ENERGY FUTURE FORUM

Project of the Century:

A blueprint for growing Canada's clean electricity supply – and fast

September 2024

PUBLIC POLICY FORUM
FORUM DES POLITIQUES PUBLIQUES
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Land acknowledgement

Pleased to be in Victoria, on the traditional territories of the Lkwungen (Lekwungen) peoples.

We acknowledge and thank the Lkwungen People, also known as the Songhees and Esquimalt First Nations communities – past, present, and future – for their stewardship, care, and leadership on these lands.

About Public Policy Forum

The Public Policy Forum builds bridges among diverse participants in the policymaking process and works with them to examine issues, offer new perspectives and feed fresh ideas into policy discussions.

We believe good policy is critical to making a better Canada — a country that's cohesive, prosperous and secure. We contribute by:

- **Researching** the issues that challenge Canadians today;
- **Convening** to foster frank and honest dialogue leading to policy solutions; and
- **Celebrating** exceptional policy leaders who have contributed to public policy excellence across Canada and the world.

PPF is an independent, non-partisan, non-profit organization and a registered charity.
Our members include a broad base of private, public, non-profit and Indigenous organizations who share insight on policy challenges and developments.

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Our clean electricity challenge

- What do we need?
- Why do we need it?
- How much will it cost?
- How are we going to do it?
- Are we ready?

2-3x new supply

Our planet

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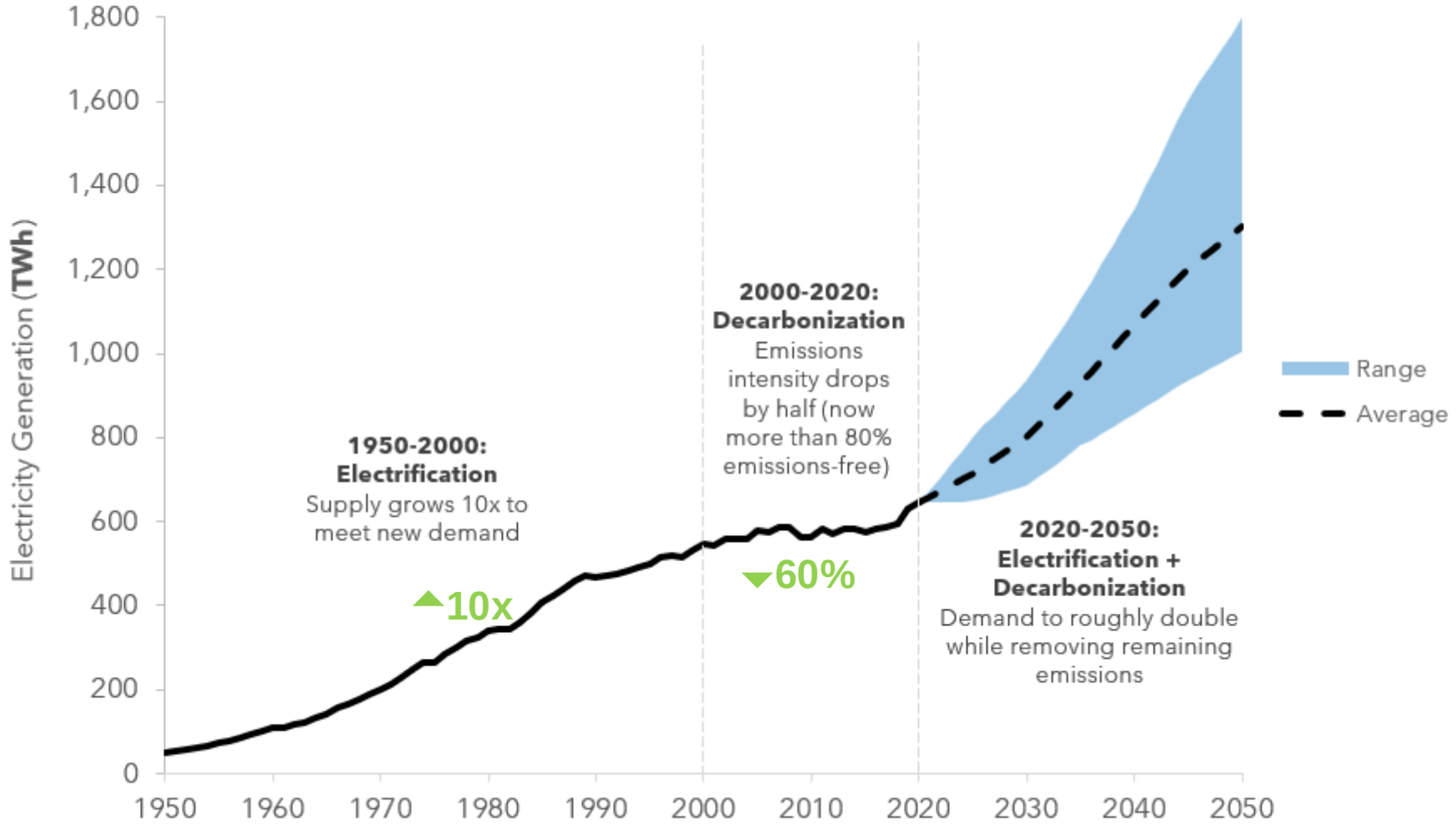
No.

It’s complicated

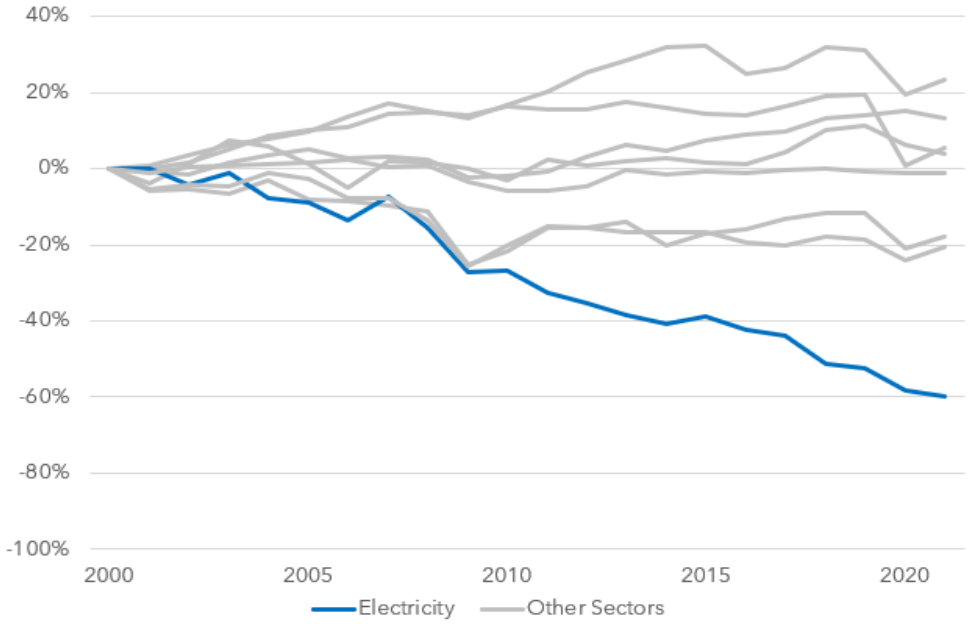
Our Dual Challenge: Decarbonize + Grow

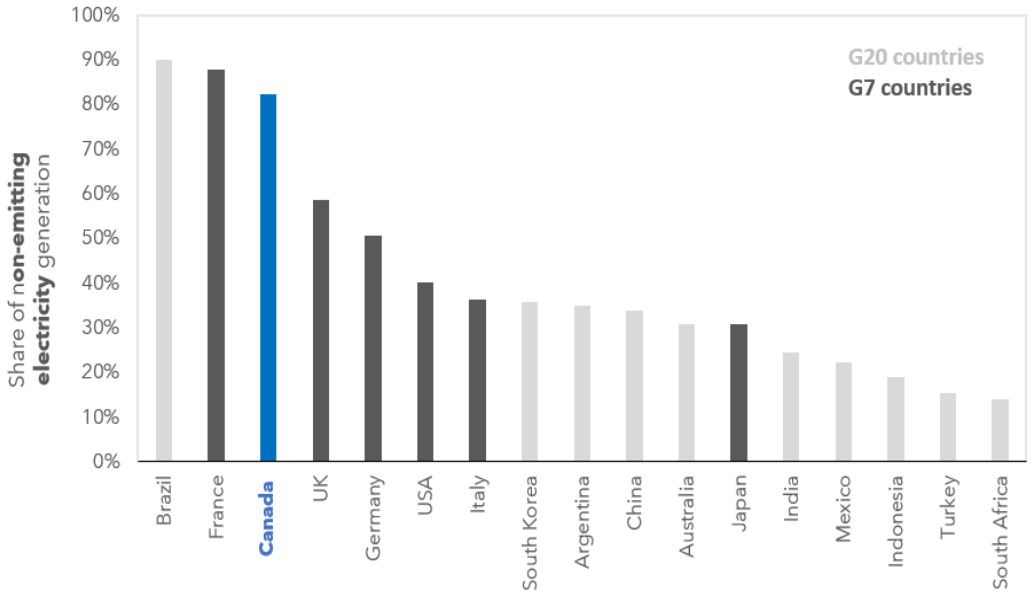


Part 1: Decarbonize

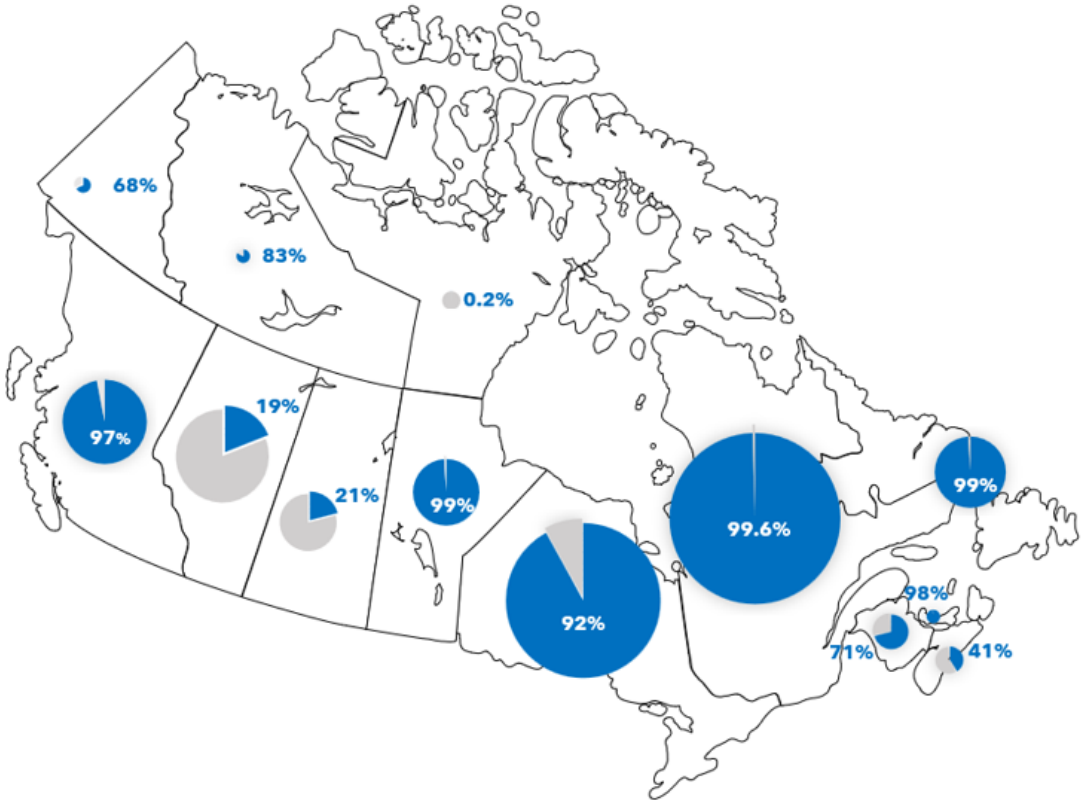
- **Canada now has one of the world's cleanest grids**, with more than 80 percent of its power already emissions-free

- **Challenge ahead: complete the sector's decarbonization** by harnessing abundant, clean energy resources from coast to coast



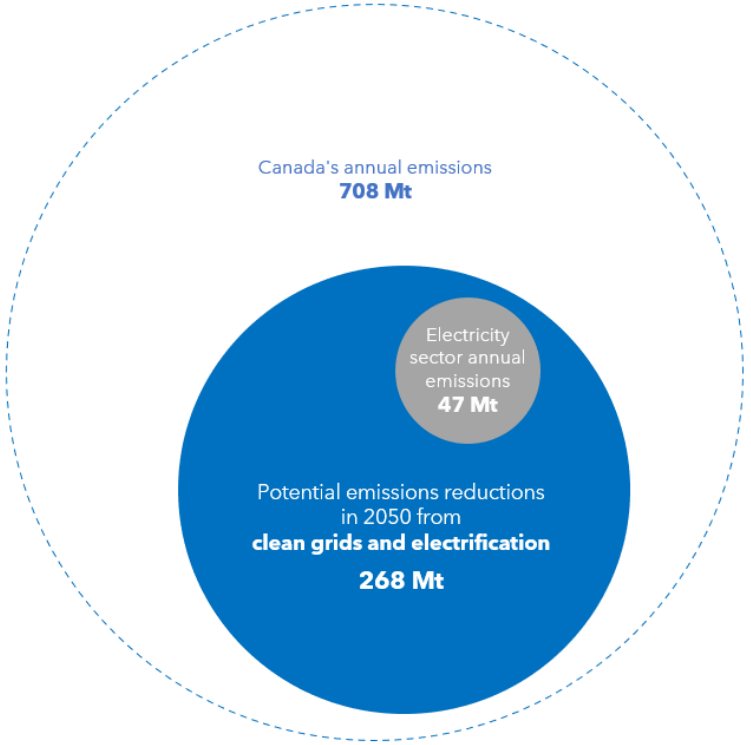


Part 1: Decarbonize



- Canada's starting point masks **significant regional differences**
  - 80% of Canadians live in provinces where emissions-free renewables or nuclear power generate nearly all their power
    - **Largely (90%+) decarbonized** : QC-BC-MB-ON-NL
    - **Mostly (>50%) decarbonized** : NB-PE-NT-YK
    - **Greater (<50%) challenge** : AB-SK-NS-NU
- Regional starting points are largely the result of historic resource availability, not ideology
- Policy-makers must consider varying starting points as Canada moves towards net-zero

Part 2: Grow (>2x by 2050)



Roles of electricity decarbonization and electricity growth in Canada's drive to Net Zero

- Decarbonizing the grid is one part of the equation
- Canada must simultaneously **grow the grid by roughly 2X** so that consumers and industry can access more clean electricity
- A new era of electricity growth means **challenging the systems we've had in place until now** that are designed to serve a nearly steady-state industry

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Path to success

Strategic investment plan

- Generation
- Transmission
- Technology
- Supply chain
- People and skills

Indigenous participation

- Corporate representation
- Decision making – Knowledge, regulatory approvals, monitoring and closure
- Financial - Ownership, equity, lease payments, dividends
- Operating - Skills, jobs and supply chain

Accommodate diversity

- Independent systems
- Different resources, different generation
- Indigenous nations, communities and customers
- Decarbonization incentives
    - Capital costs (investment tax credits)
    - Operating costs (carbon credits)

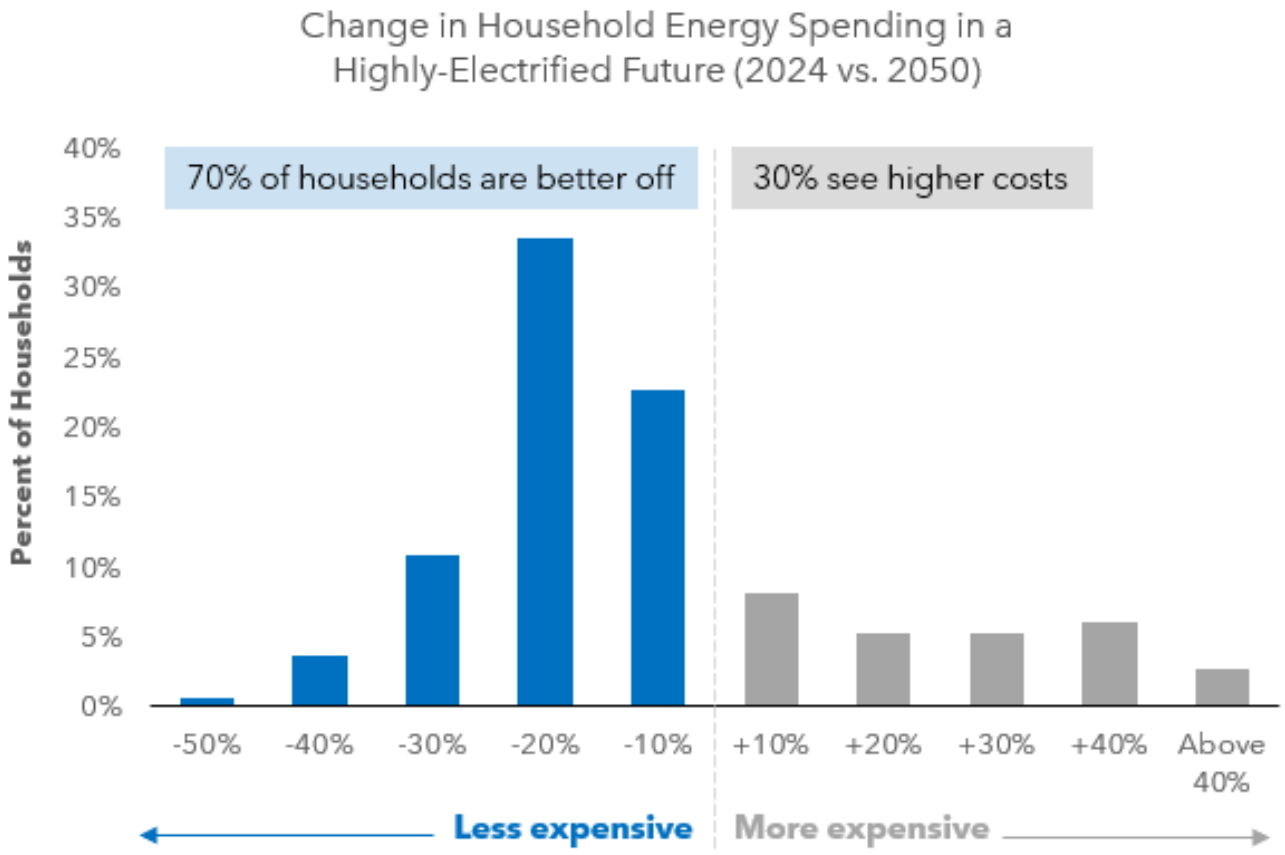
Speed and agility

- Time = GHG emissions
- Regulatory systems
- Finance
- Project construction
- Technology
- Perfect versus very good

Strategic investment plan

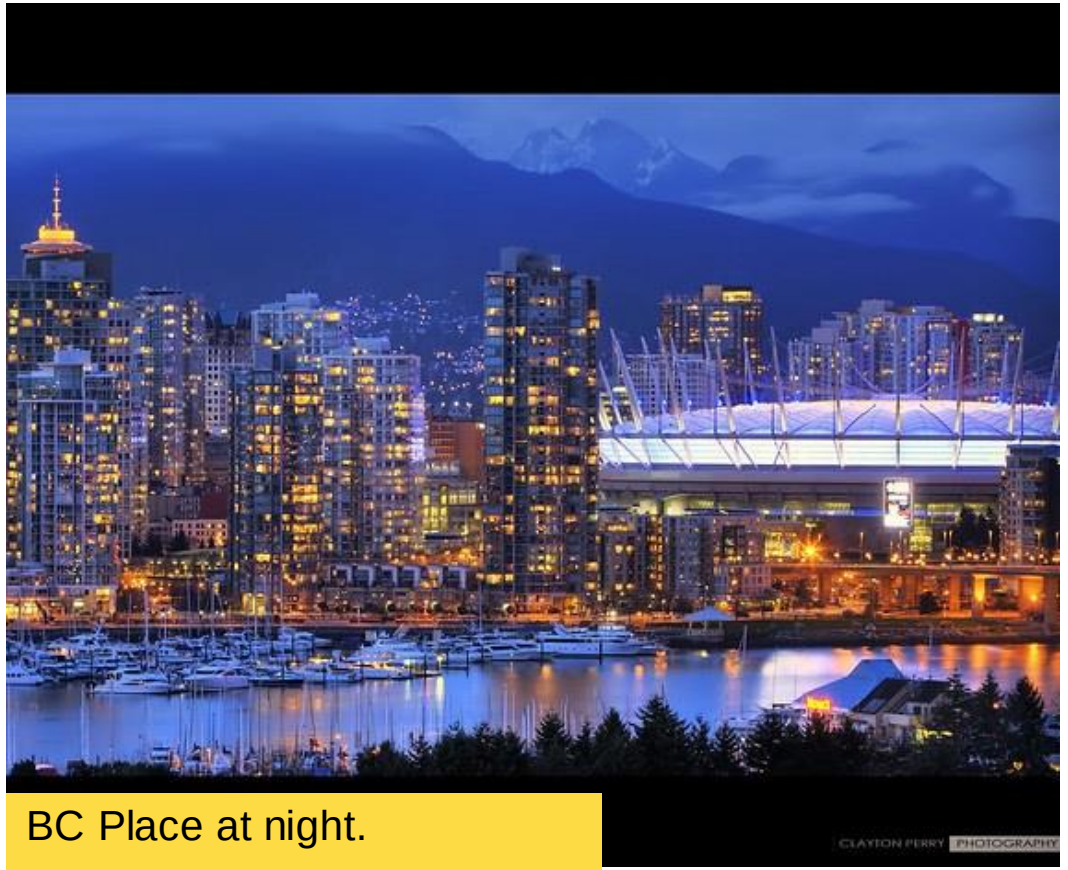
How much and who pays?

1. **Capital investments 2x to $1.4 T** (
2. **Most households see net savings** <u>in total energy-related expenditures</u>
3. Savings are strong in 8 of 10 provinces, but **AB and SK residents are more likel to see net increases.**



Canada is not one power system

- **Reliable electricity access is crucial** for our economy and people
- **Mitigating risks is central to net-zero electricity policies**
- **The challenge of decarbonizing and expanding clean electricity is complex**



BC Place at night.

Tapestry of systems

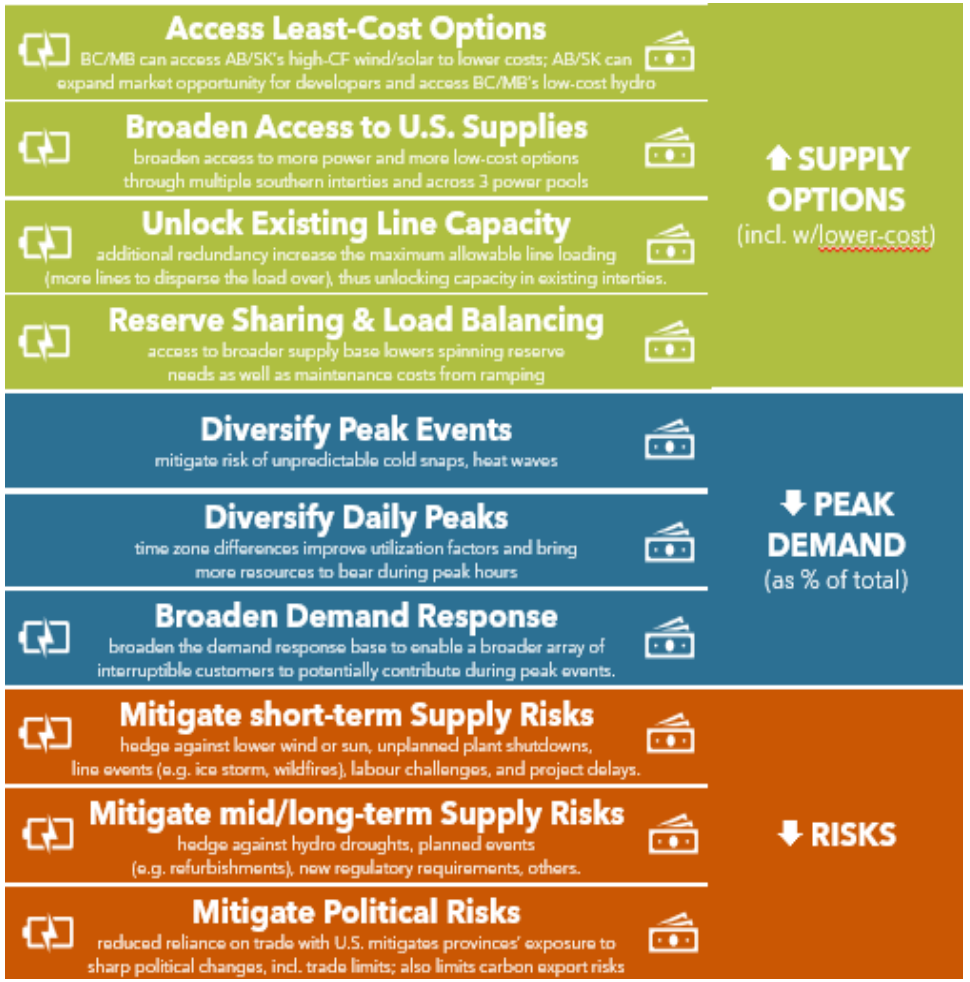
1. Canada's electricity landscape is diverse and **falls largely under provincial and territorial jurisdiction**

2. **Inter-regional transmission can enhance reliability and limit costs**

- Expands access to lowest-cost supplies
- Smooths costly demand peaks
- Mitigates supply risks

3. **Electricity trade within Canada falls short** of its potential

- A systematic framework to enable expansion of inter-regional transmission is critical



Illustrative Value Stack of a hypothetical inter-regional HVDC Line

Four orders of government

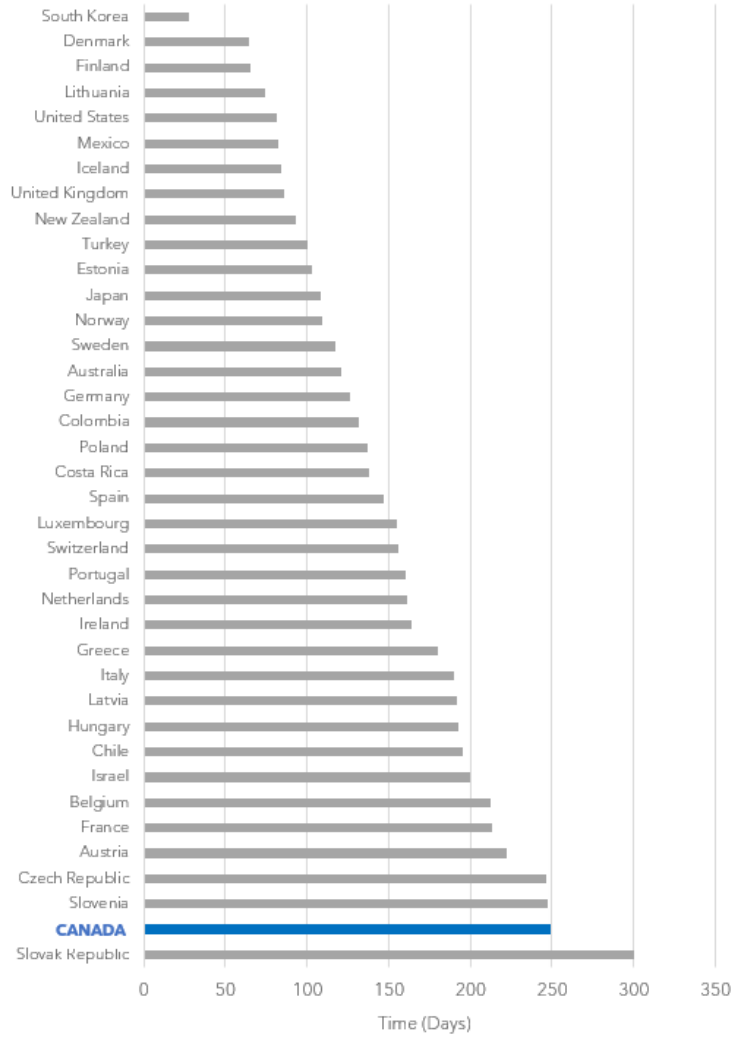
- **History of harm** to Indigenous communities from electricity projects
- **Legislative history complicates change**
- **Recent recognition and responsibility for historic failings**
- **Opportunity to accelerate growth alongside durable benefits to Indigenous communities and nations**

Drummers open a blessing ceremony for Wataynikaneyap Power's Substation W in Sandy Lake on June 21, 2024.

Credit: Nothern Ontario Business

Speed and agility – Hurry up offense

- **Electricity generation capacity must grow at least 3x faster**
- **Addressing climate change requires agility**
- **Rapidly accelerating the pace of capital deployment to increase clean electrons is essential**



Time to obtain a general construction permit, OECD countries

Recommendations

- Recognize the unprecedented challenge
- Local matters: Central policies, mandates and incentives necessary but not sufficient
- Rethink our electricity systems: Efficiency, decentralize, smart
- Reduce risk in decision making and investment
- Use public policy tools and fiscal framework to reduce risk and costs

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