



FIRST NATIONS
MAJOR PROJECTS
COALITION

Regulated Electricity in Canada:

What do First Nations need to know?

PREPARED BY:

Shaun Fantauzzo

Dr. Suzanne von der Porten

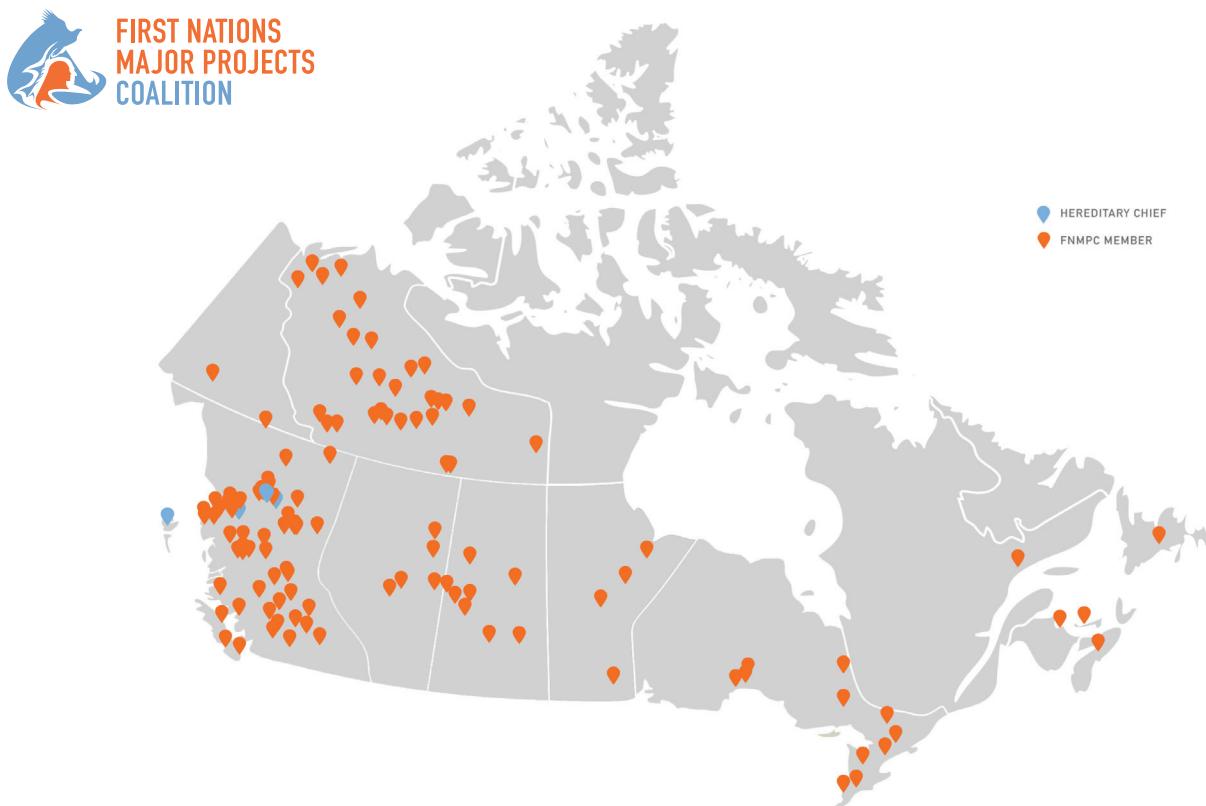
Barry Vickers

Who Are We

The First Nations Major Projects Coalition (FNMPC) is a national 145+ First Nation collective working toward enhancing the economic wellbeing of its members, while also recognizing that a strong economy requires a healthy environment supported by vibrant cultures, languages, and expressions of traditional laws. The FNMPC supports its members to:

- » Safeguard air, land, water, and medicine sources from the impacts of resource development by asserting influence on behalf of members and their traditional laws on environmental, regulatory, and negotiation processes; and
- » Receive a fair share of benefits from projects undertaken in their traditional territories; and
- » Explore ownership opportunities of projects proposed in their traditional territories.

The FNMPC offers business and commercial capacity support to its members on 12 major projects across Canada with a First Nations equity component, and a portfolio exceeding a combined total capital cost of \$45 billion. This support includes tools that supports First Nations on informed decision-makings on both the economic and environmental considerations associated with major projects development.



Purpose of this document

The federal government's international and domestic net zero commitments¹ have created momentum to electrify Canada's energy sector. This electrification includes building transmission lines (power lines) and transitioning to energy generation sources that do not emit greenhouse gases (e.g., carbon dioxide and methane). New opportunities are emerging for First Nations to benefit from clean energy projects being built on their lands and waters. These electrification projects include opportunities for First Nations participation in net zero projects through arrangements such as equity investments, procurement, partnerships, and/or becoming the project proponent. First Nations partnerships on net zero projects are essential to both (1) Canada's early steps toward economic reconciliation with First Nations, and (2) Canada achieving its net zero commitments in a manner that respects and adheres to seeking First Nations free, prior, and informed consent to build these projects.

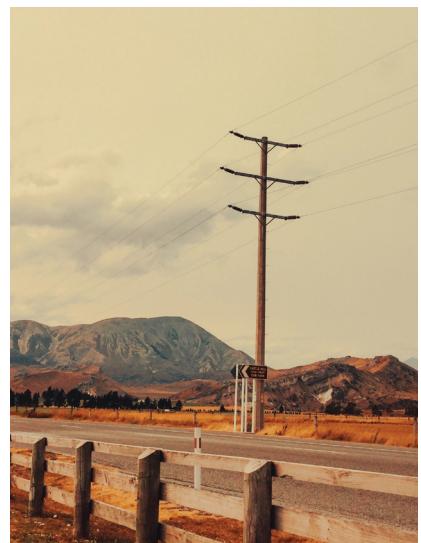
This primer examines the concept of economic regulation in the Canadian electricity sector, with a focus on rate regulation. It is intended to support First Nations in making financially informed decisions about becoming owners and/or proponents of power generation projects, transmission lines, and power distribution lines.



Transmission



Generation



Distribution

In most provinces and territories across Canada, owners and operators of electricity projects/assets are public utilities that offer an essential service. Given this, these projects/assets are subject to government regulations (e.g., permitting requirements and economic controls tied to construction and operating costs, returns on invested capital, utility rates, etc.) meant to protect the public interest. Understanding the economic and financial policies of these public utilities is essential for First Nations interested in participating or investing in economically regulated electricity projects.

¹ <https://www.canada.ca/en/services/environment/weather/climatechange/climate-plan/net-zero-emissions-2050.html>

How are electricity markets organized in Canada?

Electricity markets in Canada are organized on a provincial/territorial basis that reflects the historical, political, and economic context and approach of each of them. Provincial and territorial governments determine the specific market structure and regulatory approach for electricity generation, transmission, and distribution inside their borders. The regulatory structure varies across the country, ranging from government-owned regulated monopolies to competitive, deregulated markets with investor-owned companies. The federal government is responsible for interprovincial/international energy matters, such as electrical grid connections between provinces and to the United States.

In British Columbia, Saskatchewan, Manitoba, Quebec, New Brunswick, and Nunavut, government-owned, legislated monopolies have been established to supply and deliver electricity. These organizations generate, transmit, and distribute nearly all the electricity in their jurisdiction. Another model involves a Crown corporation generating electricity and transmitting to private distribution companies, which has been employed in the Yukon, the Northwest Territories, and Newfoundland and Labrador. Nova Scotia and Prince Edward Island have granted regulated monopolies to private companies that generate, transmit, and distribute most of their electricity.

Private companies dominate Alberta's electricity generation and retail markets, while regulated monopolies are responsible for transmission and distribution. Ontario is a hybrid model that integrates monopoly and competition through competitive generation and retail markets (although the government-owned Ontario Power Generation generates approximately half of the province's electricity). As in Alberta, transmission and distribution markets in Ontario are operated as regulated monopolies. One thing that sets Ontario apart from other provinces is the spread of "local distribution companies," which are a mix of municipally-owned and privately-operated entities that sell electricity to local markets. Ontario has more than 60 such companies.

- █ Government-Owned Monopoly
- █ Crown corporation generates electricity and transmits to private distribution companies
- █ Regulated monopolies granted to private companies who generate, transmit, and distribute most electricity
- █ Private companies generate electricity and sale; government regulated monopolies responsible for transmission/distribution
- █ Hybrid - Integrates Monopoly And Competition



What are Utilities?

Utilities is short for *public utilities* in this context. Typically, water, gas, electricity, telephone lines, waste disposal, sewerage, represent most of the public utility market and are "rate regulated" by a regulatory body. Some of these utilities in some markets are privately owned and sold.

What are Monopolies?

In Canada, many utilities are legislated monopolies, meaning the governments have required them to be the only supplier of the utility (eg., hydro) in a given jurisdiction. These monopolies are often in an industry with high-cost barriers to entering the market and start-up costs that prevent any rivals from competing.

What is a Deregulated Market?

In a deregulated electricity market, market participants other than governments/utility own power generation assets and/or transmission lines. In these cases, companies typically sell the electricity into a wholesale market, retail energy suppliers purchase this, and in turn sell it to customers. In these markets, transmission companies often own and operate the transmission lines.

Electric Power Mix

Canada currently produces a total of 600 terawatt-hours of electricity each year (equivalent of power for 4.2 million homes for a full year). Approximately 60% of this electricity is generated from hydroelectric sources (mostly hydroelectric dams). The remainder of electricity is produced from a variety of sources, including biomass, coal, natural gas, nuclear, oil, wind, and solar. The electric power generation mix varies across different jurisdictions. In British Columbia, Manitoba, Quebec, Newfoundland and Labrador, and the Yukon, hydroelectric power is more than 80% of the electricity produced. Ontario, New Brunswick, and the Northwest Territories rely on a mix of biomass, coal, hydro, natural gas, nuclear, oil, and wind. Prince Edward Island relies heavily on wind, but it imports a large share of its electricity from New Brunswick. Fossil fuels such as coal, natural gas, and oil are used as the primary source of electric power in Alberta, Saskatchewan, and Nova Scotia, although they have begun transitioning to clean energy sources such as solar, tidal, and wind.²

What are public utilities?

Public utilities are companies that provide essential services such as water, telecommunications, natural gas, and electricity. Companies involved in the generation, transmission, or distribution of electricity are electric utilities. Governments typically grant these utilities exclusive or near-exclusive rights to be the sole supplier in a particular market or jurisdiction because it is more cost-effective for a single regulated company to serve consumers than multiple companies. One reason governments grant utilities as the sole supplier is the enormous upfront costs associated with providing a service (e.g., feasibility studies, permitting, and construction). Another reason for sole suppliers is to reduce redundancies such as two parallel sets of power distribution lines by two competing utilities. In exchange for being the sole supplier, electric utilities are subject to government regulation intended to ensure that the public interest is upheld, mainly related to keeping electricity rates affordable. This arrangement is referred to as a “regulated monopoly”, and in this context, a “rate-regulated utility”.

Government regulation is intended to ensure that electric utilities offer access to power with fair prices, and reliable service. Without regulation, monopolies could target the most profitable customers, raise prices unfairly, and allow service standards to fall below satisfactory levels because there are no alternative options available to customers.

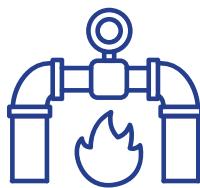
EXAMPLES OF TYPES OF PUBLIC UTILITIES



Water



Telecommunications



Natural Gas



Electricity

² <https://www.cer-rec.gc.ca/en/data-analysis/energy-markets/provincial-territorial-energy-profiles/provincial-territorial-energy-profiles-canada.html>

Independent Power Producers

Historically, electricity in Canada has been produced by large government-owned electric utilities. Demand for electricity has risen drastically in recent years and many governments are now turning to independent power producers to (1) diversify energy types (e.g., solar, wind, geothermal) and (2) increase the amount of power being produced. These independent power producers often specialize in clean energy sources such as hydro, solar, and wind, and sell power to the larger electric utilities and/or directly to industry (e.g., a remote mine in need of power). These producers are not usually considered to be electric utilities, although governments do regulate their activities and the electric utilities that purchase their power.

How are electric utilities regulated?

Approaches to regulating public utilities vary across Canada and are greatly influenced by regional energy demands, resource availability, and government priorities.³ These regulators generally perform a mix of the following functions:



Setting rates for the generation, transmission, and distribution of electricity.



Issuing certificates of public convenience and necessity.



Approving new projects and authorizing long-term resource plans.



Establishing and enforcing codes of conduct for public utilities.



Monitoring the financial and operational performance of public utilities.



Approving mergers, acquisitions, and dispositions.



Informing the public about regulatory decisions and impacts.

³ Except for Saskatchewan and Nunavut, every province and territory has created an independent board or commission to economically regulate electric utilities in their jurisdiction. Saskatchewan and Nunavut have established advisory bodies that make recommendations to the government and designated ministers are responsible for making final decisions.

Price controls

The most common type of economic regulations for utilities are price controls. In the electricity sector, rate regulation is when regulators set rates so that public utilities can recover costs (e.g., operating expenses and capital costs) and earn a reasonable rate of return on their equity investment. The intended result is that public utilities are allowed to operate financially-viable businesses and consumers are promised to receive reliable service at fair prices. In general, there are three types of price controls:



Rate of return regulation

The regulator allows a company to charge prices that cover its costs and provide a reasonable return on equity. For example, an electric utility that provides electricity to a town has invested \$10 million in infrastructure (such as transmission lines and transformers) and incurs \$1 million in annual costs (e.g., operating expenses and taxes “opex”). This utility is allowed to earn a 10% return on its equity investment plus costs, also referred to as the rate base. The total annual revenue requirement is \$2 million (\$1 million for the opex, and \$1 million for the profit), which determines the price for utility customers.



Price-cap regulation

The regulator sets a maximum price that a company can charge per unit. For example, an electric utility that provides electricity to a town is allowed to sell electricity at \$0.10 per kilowatt-hour or less for a specified period. At the end of that period, prices are reviewed and reset for the next period.



Price monitoring

Unlike rate of return regulation and price-cap regulation, the regulator monitors prices and intervenes when they believe prices are becoming unreasonable.

Certificates of public convenience and necessity

Before an electric utility can begin to construct, extend, or operate a regulated power project/asset in a particular service area, such as a power plant or a transmission line, in many cases it must apply for a certificate of public convenience and necessity. In deciding whether to issue a certificate, government regulators consider a wide range of social, economic, and environmental factors, including potential impacts to Indigenous rights and interests. This regulatory tool helps to ensure that service expansions are thoroughly considered, planned, and executed in the public interest by the project proponent. The certification process presents a potential opportunity for First Nations to influence and participate in the electricity sector by leveraging Indigenous title, rights, and interests to become equity participants in electricity projects.

Non-economic regulations

As well as economic regulation, electric utilities are subject to non-economic regulations administered by governments in Canada (e.g., emissions standards). Non-economic regulators often apply their regulatory frameworks in a complimentary fashion to the public utility regulators responsible for imposing economic regulations. An electric utility might be required to apply for an environmental assessment certificate from a provincial environmental regulator before constructing a new transmission line. This certificate does not guarantee that the company will secure its certificate of public convenience and necessity, which requires separate approval from the province's economic regulator.

Financing Indigenous-Owned, Rate Regulated Utilities

First Nation equity participation in rate regulated utilities is growing in Canada. For example, Hydro One (Ontario) is now committed to offer 50% equity partnerships on all transmission lines with capital costs above \$100 million. BC Hydro has proposed minimum First Nation equity requirements for Independent Power Producer projects. The regulatory nature of the electricity sector means that commercial deal quality and economic outcomes are more predictable. With a meaningful financing solution, such as the Government of Canada's commitment to develop a national Indigenous loan guarantee, or the existing provincial Indigenous loan guarantee programs in Alberta, Saskatchewan, and Ontario, First Nation equity investment and leadership in the electricity sector will continue to be a success story.



Main question First Nations may wish to consider asking about participation in utilities/energy projects:

Initial Project Exploration

Question	Why it's Important to Ask this Question
What type of utility project is being proposed?	Different project types – transmission, generation, distribution – carry different benefits, risks, and potential revenues.
Does the project align with First Nation priorities and values?	Utility/energy projects have different impacts, risks, revenues, scales, and timelines which can only be weighed by the potential host First Nation.
What are the economic participation possibilities for First Nations?	Various participation models – equity ownership, impact benefit agreements – have different implications on governance, financing, risks, revenues, etc.
How will First Nations finance the project?	To own/participate in parts, or all, of an energy project, First Nations may need to consider financing alternatives such as own source revenues, bank/industry loans, loan guarantees, and forms of government support.
What are the UNDRIP and economic reconciliation implications?	First Nations may want to consider how the potential project does or does not contribute to self-determination, furthering the principles of UNDRIP and reconciliation,
How will First Nations consent and Indigenous partnership be included in the project?	The principle and meaningful implementation of free, prior, and informed consent are a priority for many First Nations in utility/energy project participation.

Market and Regulatory Setting

Question

Why it's Important to Ask this Question

What is the regulatory setting of the proposed utility project?

Depending on which province/territory the project is in, how the project is regulated varies, impacting its profitability and ownership structure.

What are the current best practices for First Nation-owned public utilities?

Indigenous ownership of electrification projects in several provinces and territories in Canada and around the world has been well-established. The highest standards and best examples should be explored.

What are the risks of the project?

Each type of utility/energy project carries its own risk which is influenced by factors such as commodity prices, construction risks, projected vs. actual demand, environmental impacts, etc.

Maximizing First Nation Benefit

Question

Why it's Important to Ask this Question

What capacity supports and other resourcing needs to be put in place for the First Nation to maximize its benefits in the proposed project?

Each utility/energy project is unique and may require particular expertise and capacity supports such as financing, geotechnical, environmental assessment, legal, commercial negotiation, etc.

What are the employment and procurement possibilities for the proposed project?

In addition to other forms of participation such as ownership, First Nations businesses have the potential to benefit from well-negotiated procurement contracts, employment, and skills training embedded in the project.

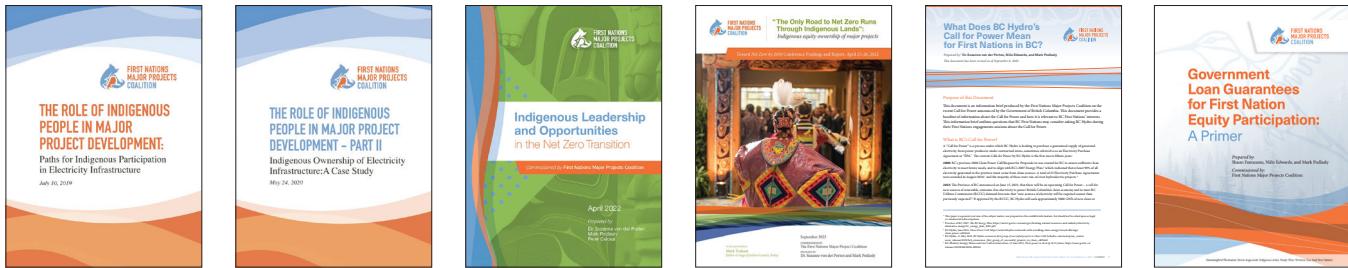
What will the rates of return to the First Nation?

First Nations may want to weigh participation in a project against other investments or projects.

Further readings

FNMPC has produced several research papers highlighting Indigenous leadership in the energy sector. These papers are accessible online for reference through the following links:

1. [Paths for Indigenous Participation in Electricity Infrastructure](#), July 2019
2. [Indigenous Ownership of Electricity Infrastructure: A Case Study](#), May 2020
3. [Indigenous Leadership and Opportunities in the Net Zero Transition](#), April 2022
4. [The Only Road to Net Zero Runs Through Indigenous Lands](#), September 2022
5. [What Does BC Hydro's Call for Power Mean for First Nations in BC?](#), September 2023
6. [Government Loan Guarantees for First Nation Equity Participation: A Primer](#), January 2024



Accessing FNMPC Business Capacity Support for Electrification Projects

Did you know that most project capacity services FNMPC provides to its national First Nation membership are in the electrification sector? Does your First Nation need help with an electrification project that is over \$100 million in value? FNMPC has in-house experience, tools, and advice that may be able to help. This support to First Nations members is provided free of charge. To access these services, please contact:

Niilo Edwards, Chief Executive Officer
First Nations Major Projects Coalition
Email: ceo@fnmpc.ca

Barry Vickers, Senior Vice President of Project Development
First Nations Major Projects Coalition
Email: barryvickersconsulting@gmail.com