



# A Moment for the Electricity Sector

## Strategic Advisory Committee

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July 16<sup>th</sup>, 2025

# | Agenda

1. Electricity Canada and our 2025 priorities
2. How did we get here
3. The current moment
4. Let's talk about Load Growth
5. How do we keep the sector secure?
6. Q&A

# Utility Members

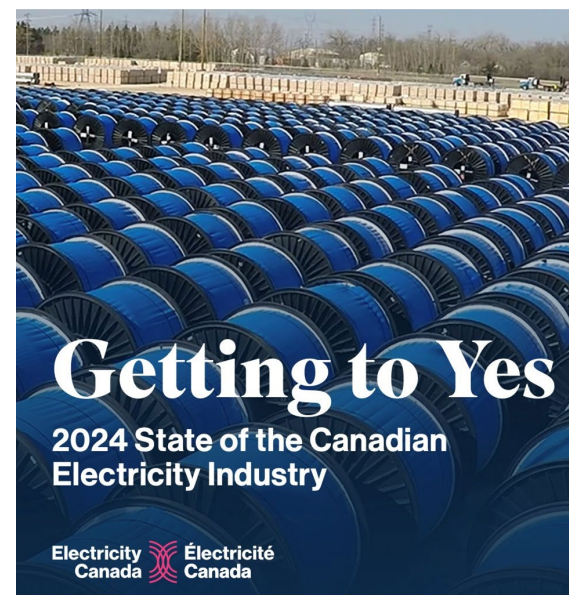
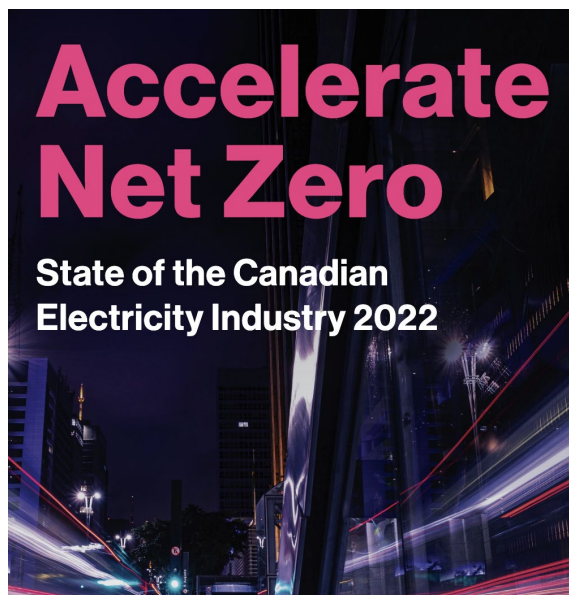


# Electricity Canada in 2025

- National trade association representing the largest electricity providers in Canada
- Recent advocacy areas include:
  - Challenging the government on the ***Clean Electricity Regulations***
  - Delivery of the ***Clean Electricity Investment Tax Credits***
  - Challenging the Competition Bureau's ***Greenwashing Provisions***
  - Participating in an NR Can study on an ***East-West Grid***
  - Closely monitoring the introduction of ***C-5*** and ensuring inclusion of electricity projects
  - Support Grid Modernization to promote Electrification
  - Exempt regulated utilities from the Excessive Interest and Financing Expenses Limitation (EIFEL)



# | Getting to the Moment



# It's Here.



## Senate passes Carney's signature bill to fast-track major projects

EMILY HAWS > POLITICS REPORTER

PUBLISHED YESTERDAY

UPDATED 1 HOUR AGO



Prime Minister Mark Carney is joined by members of his cabinet as he speaks at a news conference in Ottawa on June 20, after Bill C-5 passed in the House.

JUSTIN TANG/THE CANADIAN PRESS



# How we position *electricity* for CDNs in this moment.

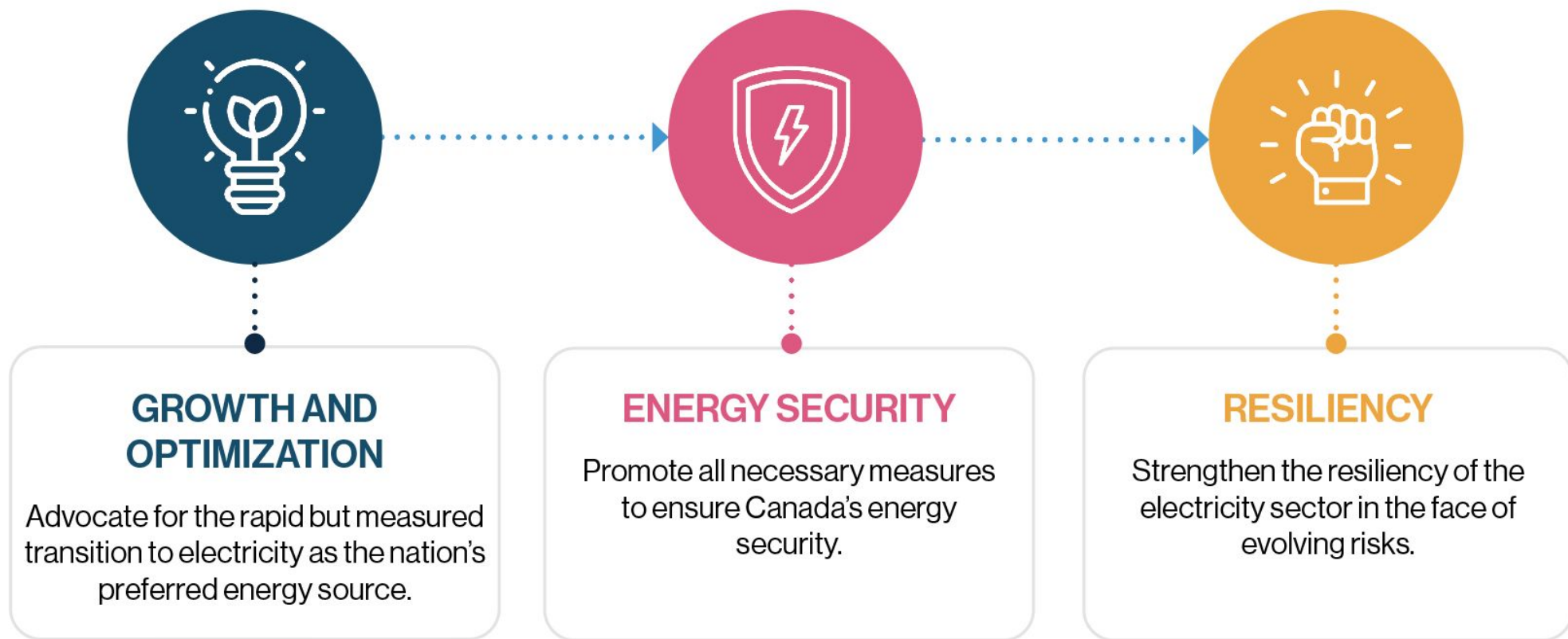
A strong electricity grid will help Canada become more self-reliant.

Electricity represents strength in the past and strength in the future.

Electricity is *made in Canada* using our abundant natural resources.



# Electricity Canada strategic plan

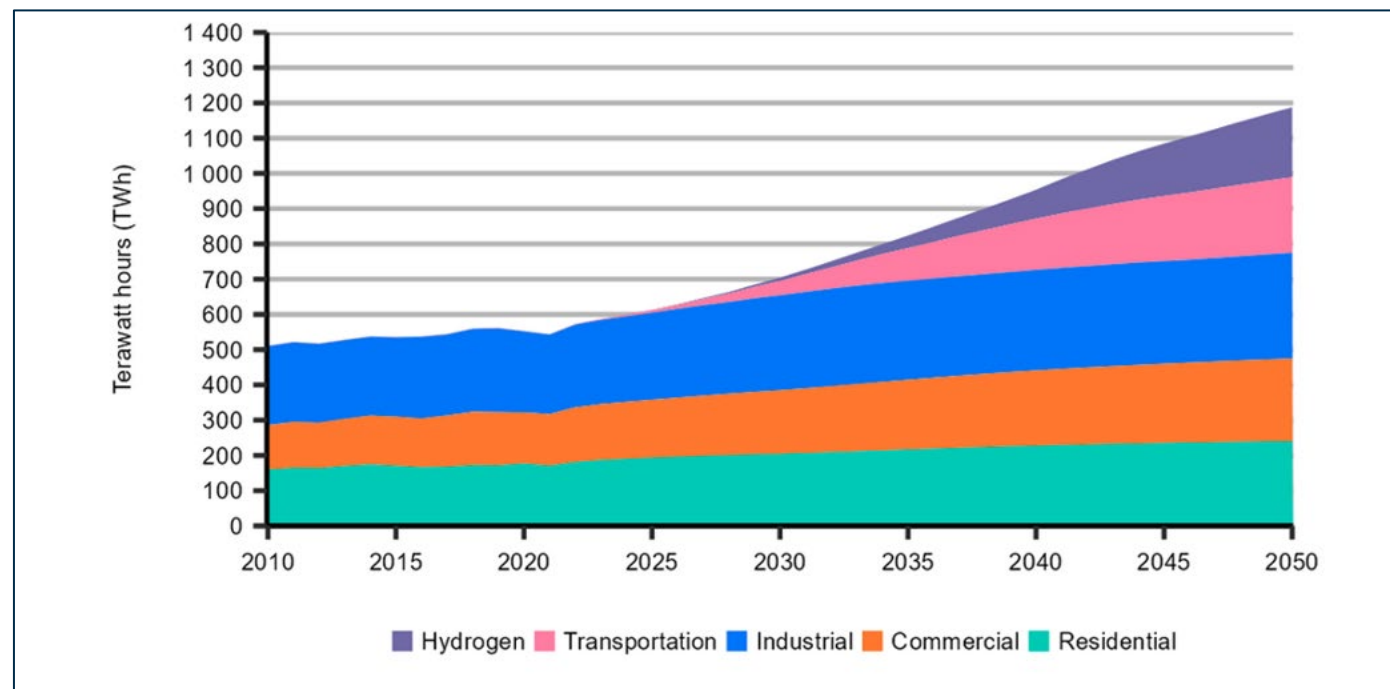




# All in on Load Growth. And Optimization.

## THE NEED

- Canada is facing unprecedented growth in demand for electricity
- In the next 25 years, Canada's electricity demand could more than double – currently our electricity use is 600 TW/h per year, and it's projected to grow to 1200 TW/h by 2050.
- *Further growth projections in some jurisdictions are indicating this number could be even higher.*
- Demand will rise due to several factors
  - Massive housing expansion requires significant connection to the grid
  - The growth of data centres which require vast quantities of electricity
  - Increasing use of electric vehicles



\*Canada Energy Regulator

# What is needed to be open for investment in building Canada's bigger, better grid



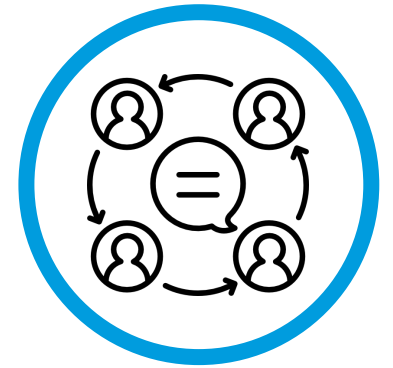
**Competitive investment  
(\$55 billion annually)**



**A simplified system of  
approvals**



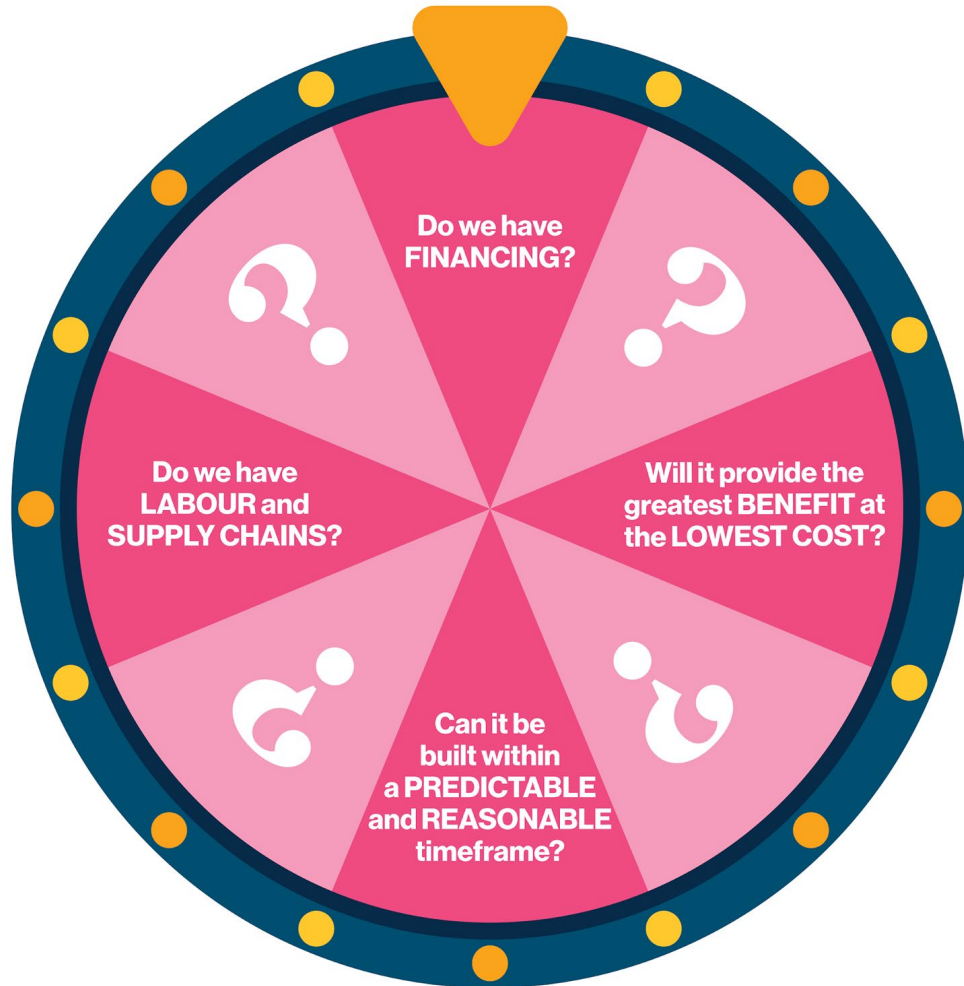
**A regulatory environment  
that works**



**A way for provincial and  
federal funders to talk to  
each other**



# The decisions asked by an electricity provider



When it comes to building a major electricity project, the people who build and invest need one thing.

**CERTAINTY.**

There is a great deal at stake: the financial cost of getting this wrong is too great.

**A decision made today needs to hold up for 20, 30 and even 40 years from now.**





# Inter-provincial transmission *right now* (some examples)

## NO CONNECTION



Yukon is completely reliant on its own power

## TWO-WAY CONNECTION



Ontario and Quebec share 2,775 MW of combined transfer capacity. Ontario often shares electricity with Quebec during winter, and Quebec shares with Ontario during summer

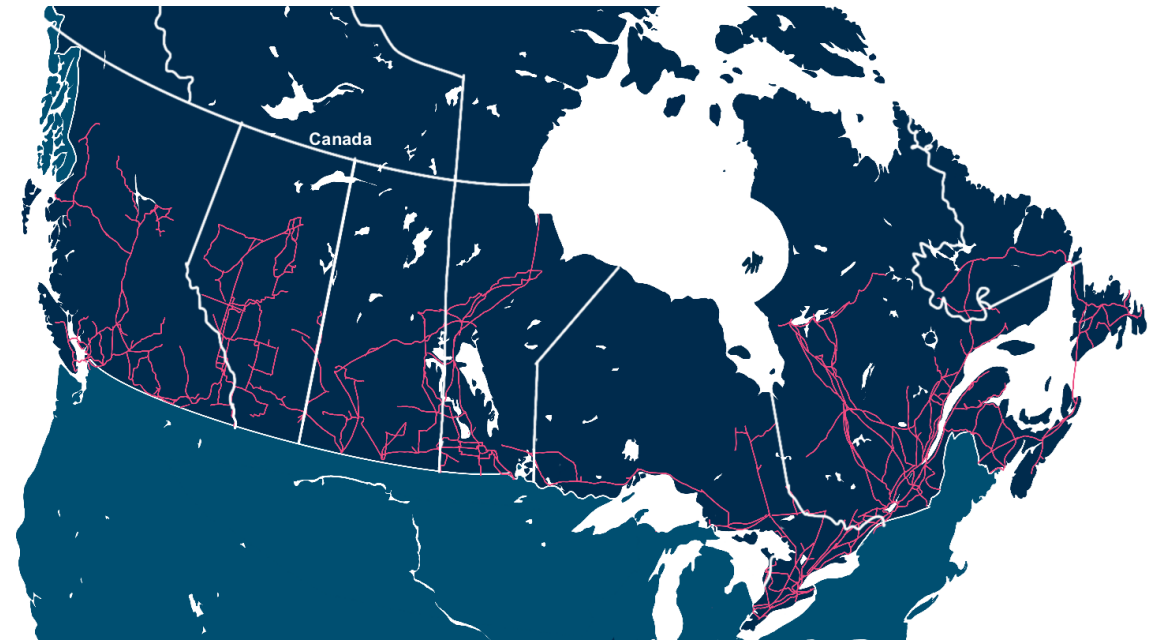
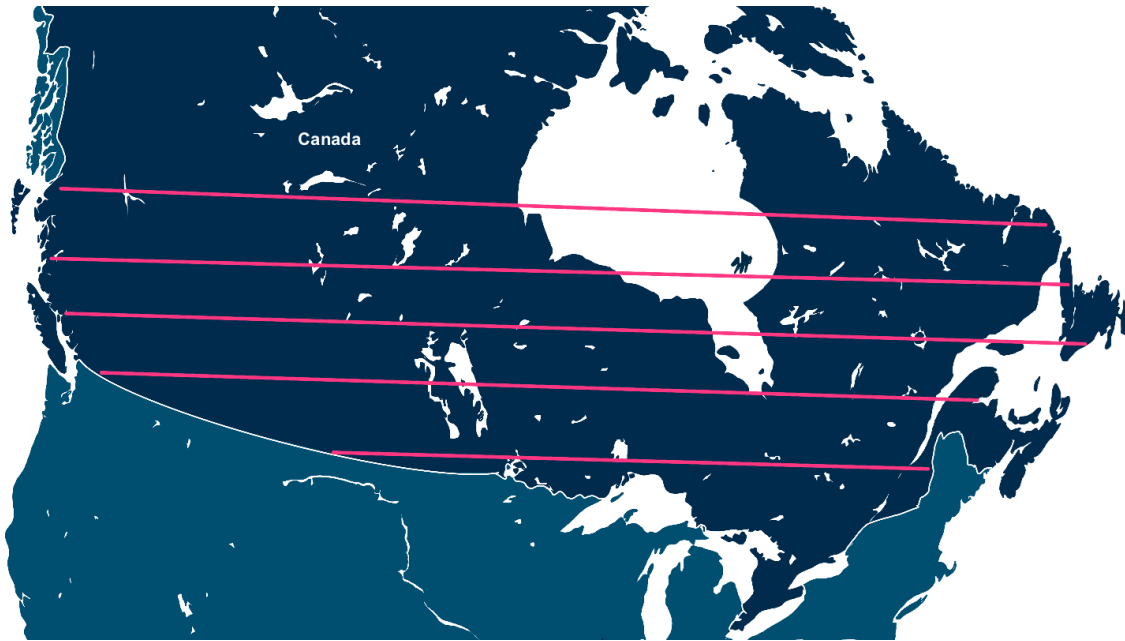
## ONE-WAY CONNECTION



Prince Edward Island derives its power from undersea cables that connect PEI to 100 MW from New Brunswick



# What people think Canada's electricity system looks like VS. what it *actually* is



There isn't **one** electricity system in Canada.

There's **13**





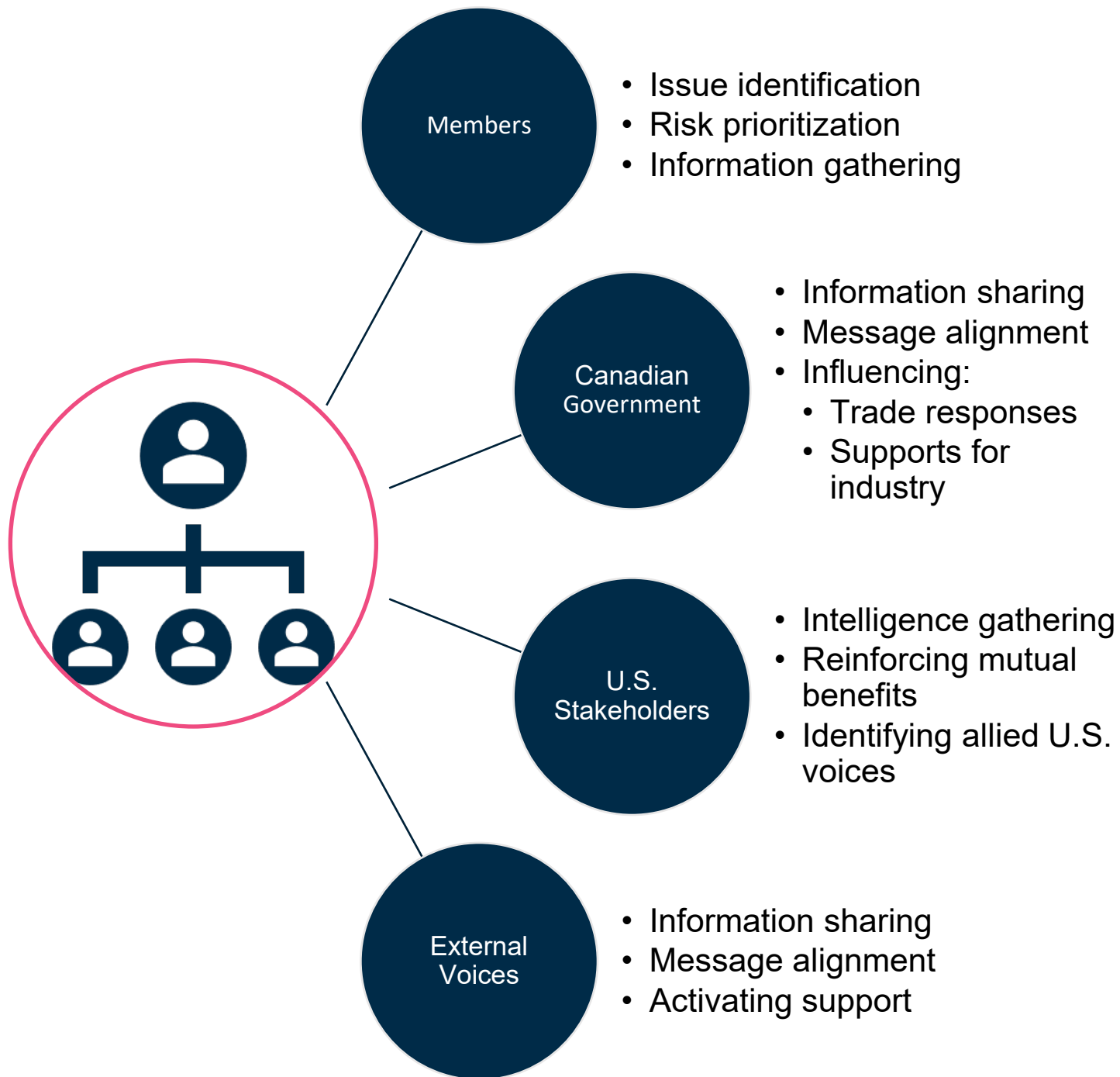
# Enhancing North American Trade



- North America has an integrated electricity system: **there are no borders for electricity.**
- Trade **enhances reliability and affordability** for Canadians and Americans.
  - In 2024, almost 60 TWh of electricity flowed across the Canada-US border
    - 60% of that went to the US.
  - On an annual basis, Canada's electricity system powers over 6 million American homes.
- Tariff uncertainty in early 2024 created confusion on how the grid might work.
- Increased electricity trade within Canada can complement north-south trade.

# Advancing Trade

**Electricity Canada  
reinforces the importance  
of Canada-US trade on  
both sides of the border**



# Cyber and Physical Security

- Human-caused risks represent significant threats to the electricity system
  - Can be harder to predict than traditional environmental risk
- Physical Risks:
  - Metal theft and sabotage
    - Cause outages and other safety risks (e.g. fires)
    - Repair and mitigation add cost
- Cyber Risk
  - A more connected grid means more vectors of attack
  - IT and OT risks are growing, with hostile actors increasing in sophistication
  - The system faces both criminal and nation-state threats.



# Cyber Security Risks

- “**State-sponsored actors target critical infrastructure** to collect information through espionage, to pre-position in case of future hostilities and as a form of power projection and intimidation” –*National Cyber Threat Assessment, 2023-2024*
- Cyber threats to IT and OT systems represent a significant threat to the reliability of the electricity system.
  - Significant attacks to energy operators in recent years in spite of preparation
- The IESO, through Project Lighthouse, is a leader in cyber security readiness in Canada.

Canadian oil firm Suncor Energy says it suffered a cyber security incident

- Mon Jun 26, 2023

A Canadian incident.

Calgary-based authorities

Nova Scotia

## Emera, Nova Scotia Power grapple with cybersecurity breach

No disruption to service in Nova Scotia, companies say

CBC News · Posted: Apr 28, 2025 11:08 AM EDT | Last Updated: April 29



Montreal

## Pro-Russian group claims responsibility for cyberattack against Hydro-Québec

Attacks are retribution for Canada's support for Ukraine, expert says



Matthew Lapierre · CBC News · Posted: Apr 13, 2023 8:29 AM EDT | Last Updated: April 13, 2023

# Security Program at Electricity Canada

- **Electricity Canada has a robust security program**
  - Board Committee on Energy Security for strategic oversight and guidance
  - Technology Committee and Security and Infrastructure Protection Committee for operational guidance and information sharing
- **Electricity Canada works with partners in government and industry to coordinate and enhance readiness**
  - Policy coordination
  - Standards development
  - Exercises and Tabletops



Electricity Subsector  
Coordinating Council





# Thank you

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electricity.ca |      YouTube