 2026; Shah, Pal 2026). From a utility or system operator perspective, the response from a large customer can have a material impact on the system, and is much easier to co-ordinate than many smaller, fragmented loads.

A clear investment signal for industry to develop flexible operations or behind-the-meter capabilities (such as storage) can also create a revenue stream or reduce costs for industry, and improve overall competitiveness (Power Advisory 2020).

Over time, these tools can create a win-win outcome for everyone, not just large industrial users. The goal is not to give industry cheaper electricity by shifting costs onto residential customers or taxpayers. Instead, the aim is to use smarter pricing to encourage industrial users to consume energy when it is abundant and cheap, and to cut back when the grid is under strain. This makes the overall system more efficient and can reduce costs for all users (Hledik et al. 2026). Without it, governments face pressure to step in—either through special rate-relief schemes that shift costs onto other users, or through direct subsidies drawn from public funds (see **Box 2**).

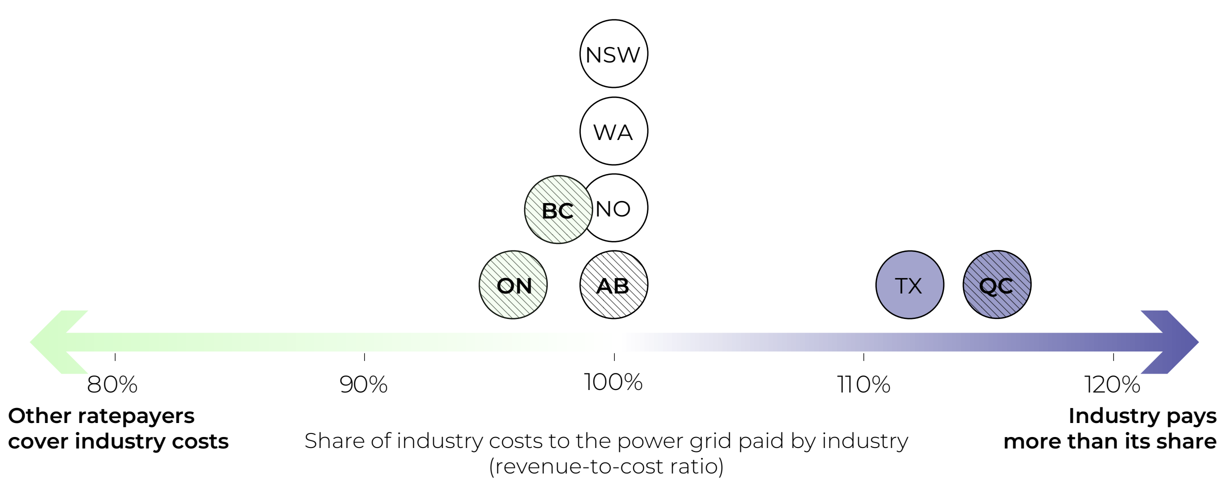
BOX 2 • SUBSIDIES

Investors we interviewed for this study also raised concerns about continued subsidization of one user group by another. Classically, system costs are split across user groups according to cost causation and the principle of beneficiary pays, but some governments share costs of the electricity system in an uneven way—with one group of customers paying more than its share of costs (Becker et al. 2025). In these cases, it is often industrial customers that pay more. Among our comparators, Quebec shows the highest cross-subsidization from industrial to non-industrial customers.

Some national governments are also using taxpayer-funded subsidies to maintain competitive industrial electricity rates. Germany recently implemented a federal subsidy package reducing electricity prices, transmission fees, and electricity tax for energy-intensive companies and the construction industry (Bundesregierung 2026). While such subsidies may be justified where national economic, reliability, resilience, and emission benefits are high, relying on taxpayer funding without also modernizing the electricity system and improving flexibility risks increasing the broader public tax burden.

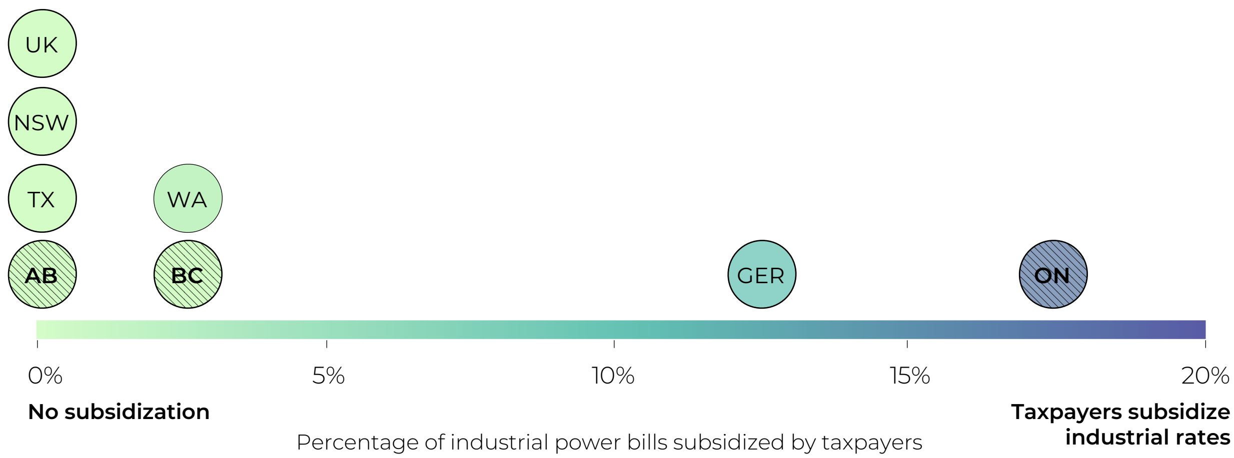
"Relying on taxpayer funding without also modernizing the electricity system and improving flexibility risks increasing the broader public tax burden."

Fig 12a • Some jurisdictions collectively charge industrial customers more than their share of costs to the grid



In standard rate-making, rates are set so that industrial users as a class pay no more and no less than their fair share for the system costs they incur, although many jurisdictions partially depart from this. This chart relies on reported revenue-to-cost ratios; see ***Technical Report*** *for further details.*

Fig 12b • Some governments use public dollars to reduce the cost of electricity for industrial users



Subsidies can apply to different parts of the bill (e.g., energy, transmission and distribution, total bill) and therefore are complex to compare across jurisdictions. This chart relies on reported bill impacts where available; see ***Technical Report*** *for further details.*

8.2 Performance across jurisdictions

This metric assesses how jurisdictions use rate structures, discounts, or payments to incentivize industrial customers to reduce demand on the grid during peak periods. It evaluates both the value to the customer (through bill savings or equivalent) and the broader system benefit (measured in terms of reduction of peak demand on the grid as a result of the program).

This research focuses on how industrial consumers are compensated for reducing demand during a system's peak hours, which drives system costs. While most jurisdictions reward demand reduction during these peak periods, Germany has opted for a different approach. It provides reduced transmission fees to industrial consumers that keep their demand stable and within a narrow range relative to their peak (Hirth, Eicke 2024). With this approach, Germany prioritizes load predictability over short-term peak demand flexibility.

Some jurisdictions, such as Alberta and Texas, incentivize industrial consumers to reduce peak demand by tying their transmission charges to their use of the system during annual peak hours (AESO 2021; Lara 2025). Lower contribution to peak results in relatively lower transmission charges. Both Alberta and Texas provide similar levels of incentives to industrial consumers, but observed reduction in peak demand differs due to the incentives' interactions with other policies and market conditions in each jurisdiction.

Other jurisdictions, such as Quebec, provide industrial consumers with more agency in how they are compensated for their contribution to reducing system peaks (Hydro-Québec n.d.b.). In these jurisdictions, industrial consumers are offered the option to sign interruptible load contracts with the system operator in exchange for credit on their electricity bills. The level of incentive is based on the consumer's ability to reduce demand by a specific magnitude and for a defined period. Norway takes a very similar approach (though data on uptake and bill impact was unavailable) (The Nordic Council of Ministers 2017).

Ontario shows both high industry incentive for peak demand management—offering greater than 10 per cent discounts on electricity bills—and a high observed reduction in the system's peak demand (1,500 MW) (IESO 2023). Ontario's Industrial Conservation Initiative (ICI) creates strong incentives for industrial consumers to materially reduce demand during the the top-five peak hours of energy use and, in response, are significantly compensated for this through lowered Global Adjustment (GA) fees.[2] Because only industrial and other large consumers benefit from reduced GA fees, the cost-recovery burden increasingly shifts to the other ratepayers in the short- to medium-term (see **Figure 12a**) (Sergici et al. 2025). However, in the longer term, managing peak demand through ICI could result in lower system costs, spreading benefits more broadly across ratepayers (Government of Ontario 2025b). Ontario is also part of a North American collaborative effort between system operators, regulators and industry to establish a common flexibility framework for data centres and new large loads (EPRI n.d.)

Rather than relying on bill reduction incentives, B.C. has historically incentivized behind-the-meter resources such as energy storage. This has included BC Hydro's Energy Storage Incentive, Demand Response for Business, and solar and battery storage rebate programs (BC Hydro 2026a). More recently, BC Hydro has introduced curtailment requirements for certain large loads, such as data centres (EPRI 2025), without associated financial incentives or compensation (BC Hydro 2026b).

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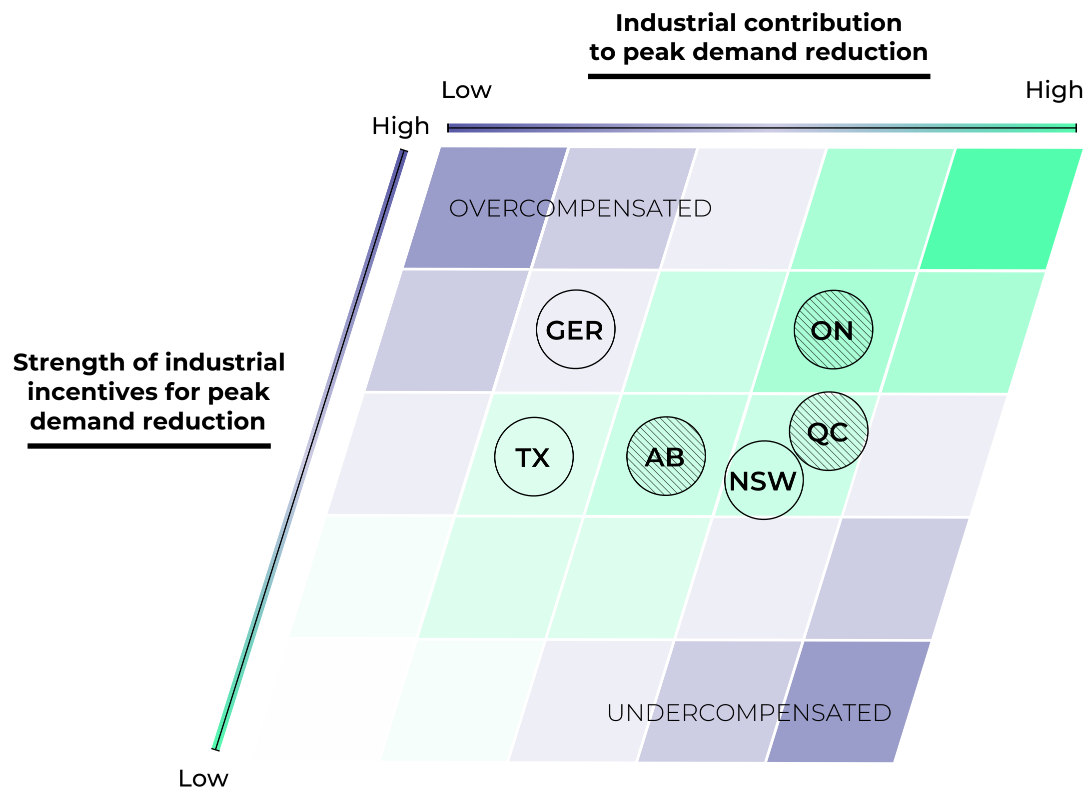
2 . Global Adjustment fees (IESO n.d.) are one of the main charges used in Ontario to recover the difference between the market price of electricity and the actual cost of supplying it. They fund generation contracts, conservation programs, and other system costs.

Fig 13 • Well-designed industrial rate incentives can lower peak demand and improve industrial competitiveness

Canadian provinces lead peers using these tools but are not maximizing them



This chart reflects the dominant form of industrial rate incentive in a jurisdiction. Options include peak demand charges or rebates, interruptible load contracts, time-of-use, and trading of demand reduction certificates. The top-right represents the strongest outcome, where incentives offered to industrial consumers are both financially material and deliver meaningful system peak reduction.
See the ***Technical Report*** *for more details.*

Table 5: Jurisdictions' performance on industrial flexibility rate incentives

JURISDICTION	COMMENT	SCORE (1-5)
Market-led systems		
ALBERTA	Industry materially reduces demand during the top 12 hours of peak	3
TEXAS	Industry is overcompensated for minimally reducing top four hours of peak	2
Co-ordinated market systems		
U.K.	n/a	n/a
GERMANY	Industry is the most overcompensated (relative to other peer jurisdictions) for maintaining flat demand (tool does not reduce peak consumption)	1
ONTARIO	High industrial compensation. Substantial (1,500 MW) peak demand reduction	5
NSW	Industry is undercompensated for materially reducing demand during peak hours	3
Hydro-led systems		
WASHINGTON	n/a	n/a
BRITISH COLUMBIA	n/a	n/a
QUEBEC	Industry opts in to established interruptible load contracts that materially reduce peak	3
NORWAY	Norway does not publicly publish data on the impact of its incentives. The score is based on theory and similarity to Quebec	3

8.3 Findings

Implications for policy emerge from this comparison of industrial rate design:

- **Compensating industry for making demand flexible during peak periods is a well-established approach, including in Canada.** Globally, industrial users make up the greatest share of demand response—with a similar trend seen in Ontario and Quebec (Çam et al. 2026). However, even with their dominant share, significant untapped potential remains for further industrial participation (Nippard, Gaede 2025). Jurisdictions vary in how they utilize industrial demand response, ranging from voluntary to compulsory participation. Such programs operate across all market types.
- **Incentivising industry to avoid the biggest annual peaks is generally more cost-effective than focusing on daily peak hours.** Tools that encourage industrial load reduction during the highest hours of system peak annually (coincident peak

programs) use the current grid more efficiently and reduce the need to add new supply over time or make premature grid investments (Shen 2025). In contrast, tools that shift load daily (e.g., time-of-use pricing) require more frequent behavioural change from industry without the equivalent magnitude of benefit for the system. Tools that are location-specific for industry (e.g., locational marginal price) are less predictable over time than system-wide, time-based tools.

◊ **Industrial demand flexibility extends beyond curtailment and requires behind-the-meter investments.** Behind-the-meter investment, such as solar installations and batteries on site, can help industrial consumers generate and store electricity during off-peak hours, when electricity prices are lower, and use it during high-peak hours when prices are higher (Power Advisory 2021). But behind-the-meter generation, storage, controls, and process upgrades often require upfront investment. Industry needs sufficient incentive or adequate support to innovate and invest in behind-the-meter technologies (Anisie, Boshell 2019). Some federal incentives exist, for example, batteries behind the meter are eligible for 30 per cent Clean Energy Investment Tax Credits (Natural Resources Canada n.d.). Current capacity varies across Canadian provinces, with Ontario leading in behind-the-meter solar (Dunsky Energy + Climate 2023). Industrial flexibility only becomes more valuable as industrial demand increases.

◊ **Setting competitive rates for industrial users typically starts with distributing system costs according to the principle of cost causation.** In some jurisdictions, where cost-allocation frameworks are not aligned with this principle, industry is cross-subsidizing the electricity rate of other ratepayers. These misalignments can compound during periods of rapid system growth, when historical methods of allocating cost can fail to track shifting responsibility. This can impact the competitiveness of electricity rates of both new and existing industrial customers (Hakim et al. 2025). Addressing such misalignments represents one lever for improving industrial competitiveness.

9 Climate policy certainty

Uncertainty about climate policy undermines investment in clean electricity and electrification. Provinces that can't offer investors in wind, solar, and battery projects predictability and clarity about their climate change objectives and actions—today and in the future—will miss out on investment (Baker et al. 2016; Gavriilidis et al. 2026).

While wind, solar, and battery technologies are increasingly cost competitive in many markets without direct policy support (see Section 2), top-down government policy still matters for attracting capital—especially the extent to which policy is predictable.

To date, a main driver for governments around the world to take these actions has been to mitigate climate change, although the economic and security-related benefits of clean power have gained in importance recently. Yet with markets increasingly driving investment in renewables, there is a risk that unpredictable policy changes can hurt investor confidence and compromise a jurisdiction's global competitiveness for capital investment (Fulghum et al. 2026).

9.1 Why climate policy certainty (still) matters for clean electricity investment

Investors in long-term projects such as generation assets or transmission lines require reassurance that governments won't suddenly remove existing support or take actions that drive up the risks or costs of new project development. High uncertainty about a jurisdiction's present and future commitment to clean electricity and electrification will directly increase financing costs for these projects and make the market less attractive to investors (Basaglia et al. 2025).

Policy certainty also has positive effects on a jurisdiction's electricity system overall. It helps attract more competitive project bids, and, ultimately, contribute to containing long-run electricity costs. Conversely, there are negative implications for employment and regional economic development when policy changes cause electricity projects and facilities to suddenly become uneconomic.

The legislation of long-term targets for decarbonization and implementation of supportive policy instruments are two essential elements of 'investment-grade' climate policy, i.e., policy that builds investor confidence and reduces financial risks (World Bank 2020; Hamilton 2009).

"The legislation of long-term targets for decarbonization and implementation of supportive policy instruments are two essential elements of 'investment-grade' climate policy"

Multiple experts highlighted in our research interviews (see **Appendix A**) how legislated decarbonization targets can function as a North Star for the transformation of energy systems toward clean electricity and thereby de-risk clean electricity investments. Economy-wide targets can drive electrification and demand for clean electricity, while sector-specific targets drive change in the inertia-prone institutions and power markets, including through utility planning and regulatory oversight (Rémont 2025). Uncertainty about the durability and implementation of climate targets reduces the incentives for the system planners, utilities, and regulators to change their decision-making.

A concrete example of how top-down climate targets can lower risks for clean electricity investors is through criteria for projects' impact assessments. These assessments determine whether projects are in the public interest. Without binding emissions targets, project assessments have very limited or no mandate to consider a project's climate impacts in their public interest determination. In contrast, accounting for the adverse climate impacts of a gas-fired power plant, for example, can increase the project's relative risk of rejection as compared to a wind power project.[3]

Policy instruments such as carbon levies, carbon markets, feed-in-tariffs, technology standards, and tax incentives support the build-out of clean electricity by addressing policy and market failures that slow investment. For instance, carbon pricing instruments internalize the cost of climate change and make clean electricity investments more competitive compared to conventional alternatives. In centrally-planned electricity systems, this means that predictable carbon pricing either creates an incentive or requirement for a regulated utility to call for non-emitting power, because that is the least-cost option once carbon pricing is factored in. In market-led systems, clear and predictable carbon pricing creates a market signal to independent power producers in support of non-emitting power generation.

Uncertainty over future policy changes can slow investment in clean electricity, but not all policy change is inherently bad. As the world evolves, governments should adjust climate policies to new circumstances or external shocks. For example, policy incentives for wind, solar, and battery investments should adjust to the falling costs of these technologies to avoid inefficient over-subsidization. Nevertheless, frequent, substantive policy changes that significantly alter the risk-return expectations for clean electricity projects can harm investor confidence in the jurisdiction's policy certainty and compromise credibility of future commitments.

9.2 Performance across jurisdictions

This metric identifies a jurisdiction's degree of climate policy certainty for clean electricity investors. We base the assessment on two indicators:

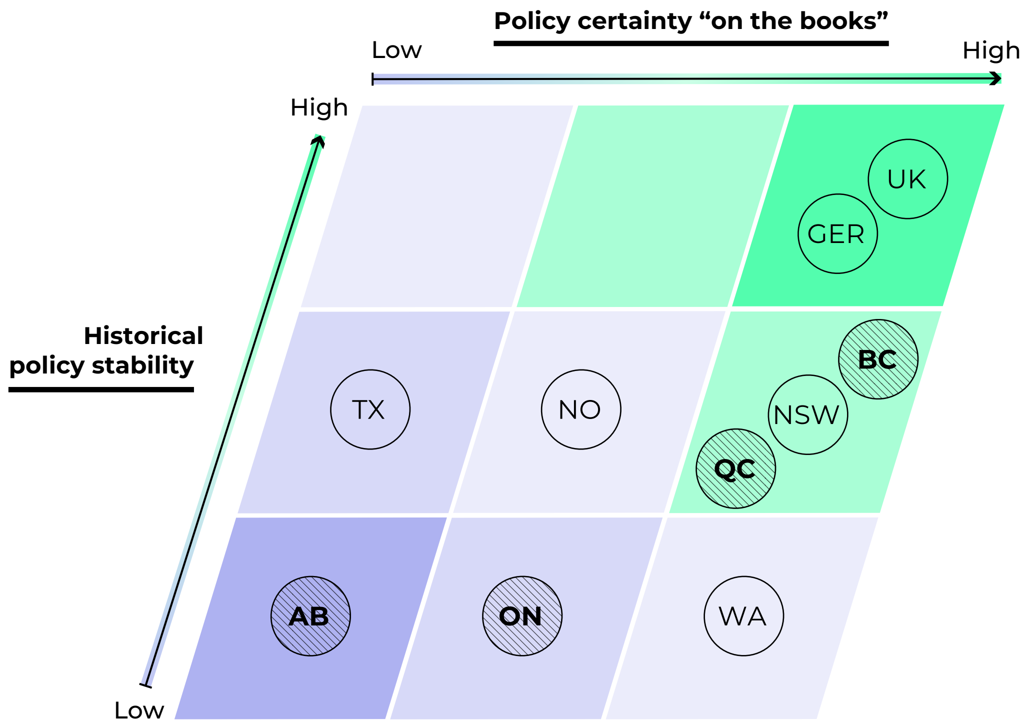
1. A jurisdiction's policy certainty "on the books" based on the existence of legislated, long-term decarbonization targets (2040 or 2050) and implemented policy instruments for achieving these targets; and
2. The extent to which the jurisdiction's climate policy has been stable over the past 10 years.

Climate policy certainty across the considered jurisdictions varies (see **Figure 14** and **Table 6**). Half of the jurisdictions (Germany, U.K., B.C., Quebec, and New South Wales) provide relatively high levels of certainty compared to Alberta, Ontario, and Texas with relatively low certainty. Norway and Washington sit in the middle of the field.

3 . For instance, the Ontario Energy Board rejected Enbridge's proposal to build the St. Laurent gas pipeline in Ottawa in 2023, explicitly citing net zero emissions targets as a key factor in its decision-making (Beer 2023).

Fig 14 • Targets and incentives can signal certainty but historical policy instability can reduce their credibility

Climate policy certainty varies significantly across Canadian jurisdictions



For sources and methodology, see ***Technical Report****.*

A few observations about the differences and similarities between jurisdictions with high/low levels of climate policy certainty stand out.

Jurisdictions with relatively high certainty align their targets and policy instruments with those of higher-level governments. Germany, the U.K., and Norway link their targets to EU targets (only partially in the case of Norway) and co-ordinate the design of their policy instruments with the European Emissions Trading System. B.C. and Quebec developed their own targets and industrial carbon pricing schemes, aligned with the federal Clean Electricity Regulations (CER) and output-based pricing system OBPS) in their current forms. These regulations might change as a result of the new federal electricity strategy and the MOU implementation agreement between the federal and Alberta governments (see below).

Jurisdictions with relatively lower levels of certainty do not benefit from co-ordinated multi-level climate policy. For both Texas and Washington, the reversals of major clean energy policies by the federal government in 2025 (including key parts of the Inflation Reduction Act) have led to policy instability at the state level despite their own targets and policies remaining stable. In Canada, both Alberta and Ontario have in recently shown a lack of co-ordination with federal policy. For example, both governments opposed the Clean Electricity Regulations and challenged the regulations' constitutionality in court (Government of Ontario 2025a).

The May 2026 MOU implementation agreement between Alberta and the federal governments indicates greater collaboration between these governments going forward—and creates an opportunity for greater stability in Canada's industrial carbon markets, though at a lower level of stringency (i.e. headline carbon prices) than previously indicated. The implementation agreement fixes headline and floor prices for the federal backstop through 2040 and also introduces financial mechanisms such as contracts for difference to build investors' confidence in these prices. While this agreement initially adds to policy instability in Alberta's carbon markets, it can increase the predictability of Alberta's industrial pricing system "on the books". It is not yet clear how B.C., Ontario, and Quebec will adjust their targets and policies "on the books" in response to these changes in the federal backstop that the implementation agreement has introduced. In particular, the linkage of the Quebec carbon market to the California system (i.e., cross-border policy co-ordination) may prove more policy stabilizing in the long run than alignment with the lowered federal backstop.

A similarity across all jurisdictions is the reliance on carbon pricing as the primary instrument for mobilizing investment in clean electricity technologies and industrial electrification (a key driver of demand for clean electricity). All jurisdictions, except Texas, have implemented or participate in an emissions pricing scheme, some more recently (e.g., New South Wales and Washington) than others (e.g., Norway and Alberta). This finding is reflective of a global trend toward pricing mechanisms (World Bank 2025).

Our analysis found that Texas is an outlier when it comes to the relationship between climate policy uncertainty and clean electricity investment. Today, Texas attracts significant investment in wind, solar, and battery projects despite low levels of climate policy certainty (Wagner, Arango 2025). Investment has been driven by the state's excellent resources, economies of scale (achieved largely due to past clean electricity policy), deregulated markets, and streamlined permitting, despite having no targets or policy instruments on the books in the past decade. A renewable portfolio standard was in force from 1999 to 2015 and helped mobilize significant investment in renewables and achieve economies of scale. Since then Texas' climate policy has been stable in its absence; investors knew what to expect. However, the U.S. government's rollback in 2025 has recently created some policy flux, but without affecting the state's strong fundamentals.

All jurisdictions, even those scoring high on the policy certainty metric, are affected by or responding to the general increase in global economic uncertainty and turmoil in global climate politics, much of which has been driven by policy changes coming from the U.S. Trump administration. Governments of all jurisdictions in our sample prioritize economic growth, jobs, competitiveness, and security in their political agendas—and many of them have either implemented (Canada, B.C., Quebec) or publicly considered (Germany, New South Wales) rollbacks of climate policies. But while some governments retract, the clean energy transition is advancing and global clean energy markets are booming, attracting over $US2 trillion in 2025 (Beck 2025; IEA 2025).

Table 6 • Jurisdictions' performance on climate policy certainty

JURISDICTION	COMMENT	SCORE (1-5)
Market-led systems		
ALBERTA	With the CER suspended, no legislated long-term target for clean electricity exists; TIER is only source of policy certainty, but has been undermined with recent changes	1
TEXAS	Strong project economics make up for lack of targets and instruments; but drastic rollback of federal policy creates uncertainty	2
Co-ordinated market systems		
U.K.	High certainty "on the books" and track record of policy stability	5
GERMANY	High certainty "on the books" and track record of policy stability	5
ONTARIO	Lack of legislated economy-wide target reduces certainty "on the books"; CER provides only long-term electricity target; history of policy instability	2
NSW	High policy certainty "on the books" but key legislation still young	4
Hydro-led systems		
WASHINGTON	Legislated targets and implemented policies exist; federal policy instability creates uncertainty	3
BRITISH COLUMBIA	High policy certainty "on the books" but recent instrument rollbacks caused some instability	4
QUEBEC	High policy certainty "on the books" but recent instrument rollbacks caused some instability	4
NORWAY	Some past policy instability due to public opposition to on-shore wind; missing legislated clean electricity target reduces policy certainty "on the books"	3

9.3 Findings

Implications for policy emerge from this comparison of policy certainty:

- **In this time of high economic uncertainty and global political turmoil, climate policy certainty is the key to attracting clean electricity investors and participating in the booming clean energy market.** Stable, predictable commitments and credible actions are essential—without them, capital will go to markets that offer lower risks. As the costs of clean electricity technologies drop, policy predictability remains crucial for investment. Offering investors policy stability as the U.S. is turning away from its climate commitments and clean energy investments creates a competitive advantage. In this uncertain world, the currency is credibility and the reward is a slice of the trillions of dollars in investments flowing into clean energy markets (Victor 2026).
- **Collaboration on climate policy across orders of government can boost certainty when targets are aligned and instruments are co-ordinated (Gibson et al. 2025).** In contrast, a lack of co-ordination and collaboration between orders of government can lead to more instability and uncertainty. For example, Norway and the U.K. deliberately harmonized their carbon pricing systems with the European trading scheme, which can contribute to investor confidence. In contrast, policy stability in Texas and Washington has been undermined by the rapid federal policy changes in the U.S. in 2025. Developed collaboratively, the implementation agreement between the federal government and Alberta provides an opportunity for building greater policy certainty going forward—in Alberta and possibly other Canadian provinces. However, the increase in policy certainty comes at the cost of weaker incentives to invest in electrification and low-carbon electricity.
- **Carbon pricing systems are key investment drivers across Canada and peer jurisdictions, and the stability of systems over time contributes to investor confidence.** All jurisdictions except Texas have implemented emissions pricing, reflecting a global trend (World Bank 2025). The effectiveness of pricing systems in driving investment depends on their predictability and stability over time. For example, Alberta's TIER system contributed to growing the province's renewable generation capacity by 221 per cent between 2010 and 2023, but changes to the policy in 2025 increased uncertainty for investors (Brown et al 2025; CER 2025).

10 Benchmarking summary

Jurisdictions perform differently across the six conditions, and the significance of each condition varies with system context. Therefore, it is important to not look at one condition in isolation, but to consider a jurisdiction's result profile across all relevant conditions (Figure 15).

In particular, access to legacy hydro infrastructure materially changes which conditions matter most and how results should be interpreted. These differences are consequential for drawing policy conclusions in a Canadian context.

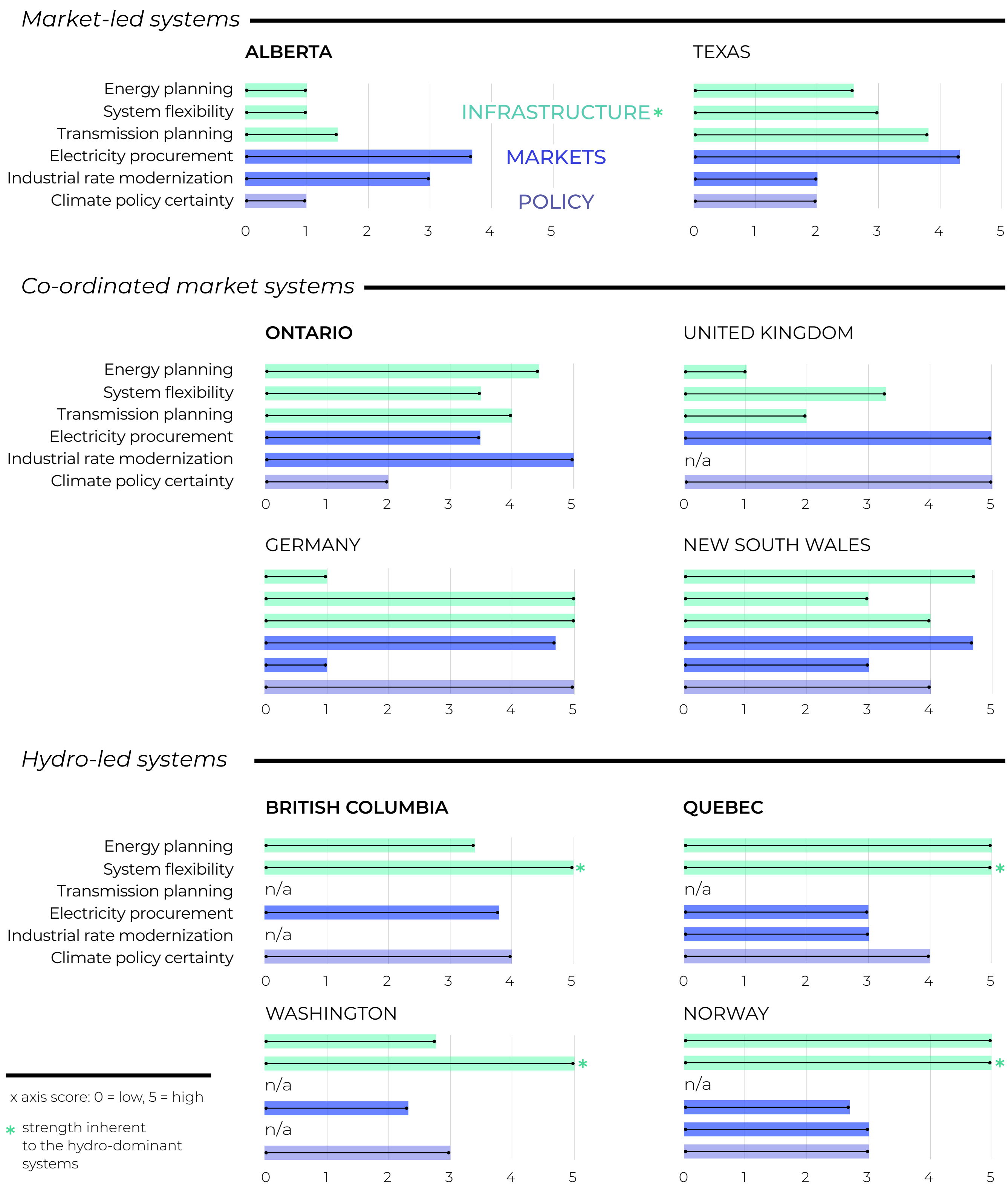
Subsequent publications in this series will unpack the conditions that matter most to specific Canadian provinces and examine provincial policy implications.

Hydro-led jurisdictions (e.g., B.C., Quebec) start from a position of advantage with clean, flexible power and major transmission lines that connect such large, frequently remote generation to urban centres. These flexible systems already have built-in capacity to balance variable wind and solar across hours, days, and even seasons. Flexibility and clean electricity policy signals matter somewhat less than they do in jurisdictions without these competitive advantages in starting conditions.

But these jurisdictions vary significantly when it comes to opening up markets to competition and private investment in generation (Sudhakar 2025). Only in the past decade have wind, solar, and storage costs fallen sufficiently that such technologies out-compete hydro dam investment on a lifetime-cost basis. They are typically earlier in their journey of expanding wind and solar investment than the others in the group. Their advantage of low-cost hydro power also creates added challenges with new generation adding rate pressure and creating a higher incentive for conservative energy planning. Given this starting position, energy planning, procurement, and rates matter in hydro-led jurisdictions.

By contrast, jurisdictions with fewer hydro resources (e.g., Alberta, Ontario) generally have to build system flexibility rather than inherit it. Wind and solar deployment is typically further advanced for these jurisdictions in our group, so the transmission and grid constraints associated with integrating these newer generation sources are more visible. These issues, if not resolved, act as a barrier to further investment. Rates still matter, as they do everywhere, especially given that electricity prices are typically higher than the hydro-led peers (**Figure 1**). Finally, with more work to do compared to their hydro-led peers, we see greater diversity in policy commitments to clean electricity in low-hydro jurisdictions.

Fig 15 • Jurisdictions need to focus on improving different conditions to be prepared for the future grid



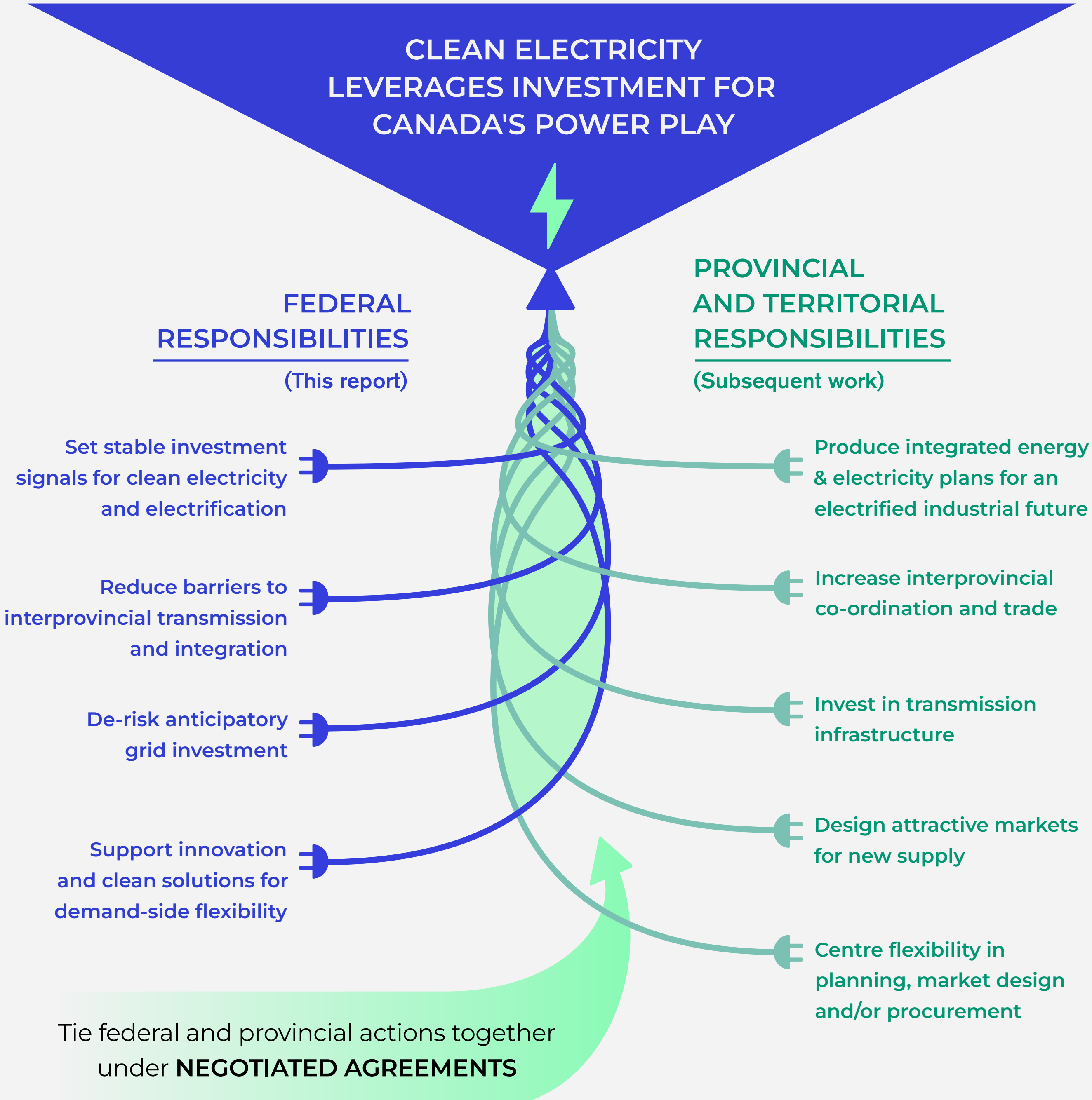
11 Recommendations

Our comparison of electricity systems across sub-national jurisdictions has illustrated risks and opportunities for electricity policy.

Individual provinces have clear opportunities to further modernize their electricity markets and policies to enhance and grow comparative advantage in competing for investment. We will return to specific policy advice for individual provinces in future publications later this year.

At the same time, federalism matters in the context of Canada's electricity systems. The economic and broader benefits of modernizing regional electricity systems extend beyond provincial borders. The federal government can set supportive conditions for success as provinces seek to build more competitive electricity systems that leverage investment in the sector into broader industrial investment and economic growth. These recommendations complement provincial action.

Fig 16 • Federal policy can help provinces build electricity systems for economic growth



Recommendation 1

The federal government should support new co-operative processes for interprovincial energy planning focused on information-sharing and goal-setting in the short term and new intergovernmental institutions in the longer term.

While electricity is primarily—and rightfully—provincial responsibility, the expansion of Canada's electricity systems is also increasingly a national economic issue with national implications, and one that calls for co-operation. Economic growth and electricity are inseparable: without sufficient infrastructure and competitive rates, Canada will forgo real opportunities now and in the future. Better interprovincial co-ordination across Canada's electricity systems could unlock more efficient use of infrastructure and support competitive rates, yet such efforts are slowed by fragmented incentives and split decision-making across jurisdictions.

Current incentives for provinces encourage uncoordinated, regional strategies. Each province captures only part of the benefit from cross-border co-operation while potentially bearing much of the political, financial, and planning cost. Existing Canadian interprovincial infrastructure is not fully utilized, in part as a result of such frictions (Harland 2025b). Federal co-ordination efforts have assessed and found net benefits from increased interprovincial transmission in the past (RECSI 2018), but stopped short of addressing practicalities including the distribution of such costs and benefits.

Regional co-ordination must be provincially anchored if progress is to occur on the ground, because provinces hold the core operational, planning, and regulatory levers in electricity (and provinces are accountable to provincial ratepayers). But provincial leadership can be supported by a practical federal-provincial framework that creates a shared evidence base, and supports fair distribution of costs and benefits. Indigenous Nations also transcend provincial borders and have a unique role to play in regional electricity planning that requires recognition (von der Porten et al. 2024). Any credible approach to regional co-ordination must also include Indigenous leadership (Leslie, White 2026).

Any shared framework does not mean the federal government stepping into provincial jurisdiction, which acts as a barrier to greater co-ordination. The federal role should be targeted in scope and supportive in nature and focused on quickly filling practical gaps linked to the ideas described above. Given the urgency, it will likely need to rely on existing institutions in the first instance. For example:

- The federal government can create a process for translating federal economic and national security strategies—including for artificial intelligence, critical minerals, defence, and major projects—into high-level electricity implications (ISED n.d.). Other jurisdictions (such as the U.K.) proactively connect electricity infrastructure requirements to their industrial strategies (Department of Business and Trade, 2025). Canada already has an Energy Regulator with information-sharing within its mandate and could formalize the flow of information at least in the near term to provide consistent information to provincial system planners.

- The federal government can support the development of guidelines for assessing benefits and allocating costs for interprovincial electricity infrastructure (both between provinces, and with the federal government in line with the national test described in Recommendation 2). Such work can draw on beneficiary-pays approaches used in jurisdictions such as Australia and the European Union (TasNetworks 2019, ACER n.d.). This would not replace provincial bilateral negotiation. It would give provinces a clearer framework to fall back on, reduce uncertainty, and make co-operation easier to advance. This work could be held by the Canada Energy Regulator, Canada's association of energy regulators (CAMPUT) or a working group of the Energy and Mines Ministers' Conference.

Over time, Canada will likely require a stronger and more durable framework for intergovernmental electricity planning and co-ordination. This may require a new co-ordinating body with clear accountability for co-ordinating provincial plans, maintaining a shared evidence base, and supporting regional planning, similar to the European and Australian models (McPherson 2025). Such a path will likely need to be built from the bottom up. A pragmatic option begins with regional co-operation, using successful bilateral or regional initiatives to test shared planning methods, common reliability and access rules, and dispute-resolution processes (Morton 2026).

Recommendation 2

The federal government should selectively deploy the national balance sheet to support anticipatory grid build-out where there is a case for national benefit.

Both the energy and transmission planning work in this report revealed a recurring tension: provinces face real trade-offs that encourage caution in grid build-out even as industrial growth and electrification demand the opposite. Transmission and grid-enabling investments involve long lead times, large balance sheets, and shared benefits across regions. Benefits also accrue over decades — making it unfair to place the full weight of their costs on today's provincial ratepayers alone. Where a project delivers net benefits for Canada as a whole, there is a reasonable case for federal risk-sharing and support from the federal balance sheet.

On this basis, we recommend the federal government should first develop and deploy a national test to determine when federal support is warranted for transmission infrastructure (both within and between provinces) (Harland, Sudhakar 2026). This test should standardize cost-sharing principles between the federal government and provinces, and distinguish between lower-risk projects that mainly need financing and projects that justify deeper fiscal support. Canada is not unique in its circumstances. Across the U.S. and Australia—where electricity is likewise led by states—lagging transmission investment has prompted national governments to develop financing tools to share risk and enable earlier build-out.

Next, the federal government should scale up its fiscal support for electricity infrastructure commensurate with the benefits identified. This includes, but is not limited to, scaling existing successful tools such as the Canada Investment Bank's financing of clean electricity (as one example, Australia's equivalent institution, the Clean Energy Finance Corporation, committed twice Canada's budget through its Rewiring the Nation Fund for a system that delivers a third of the power; see AEMC 2023). Also, some clean electricity projects may fall within the mandates of public investment vehicles such as the Canada Growth Fund or the Canada Strong Fund.

Finally, fiscal support should come with expectations to ensure the efficient and equitable use of the increased federal funding for transmission implicit with this recommendation.

- As the federal government scales up support for transmission infrastructure it can also expect provinces to ensure efficient use of these funds. This can include (i) the evaluation of least-cost alternatives to building new transmission lines (i.e., storage, demand-side flexibility, and grid-enhancing technologies), and (ii) efforts to maximize use of existing assets in the near term through greater transparency regarding available space to connect to the existing grid. Several jurisdictions are making spatial information about where there is spare capacity in the grid publicly available for potential power producers and users. Ontario recently published a system capacity map following a similar map that the U.K.'s national grid maintains (OEB n.d.; National Grid n.d.)[4] (see **Section 6.3**).
- The federal government should also provide capacity-building resources that help Indigenous communities determine how they want to structure themselves and participate economically in grid development, including but not limited to equity ownership (see **Section 2.3**) (von der Porten et al. 2026).

This recommendation sets up provinces to proactively invest in the grid and gives investors greater confidence that structural grid improvements will materialize, strengthening conditions in the medium term. Improved transparency for generators and industry will enable faster connections in the interim.

4 . Alberta, Texas, and Quebec also make spatial information available albeit in different ways.

Recommendation 3

To build long-term policy certainty for clean electricity investors, the federal government should move forward with flexible Clean Electricity Regulations that anchor expectations for new supply to be predominantly clean.

At a moment of global economic uncertainty and political volatility, credibility and stability are central to attracting clean electricity investment. Greater policy certainty lowers financial risk for investors, helping Canadian markets attract long-duration capital, secure more competitive project bids, and contain long-run electricity costs. This matters even more now that Canada's new electricity strategy aims to double grid capacity by 2050 and explicitly links affordability and competitiveness to large-scale electricity expansion.

The Clean Electricity Regulations can serve to anchor expectations that new supply will be predominantly clean, including clean power, storage, and other flexible resources. The regulations should also preserve a bounded role for existing gas-fired generation to meet peak demand and reliability needs where necessary. These features need to be maintained moving forward in order to build long-term policy certainty for clean electricity investors. The federal government should resolve amendments to the policy swiftly, reducing ambiguity and uncertainty about treatment for gas-powered generation created by the Alberta-Canada implementation agreement.

Recent bilateral negotiations between Alberta and the federal government led to a Memorandum of Understanding (MOU) implementation agreement that offers potential for greater certainty for Canada's industrial carbon markets at the cost of weaker incentives. First, the agreement established a trajectory of industrial carbon prices through to 2040 and introduced financial instruments for ensuring these prices are bankable for investors. Second, the collaborative development of the agreement holds a promise of greater policy durability given it was developed across orders of government. But the MOU also weakened the overall price signal and introduced policy instability—both in the short term in Alberta, as these changes come into effect, and nationally, if other provinces also change their Output-Based Pricing Systems as a result.

As a result, the Clean Electricity Regulations become an even more important anchor establishing clear signals that Canada remains attractive for investment in clean power—and an immediate opportunity for the federal government to enhance policy certainty for investors. It is not the only signal, but it is an increasingly important one that offers long-term predictability over the full thirty-plus year lifetime of a project. It also offers a coherent signal across the country.

The federal government should provide clarity on the role of gas-fired generation in the regulations. The new federal electricity strategy confirms the importance of clean power expansion, but also opens the door to regulatory changes in the Clean Electricity Regulations and adds ambiguity to the role of gas-fired generation beyond peaking support.

A clear regulation with explicit clean electricity targets sends strong signals to utilities, system operators, project developers, and supply chains and gives them time to plan. It helps investors decide where to build, gives provinces a predictable framework for procurement and transmission planning, and reduces the risk of stranded assets that could raise costs for ratepayers later. A robust Clean Electricity Regulation also sends clear signals to regulators, anchoring expectations around long-term net zero goals.

While the regulation should allow gas-fired generation as a complement to clean, flexible sources to support peak demand, it should avoid crowding out the investment in faster-growing and increasingly cost-competitive alternatives—batteries, interties, and demand response—that a modernized grid requires.

Recommendation 4

The federal government should make system flexibility a strategic priority across programs and use federal investment tools to help scale industrial flexibility behind the meter.

As we learned in **Section 5**, flexibility is one of the most important levers for enhancing system efficiency and, therefore, delivering competitive electricity rates in the medium- and long-term. Flexibility is unique in that it can help deliver competitive rates and support reliability while also increasing near-term availability of supply (Norris et al. 2025; Çam et al. 2026).

Any federal electricity strategy that seeks to support long-term rate competitiveness should therefore make system flexibility a strategic priority. This will enable further integration of low-cost renewables and investment while also reducing the need to build out excessively as electricity demand rises. Part of this flexibility is covered by earlier recommendations that support interconnections between provinces and particularly to neighbours with extensive hydro power. But federal policies should also continue to support other forms of clean flexibility, such as batteries and alternative forms of longer-term energy storage that enable more active matching of demand and supply. Right now, storage and grid modernization are eligible in the Smart Renewables and Electrification Pathways Program, the federal Investment Tax Credits, and Canada Infrastructure

Bank financing, but they are usually treated as part of the broader clean electricity build-out. A stronger federal position would say explicitly that projects that increase system flexibility should be prioritized.

In **Section 8**, we showed that industrial customers in Canada (particularly in Ontario and Quebec) are willing to contribute to system flexibility by reducing their electricity use at peak times in return for discounts on their bills. Performance is already relatively strong by international standards, but there remains a clear opportunity to scale these efforts further and position Canada as a leader.

The federal government should more deliberately support programs that incentivize industrial users to contribute to overall system flexibility in cost-effective ways. Federal tax policy is an important lever because industry's participation in such programs often depends on upfront investment in industrial equipment and control systems. Tools such as Clean Technology Investment Tax Credits and capital cost allowances can incentivize large electricity users to invest in flexibility equipment such as storage, controls, and process upgrades that allow them to reduce or shift demand during peak periods.

Federal policy should complement efforts by provinces to support industrial flexibility through rates and other incentives for projects willing to flex their demand during the highest peak times of the year. The importance and potential of industrial flexibility is only growing over time as industrial electricity demand grows in scale and new technologies emerge. Delivered well, the combination of policies can improve rate competitiveness for industrial investors, give users greater choice and agency in how they manage their energy use, and reduce pressure on the grid and system costs over time.

Glossary

Behind-the-meter

Electricity generation and storage systems located on a consumer's premise that supply power directly to that customer, rather than relying on the transmission and distribution grid. These systems can reduce grid consumption, and in some cases generate revenue by exporting excess electricity.

Capacity

The maximum amount of electricity that a generator can produce at a single point in time, measured in watts, kilowatts or megawatts.

Clean electricity

Electricity generated from low- or non-emitting sources such as solar, wind, hydro, and nuclear.

Co-ordinated markets

Electricity systems where government, system operators, or utilities help centrally plan and procure new supply. Wholesale competition may still exist, but long-term investment is meaningfully shaped by such central planning and procurement.

Demand (or load)

The consumption of electricity at any given time.

Demand flexibility

The ability of electricity users to reduce, shift, or increase their electricity use in response to grid needs, prices, or other signals.

Deregulated electricity markets/Market-led systems

Electricity markets where generation is supplied through competition among generators, with prices often set in wholesale markets. Transmission and distribution networks typically remain regulated.

Electricity planning

The process of identifying the generation, transmission and other infrastructure required to meet a jurisdiction's projected electricity demand reliably and cost-effectively.

Electricity rates

The total amount consumers pay for consuming a unit of electricity (typically measured in cents per kilowatt-hour), including energy charges, delivery charges (transmission and distribution), and other policy-based charges (environmental fees and taxes).

Electrification

Replacing processes that traditionally use other forms of energy with those that use electricity.

Flexibility

An electricity system's ability to manage changes in demand and supply by adjusting generation, consumption, storage or imports to deliver reliable service that uses system resources efficiently.

Generation

The amount of electricity produced over a certain time period, measured in watt-hours (e.g., kWh, MWh).

Peak demand

The highest rate of electricity use within a given period, such as a day, month, season, or year.

Procurement

The process through which utilities, governments, system operators, or large customers acquire electricity supply, capacity, storage, demand response, or other grid services through competitive markets, contracts, or regulated mechanisms.

Rate incentive

A pricing mechanism, bill credit, discount, or payment that encourages electricity consumers to reduce, shift, or otherwise adjust their electricity use.

Ratepayer

A person or entity that pays a utility for an energy service. Ratepayers are typically categorized into residential, commercial, and industrial classes, each with unique billing structures and rate designs.

Regulated electricity markets

Electricity systems where monopoly utilities are responsible for serving customers, and regulators approve the costs recovered through customer rates. These systems may still use competitive procurement for new generation or services, but customer rates and utility returns remain regulated.

Variable generation

Electricity sources, including wind and solar, that fluctuate over time, such as over the course of a day or season.

Appendix A: Expert Engagement

The objective of this report is to understand how infrastructure, market, and policy conditions enable Canadian jurisdictions to grow their electricity systems quickly and at a low cost to accelerate clean economic growth. Research for this report included expert engagement to help identify the metrics to include in the benchmark analysis and assess jurisdictional performance against those metrics.

We began by refining a broad set of potential metrics through a **preliminary online survey** of academic and policy researchers across Canadian jurisdictions (n=10). This survey helped identify the metrics that most strongly influence a jurisdiction's ability to build abundant, reliable, and rate-competitive clean electricity grids, and informed the final set of metrics used in this benchmarking analysis.

We then gathered detailed information to further refine and narrow down these metrics through **semi-structured interviews** with 36 experts. The table below breaks down research participants by background.

EXPERT TYPE	NUMBER OF PARTICIPANTS
Industry association	9
Research institution	7
Environmental non-governmental organization	5
Business association	5
Renewable energy investor	5
Consulting	4
Government	1

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