The Value of the U.S.-Canada Electricity Relationship

Electricity Canada
Our energy future

Électricité Canada
Notre avenir énergétique

The Value of the U.S.-Canada Electricity Relationship

For over a century, electricity has flowed back and forth across the U.S.-Canada border. The transmission and distribution lines carrying it make up one of the one of the most complex machines ever built, forming the backbone for two modern and competitive economies. Around 25-30 states trade power with Canada annually, and every Canadian province located along the border trades with the United States.

Cross-border electricity trade offers three distinct advantages to the U.S. and Canadian economy:

- **Resilience and reliability:** Trade helps even out changes in energy needs, helping manage periods of prolonged demand due to extreme weather.
- **Affordable bills:** The free flow of electricity between the U.S. and Canada helps keep electricity competitively priced, and brings down bills for American and Canadian families and businesses.
- **Jobs and economic growth:** Electricity trade powers industrial and manufacturing potential on both sides of the border, creating American and Canadian jobs.

With electricity load in America expected to significantly increase over the coming years due to data centers and industrial re-shoring, Canadian imports can play an important role in meeting this demand, while at the same time mitigating price impacts for consumers and ensuring electric reliability. The integrated North American grid can also strengthen electric reliability and resilience for both countries, not only on a day-to-day basis, but also delivering support and aid during regional weather challenges and emergencies. As demand increases, electric reliability is ever more important. Enhanced coordination on planning electricity demand curves, growth projection, and transmission can support the growth and buildout of a modern, resilient grid – together. Additionally, as cyber and physical threats to critical infrastructure continue to grow, sustained and deepened efforts on government-industry engagement will be more important than ever.

The grid: A closely integrated system

The integration of the electricity system in the U.S. and Canada has endured, and increased over time, because of the very significant benefits that partnership offers.

By working together, both countries have been able to build an optimal system, drawing from each other as needed to meet higher demand at better and cheaper rates.

The alternative is overbuilding expensive electricity infrastructure that sits unused most of the time – difficult to justify to investors and customers alike.

Electricity's full value is only unlocked if it is reliable, dependable, and there when you need it. A sudden unit shutdown or a peak in demand can spell trouble unless backup capacity is available. Pooling resources with neighboring regions, arranging access to their generation when needed – this option was what evolved between the U.S. and Canada during the 20th century. This offered economies of scale and risk diversification (for example, spreading weather event risk across more than one geographical area), so long as both parties cooperated and coordinated effectively. As electricity industry grew, enhanced reliability became an integral part of grid planning and operation.

The recognized value of integration was so strong that it has endured between the U.S. and Canada for over one hundred years. To support the infrastructure, both countries have worked together as allies and partners on critical security and technical issues.

Two-way trade with affordability benefits

The economic benefits of integrated grids have been so strong that tariffs have never been applied to electricity – there is no precedent or tested mechanism. This tariff-free status has been upheld in successive trade agreements, most recently in the U.S.-Mexico-Canada Agreement signed in 2020.

The USMCA's side letter between Canada and U.S. further underlined the point, noting "the importance of enhancing the integration of North American energy markets based on market principles, including open trade and investment."[i]

Over 56 TWh of electricity flowed across the U.S.-Canada border in 2025, a trade relationship valued at over 3.4 billion USD[ii]. And the electrons flow both in both directions: in 2024 and 2025, Canada imported a total of over 48 TWh from the US, valued at over 2 billion USD. The net flow is influenced by a wide variety of factors, including seasonal variations in load (air conditioning or heating), availability of generation types (constrained natural gas, solar plants, or spring runoff for hydropower), and regional weather (drought or heat waves).

Selling into wholesale markets means that any Canadian imports won on competitive pricing. For critical utilities, this translates into tangible benefits of lower prices and lower volatility for Canadians and Americans. And while Canadian electricity sales to the U.S. in 2024 accounted for only 0.3 per cent of total U.S. demand[iii], they played a key role in improving affordability and reliability in their neighboring border states. In Vermont, for example, just over 24% of the state's consumption was met by imports from Quebec in 2023[iv], through long-term contracts designed to shield customers from volatile rate increases[v]. And in New York, the Independent System Operator reported that free-flowing ties with Ontario in 2024 resulted in estimated production cost savings of nearly $20 million USD in the Day-Ahead Market.[vi]

Electricity has risen in price over the last few years[vii], and there has been significant public discussion of lowering household costs while also boosting energy-intensive industries, such as data centers and value-added manufacturing. To achieve these objectives simultaneously, more affordable and flexible electricity supply will be required, not less – without the friction that tariffs would add to this critical enabling input, in both directions.

Energy security from a trustworthy partner

Energy security depends on energy being available when it is required, and interconnections between Canada and the U.S. increase supply diversity and resilience. During the 2021 polar vortex, record-breaking cold came to Texas and the South-Central U.S. When extra electricity supply was needed in the region, SaskPower and Manitoba Hydro stepped up to export electricity to the Southwest Power Pool[viii] and Midcontinent ISO[ix], respectively, to help meet unprecedented U.S. demand.

When extreme weather events damage infrastructure or cause electricity shortages, affordable and secure power needs to be able to flow unimpeded across borders. But emergency transfers are not the only way of enhancing resilience.

Historically, the U.S. and Canada have also exchanged electricity during seasonal variations. Manitoba Hydro has a strong trading relationship with Minnesota and Wisconsin, including several power sale agreements which are seasonal diversity exchanges. These arrangements send power south across the border in the summer to meet peak demands for cooling, and north in the winter when heating load is highest.[x]

New York and New England are also planning to diversify and bolster their energy security by partnering with their Canadian neighbors.

In New York, the Champlain Hudson Power Express (CHPE) project will provide clean power from Canada to the metropolitan area of New York, helping that region meet its clean energy goals. A fact-finding report from the U.S. International Trade Commission found that hydropower trade with Canada has provided New York with economic and environmental benefits, including cost savings in the day-ahead market and emissions reductions.[xi] The New York Independent System Operator's *2024 Reliability Needs Assessment* also found that CHPE coming online by May 26, as scheduled, was important to avoid reliability margin deficiencies during summer peaks.[xii]

In the northeast, the New England Clean Energy Connect (NECEC) Transmission Line from the Canadian border to a substation in Lewiston, Maine, will provide 9.45 TWh per year over a 20-year period.

Longer term, the water cycle also drives rises and falls in supply and demand, particular in the northwest where hydropower generation is significant. In drought years, regions may rely on imports and later, in high water years, have plenty to export. For example, due to drought concerns over the last three years, the Canadian province of British Columbia has purchased more electricity from the U.S. than it has sold.

Energy security is a crucial domestic objective, but tariffs are an inefficient way of furthering that goal – adding unnecessary friction, complexity, and opacity. Indeed, tariffs may pose challenges that have not been fully considered, including:

- **Mechanism:** The electricity markets and physical infrastructure in North America were purposely developed and designed based on the unhindered free flow of power across the border. There is no existing mechanism that has been tested for the application of tariffs to electricity exports.
- **Impact on affordability:** Tariffs on electricity would drive up costs for the U.S. and Canada.
- **Emergency power supply:** One of the biggest reasons for cross-border electricity trade is to handle peak demand caused by extreme weather. Increasing the cost of electricity could hurt consumers and businesses when they need it the most.

Room to grow

Electric integration has truly been a case where both the U.S. and Canada have benefitted from working together, utilizing a true "all of the above" approach to power their economies. Canadian imports help American customers meet baseload and peak demand, while providing a full range of grid reliability services – and vice versa.

One of the significant advantages of Canadian electricity imports is that 61% of Canadian supply is generated by large-scale hydro[xiii]. This allows it to serve as a baseload resource, well suited to maintaining resiliency by meeting demand while also providing ancillary services that support the physical stability of the grid.

Beyond resource balancing, increased capacity will be needed to supply the growing load of new data centers, advanced manufacturing and industrial reshoring. Investment certainty is key for these energy-intensive projects, and impeding the flow of electricity by imposing tariffs risks reducing their flexibility to source power.

The North American grid was built for the free trade of electricity across borders. As a result, potential tariffs on electricity trade pose a significant risk to the ability to maintain stability, reliability and low costs that have benefitted the U.S. and Canada for generations.

About Electricity Canada

Electricity Canada is the national voice for electricity in Canada. Our members generate, transmit, and distribute power to homes and businesses across Canada. We represent integrated electric utilities, independent power producers, transmission and distribution companies, power marketers, and system operators. Our members deliver electricity to all Canadians, in every province and territory.

Electricity Canada
Our energy future

Électricité Canada
Notre avenir énergétique

electricity.ca
1500-275 Slater Street, Ottawa, Ontario,
Canada K1P 5H9

Endnotes

i Office of the United States Trade Representative. *CA-US Side Letter on Energy*. November 30, 2018.

ii Canada Energy Regulator. *Electricity Trade Summary*. Retrieved April 8, 2026.

iii Center for Strategic and International Studies. *Consequences of U.S.-Canada Electricity Tariffs*. March 14, 2025.

iv State of Vermont Department of Public Service. *2025 Annual Energy Report*. January 15, 2025.

v Reuters. *Vermont to buy power from Quebec for 26 years*. August 12, 2010.

vi Market Monitoring Unit for the NYISO. *2023 State of the Market Report for the New York ISO Markets.* May 15, 2024.

vii U.S. Bureau of Labor Statistics. *Consumer Price Index Average Price Data*. Retrieved February 28, 2025.

viii The Southwest Power Pool operates the grid for all or parts of: Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming.

ix The Midcontinent ISO operates the grid for all or parts of: Montana, North Dakota, South Dakota, Minnesota, Iowa, Wisconsin, Michigan, Indiana, Illinois, Missouri, Kentucky, Arkansas, Mississippi, Louisiana, and Texas.

x Manitoba Hydro. *Operations & exports: power sale arrangements*. December 21, 2024.

xi U.S. International Trade Commission. *Renewable Electricity: Potential Economic Effects of Increased Commitments in Massachusetts*. January 2021.

xii NYISO. *2024 Reliability Needs Assessment*. November 2024.

xiii U.S. Energy Information Administration. *Canada's energy overview, 2022*. Last updated May 30, 2024.