The Role of Indigenous People in Major Project Development:

Paths for Indigenous Participation in Electricity Infrastructure

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FIRST NATIONS MAJOR PROJECTS COALITION

The First Nations Major Project Coalition (Canada) is a national 51 Indigenous nation collective working towards the enhancement of the economic well-being of its members, understanding that a strong economy is reliant upon a healthy environment supported by vibrant cultures, languages and expressions of traditional laws, and in particular to:

a) Safeguard air, land, water and medicine sources from the impacts of resource development by asserting its members' influence and traditional laws on environmental, regulatory and negotiation processes;

b) Receive a fair share of benefits from projects undertaken in the traditional territories of its members, and;

c) Seek ownership opportunities of projects proposed in the traditional territories of its members, such as pipelines and electric infrastructure.

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EXECUTIVE SUMMARY

This paper, prepared by the First Nation Major Project Coalition (MPC), highlights the growing world examples of Indigenous ownership in major projects including energy infrastructure. The MPC is a non-profit Indigenous-led coalition of 51 First Nations across Canada (45 in British Columbia) who are interested in becoming equity owners of major projects occurring in their traditional territories. This includes energy generation, transmission and distribution networks, oil and gas pipelines, mines and ancillary operations, transportation routes, or other projects.

The intent of this discussion paper is to:

1. Highlight how, over the past 50 years, Indigenous people worldwide have started to pursue equity ownership of major projects and infrastructure;
2. Illustrate the ways that Indigenous people are capitalizing on policy and societal changes to pursue their interests, and;
3. Emphasize specific electrical infrastructure ownership examples for possible use by Canadian governments and First Nations.

This paper includes information on over 60 Indigenous and local community-owned electric generation, transmission and distribution projects. The Indigenous equity ownership models highlighted in the paper include questions that require further investigation to fully understand how these examples could be adapted by governments and First Nations for use in Canada.

[1] The paper is adapted from a chapter written by Mark Podlasly and published in: Thomas, Dimitroff and Troy Edwards. "New risks, new opportunities: The growing role of indigenous peoples in project development." More on Risk and Energy Infrastructure: Value Chains, Stakeholders and Black Swans. London: Globe Law and Business Ltd., 2017. Print.

INTRODUCTION

There has a rapid increase of Indigenous and cooperatively-owned energy infrastructure occurring around the world, most notably in New Zealand, the United States, and Canada.

The two main drivers for this growth are:

1. The increased global demand for clean energy and;
2. Indigenous nations' interest in acquiring equity positions in infrastructure for long-term revenue streams.

Many Indigenous nations – once relegated to minor roles in project development on their own lands – are increasingly becoming equity owners in projects impacting their territories. Equity ownership of resource and infrastructure projects is increasingly seen by Indigenous people as a means to pro-actively exercise their rights, protect community interests and share to the economic benefits derived from their territories.

Consistent with global examples of Indigenous project engagement, this new normal has been fueled by a growing desire of Indigenous nations to be part of all aspects of resource development in their traditional territories.

BACKGROUND

The ability of companies, governments, and investors to dictate terms of development in Indigenous lands is changing. Indigenous populations have found new ways to impact, intervene and in an increasing number of cases – have ownership -- in pipelines, mines, energy generation, transmission and distribution systems and related infrastructure.

From an Indigenous perspective, this change is the culmination of a long process that has evolved over decades of increasingly successful assertions that Indigenous voices, interests and rights in traditional territories can no longer be ignored by companies and host governments. These changes are not unique to Canada. Seen from a global perspective, the past seventy years have seen an increase in court decisions favorable to Indigenous rights, increasing availability of legal and technical resources, changes in societal attitudes, the United Nations Declaration of the Rights of Indigenous People (UNDRIP), and the rise of internet-supported activism and knowledge sharing.

Capitalizing on these changes, there has been an incremental increase in Indigenous influence and leadership on large capital and infrastructure projects through negotiated participation agreements (e.g., Impact Benefit Agreements) with companies and governments. In the past, Indigenous matters have been considered by many companies and governments as one of Corporate Social Responsibility (CSR) where companies and governments would narrowly address the social and environmental concerns of local Indigenous populations in a piecemeal

way, treating them as matters separate from the commercial objectives of the proposed project.[2]

In cases across the Americas, Africa and in the Asia-Pacific region, Indigenous peoples are moving beyond limited CSR interpretations to new realities. In these new realities, Indigenous communities are no longer passive hosts of infrastructure projects but share in resource development planning and benefit directly in the prosperity of the project via a variety of means including preferential contract bidding, co-ownership, equity stakes, and revenue sharing.

Community development needs – economic, as well as environmental and social – can be enabled by such projects. Companies and governments foisting project decisions onto Indigenous communities is no longer acceptable.

From the Dakota Access oil pipeline in the United States,[3] to the Tía María copper and gold mine in Peru,[4] to Papua New Guinea's Exxon-Mobil Liquefied Natural Gas project, [5] to BC Hydro's Site C hydroelectric dam in Canada, [6] Indigenous and local protests against large-scale projects are widespread and growing. Further, these protests are no longer restricted to far-flung project locations. Mainstream media now regularly transit reports of Indigenous protests in remote or overseas countries to urban centres and in turn garner significant support for their causes.

The reality of decades-long protests and on-going community action, coupled with shifting international laws and increasing demands for "social license to operate," are causing commercial investors to delay or defer investing in resource and infrastructure projects. The cost of project failure or substantive delay from Indigenous community action is high. In a 2014 study, the *National Academy of the Sciences of the United States* found that a community-led production delay at a major mine can result in losses of up to US$20 million per week.[7]

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[2] "What is CSR?." United Nations Industrial Development Organization, Web. 15 Mar 2019. <http://www.unido.org/csr/o72054.html>.

[3] Levine, Sam. "Dakota Access pipeline: the who, what and why of the Standing Rock protests ." The Guardian, 3 Nov 2016. Web. 15 Mar 2019. <http://www.theguardian.com/us-news/2016/nov/03/north-dakota-access-oil-pipeline-protests-explainer>.

[4] "From conflict to co-operation - Mining in Latin America." The Economist, 6 Feb 2016. Web. 15 Mar 2019. <http://www.economist.com/the-americas/2016/02/06/from-conflict-to-co-operation>.

[5] Tlozek, Eric. "Papua New Guinea protesters angry about unpaid royalties picket LNG plant near Port Moresby." ABC - Australian Broadcasting Corporation, 20 Feb 2017. Web. 15 Mar 2019. <http://www.abc.net.au/news/2017-02-20/png-protesters-block-lng-project-near-port-moresby/8286894>.

[6] "3 protesters arrested at Site C dam project." CBC - Canadian Broadcast Corporation, 6 Jan 2016. Web. 15 Mar 2019. <http://www.cbc.ca/news/canada/british-columbia/site-c-protesters-arrested-1.3392884>.

[7] Franks, Daniel, Rachel Davis, Anthony Bebbington, Saleem Ali, Deanna Kemp and Martin Scurrah. "Conflict translates environmental and social risk into business costs." PNAS - Proceedings of the National Academy of Sciences of the United States of America, 27 May 2014. Web. 15 Mar 2019. <http://www.pnas.org/content/111/21/7576.short>.

The new reality is that investors, governments, and project proponents must now address Indigenous rights and concerns as a core element of their infrastructure and resource projects. Project proposals that enable a local community to achieve shared development goals are more likely to proceed. Projects that do not -- or are seen by increasingly vocal and activist communities as detrimental to community well-being -- will not gain vital local support.

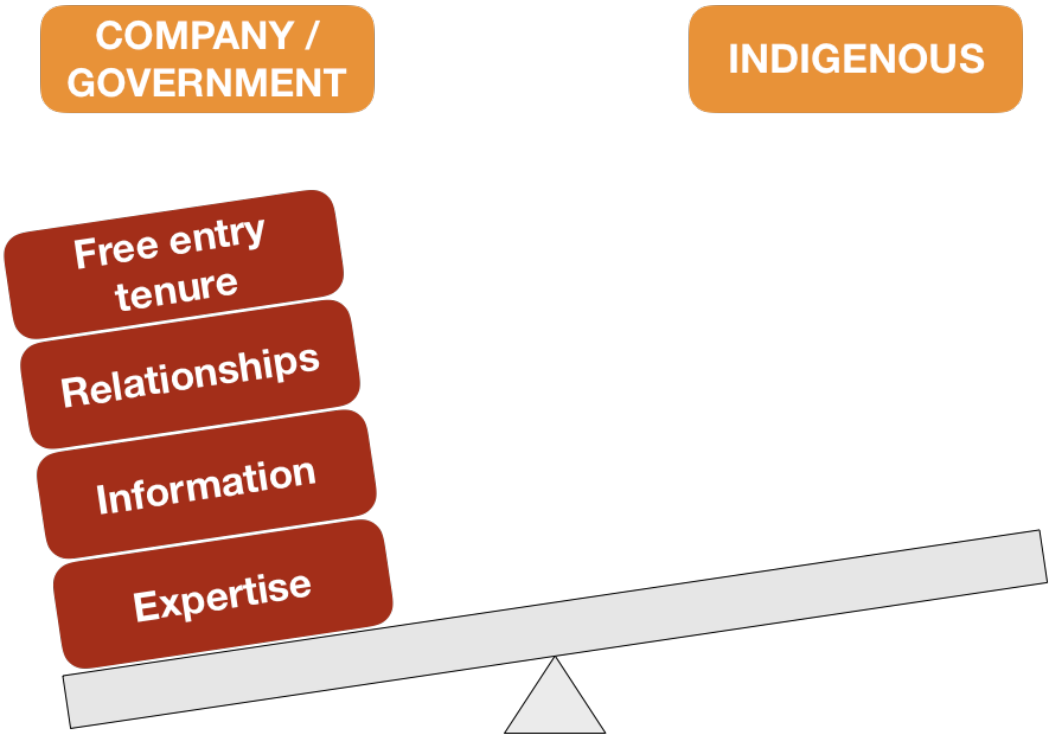
Many companies and governments have been ill-equipped to make this change in thinking. Going forward, parties that can make the turn to a new reality of partnership with Indigenous peoples will succeed and see projects approved, constructed, and put into operation.

RIGHTING AN IMBALANCE

> *"Surely given that we are multi-generational, that we're never going to leave the country and everything we earn will stay in the country, aren't we in effect your perfect partner?"*
>
> *Mark Solomon, Director of South Island Iwi Ngai Tahu, New Zealand*

In the past, governments and companies enjoyed near complete domination of key aspects of project development on Indigenous lands. They held privileged access to land, capital, natural resources, and information needed to develop projects. In short, project proponents and their partners enjoyed freedom to dictate how projects would be developed in Indigenous homelands. Indigenous people and their interests were minimized, or in many cases, ignored by companies and governments.

Figure 1. Past Development Practices on Indigenous Lands



Land Access

Governments and companies held near complete free access to national lands and natural resources. In many cases, allocation of land and resources was determined by governments without regard for traditional Indigenous rights, use or interests.

Relationships

Access to government officials, capital/financial instruments, market access for end-user purchase agreements, and in many cases, national legal courts and systems, was limited to government and corporate parties.

Information

Information such as topography/mapping data, geologic survey databases, resource planning professionals, information systems, etc., was only available to governments, companies and their agents.

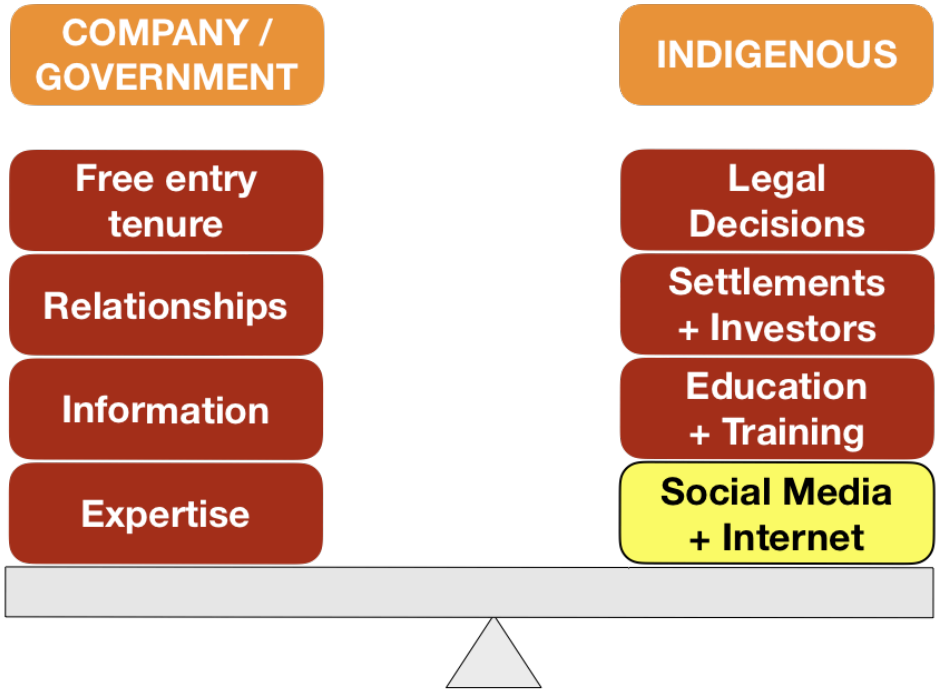
Expertise

Access to technical skills professionals like engineers, financial analysts, and other trained technical resources were solely within the domain of companies and governments.

NEW REALITIES

Starting in the 1950s, the former imbalance between companies/governments and Indigenous peoples began to shift. Indigenous people began accessing legal remedies, skills, and communication technologies that started to equalize the company/government-led development model.

Figure 2. Current Development Practices on Indigenous Lands



Legal Decisions

Over the past 50+ years, numerous national courts around the world have started recognizing Indigenous land rights in their respective jurisdictions. While not uniform in their decisions, there has been a trend towards recognizing and re-enforcing Indigenous peoples' rights over lands that would previously have been administered exclusively by majority society governments.

When viewed from a global perspective via the following examples, the trend towards Indigenous influence over local land decisions is clear:

Malaysia

Starting in the 1950s, Malaysian court decisions ruled that customary Indigenous lands were inalienable.[8] Subsequent Malaysian court decisions have declared Indigenous rights to land to be property rights and as such protected by the Malaysian constitution.[9]

Canada

In 1973, the Supreme Court of Canada in the *Calder v. Attorney-General of British Columbia [1973]* decision acknowledged that Indigenous title in Canada existed prior to

[8] *Sumbang Anak Sekam v Engkarong Anak Ajah* [1958] SCR 95. (Malaysia).
[9] *Selangor Pilot Association v Government of Malaysia* [1975] 2 MLJ 66. (Malaysia).

European colonization.[10] Subsequent court decisions (e.g., *Delgamuukw v British Columbia, [1997])* further advanced the concept of Indigenous title by reaffirming the place of common law Aboriginal title in Canada.[11]

In 2004, the Supreme Court of Canada released its twinned decisions in the *Haida Nation v. British Columbia (Minister of Forests), 2004 SCC 73* and *Taku River Tlingit First Nation v. British Columbia, 2004 SCC 74*. These two important cases set the stage for the Crown's duty regarding Indigenous consultation and accommodation on matters related to resource development. These decisions established a duty to consult and accommodate Indigenous interests until treaties are concluded. However, *the Tŝilhqot'in Nation v. British Columbia* case then upped the ante from consultation and accommodation to consent. In 2014, the court issued the *Tŝilhqot'in Nation v. British Columbia* decision, recognizing an Indigenous claim to 1,750 square km of traditional lands. The court created a new land classification of Aboriginal Title which affirmed the right of Indigenous people to decide how the land and its natural resources will be used, occupied, and managed."[12] The *Tŝilhqot'in v. B.C.* case set a new precedent for Indigenous consent.

New Zealand

In 1987, New Zealand courts via the 'Lands' case recognized that existing Indigenous rights in the 1840 Treaty of Waitangi continued to apply to the country.[13]

Australia

The 1992 *Mabo v. Queensland (No 2*) case recognized Aboriginal and Torres Strait Islander peoples' rights. The court ruling led to Australia enacting the *Native Title Act 1993* which recognized that Aboriginal people have rights to and interest in certain lands because of traditional laws and customs.[14]

In 2010, Torres Strait Regional Sea Claim decision recognized the rights and interests of Torres Strait Islanders over more than 40,000 square kilometres of sea between the tip of Cape York and Papua New Guinea.[15]

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[10] "Calder et al. v. Attorney-General of British Columbia." Judgements of the Supreme Court of Canada. Lexum, 31 Jan 1973. Web. 15 Mar 2019. <http://scc-csc.lexum.com/scc-csc/scc-csc/en/item/5113/index.do>.
[11] "Delgamuukw v. British Columbia." Judgements of the Supreme Court of Canada. Lexum, 11 Dec 1997. Web. 15 Mar 2019. <http://scc-csc.lexum.com/scc-csc/scc-csc/en/item/1569/index.do>.
[12] "Tsilhqot'in Nation v. British Columbia." Judgements of the Supreme Court of Canada. Lexum, 26 Jun 2014. Web. 15 Mar 2019. <http://scc-csc.lexum.com/scc-csc/scc-csc/en/item/14246/index.do?r=AAAAAQA>.
[13] Burton, Mark. "The Significance of the Lands Case for Law and Society." New Zealand Government, 30 Jun 2007. Web. 15 Mar 2019. <http://www.beehive.govt.nz/speech/significance-lands-case-law-and-society>.
[14] "Mabo case." Australian Institute of Aboriginal and Torres Strait Islander Studies, Web. 15 Mar 2019. <http://aiatsis.gov.au/explore/articles/mabo-case>.
[15] "Successful Torres Strait regional sea claim a cause for celebration!" Australian Human Rights Commissions, 2 Jul 2010. Web. 15 Mar 2019. <http://www.humanrights.gov.au/news/media-releases/2010-media-release-successful-torres-strait-regional-sea-claim-cause-celebration>.

Kenya

In 2010, the African Commission on Human and People's Rights condemned the eviction of the Endorois people from their traditional lands in Kenya. The Commission ruled that the Endorois expulsion from their traditional homeland for tourism development violated their human rights.[16]

United Nations Declaration of the Rights of Indigenous People & Free Prior Informed Consent

Adopted in 2007 by the UN General Assembly, the United Nations Declaration of the Rights of Indigenous People (UNDRIP) is widely seen by Indigenous people as a motivating document that not only recognizes their rights to greater participation and decision-making in subjects that affect their communities but also unites their aspirations with other Indigenous nations/groups around the world.

The 46 articles of the declaration detail the individual and collective rights of Indigenous people in a wide range of areas including culture, identity, language, employment, health, and education. The Declaration "*emphasizes the rights of Indigenous peoples to maintain and strengthen their own institutions, cultures and traditions, and to pursue their development in keeping with their own needs and aspirations*"[17] and "*promotes their full and effective participation in all matters that concern them and their right to remain distinct and to pursue their own visions of economic and social development.*"[18]

Of specific interest to governments and project developers, the document includes the concept of Free, Prior and Informed Consent (FPIC) as a core tenet of dealing with Indigenous peoples: "*States shall consult and cooperate in good faith with the Indigenous Peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them*."[19]

"...[UNDRIP] has started to find deep traction with Aboriginal peoples. Hundreds of Indigenous groups see themselves, their history and their futures in UNDRIP. That their stories and dreams are shared by so many people around the world serves, in Indigenous communities, to provide both inspiration and hope that the global political system will right itself."

- Ken Coates, Canadian public policy professor

For many Indigenous people, UNDRIP has had a profound effect on how they see development and their ability to impact decisions that are contrary to their interests. It has focused and

[16] "Kenya: Landmark Ruling on Indigenous Land Rights." Human Rights Watch, 4 Feb 2010. Web. 15 Mar 2019. <http://www.hrw.org/news/2010/02/04/kenya-landmark-ruling-indigenous-land-rights>.
[17] United Nations, Declaration on Rights of Indigenous Peoples (2008).
[18] Ibid.
[19] Ibid.

energized Indigenous understandings of rights and political organizing around these rights locally and globally. Notably, in the February 2019 throne speech, the Province of BC committed to be the first province in Canada to put UNDRIP into legislation.[20]

Governance

Simultaneous with court decisions and UNDRIP, national governments around the world have implemented self-government and governance arrangements with Indigenous populations that influence how they see themselves as self-determined peoples and how they can influence land and resource project plans. The following are examples of some notable governance arrangements:

Norway/Sweden/Finland – Sami Parliamentary Council

Comprised of Sami members from across Norway, Sweden and Finland, the Council – created in 1956 -- is a publicly-elected parliament that represents the interests of the Indigenous Sami population.[21]

Canada – Nunavut

Created in 1999 as part of an Indigenous land claim settlement, the *Nunavut Land Claims Agreement* provides for broad self-government powers and jurisdiction for the majority Indigenous population.[22]

Denmark - Greenland

In 2008, the 90% Indigenous population of Greenland endorsed a self-rule referendum that advances the Danish dependency towards eventual independence. Enacted in 2009, the resulting agreement will eventually see the Indigenous-led government assume full sovereignty over Greenland including natural resources and revenues.[23]

Settlements

For some Indigenous communities, court decisions, land settlements, and resource allocations have resulted in significant financial resources which – in certain cases -- have allowed the creation of financial trusts and business and commercial opportunities. Some notable examples of such settlements are as follows:

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[20] Bellrichard, Chantelle. "B.C. commits to being 1st province in Canada to put UNDRIP into legislation." CBC - Canadian Broadcast Corporation, 13 Feb 2019. Web. 15 Mar 2019. <http://www.cbc.ca/news/indigenous/b-c-commits-to-being-1st-province-in-canada-to-put-undrip-into-legislation-1.5018447>.

[21] "Sámiráđđi - Saami Council." Saami Council, Web. 15 Mar 2019. <http://www.saamicouncil.net/en/>.

[22] "Nunavut Agreement | Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada." Nunavut Tunngavik Incorporated, Web. 15 Mar 2019. <http://nlca.tunngavik.com/>.

[23] "Greenland voters back greater autonomy from Denmark." The Guardian, 26 Nov 2008. Web. 15 Mar 2019. <http://www.theguardian.com/world/2008/nov/26/greenland-denmark-referendum>.

USA – Alaska

The *1971 Alaska Native Settlement Act* provided the Indigenous population with 44 million acres (11% of Alaska) with both surface and subsurface rights and over US$936 million dollars.[24] Some of the resulting community corporations set up under the Act are now multimillion-dollar operations employing residents – both Indigenous and non-Indigenous - across the state and beyond.[25]

USA – Colorado

The Southern Ute Tribe, exercising their domestic sovereign rights, has directed profits from their on-reservation energy resources to an Indigenous-controlled $4 billion private equity and investment fund with operations and assets in over fourteen US states and the Gulf of Mexico.[26]

Canada - Quebec

The *1975 James Bay and Northern Québec Agreement* provided the Cree and Inuit peoples with control over specified lands, education, health, and economic development initiatives. The Agreement allocated $225 million allocated to economic development corporations.[27]

New Zealand

In New Zealand, nearly NZ$12.5b is owned by Indigenous Maori trusts, incorporations, and other collectively-owned enterprises, such as tribal organizations managing Treaty settlement funds.[28]

Social Media & the Internet

The largest impact on Indigenous commercial and government negotiations has been the internet. The arrival of computer and smartphones into previously remote communities, and accompanying social media platforms, has connected Indigenous peoples across the planet to each other and to resources that were previously unavailable. Information databases, global media, group chat sites and direct person-to-person connections are now available in many Indigenous communities.

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[24] "Alaska Native Claims Settlement Act." Wikipedia, Web. 15 Mar 2019. <http://en.wikipedia.org/wiki/Alaska_Native_Claims_Settlement_Act>.

[25] "Alaskan Native Corporation Links." Fairbanks Alaska Visitor Information, Web. 15 Mar 2019. <http://fairbanks-alaska.com/alaska-native-corporations.htm>.

[26] Terry, Anderson. Unlocking the Wealth of Indian Nations. Lanham, MD: Lexington Books, 2016. Print.

[27] Prince, John and Brian Craik. "James Bay and Northern Quebec Agreement." The Canadian Encyclopedia, 27 Jun 2011. Web. 15 Mar 2019. <http://www.thecanadianencyclopedia.ca/en/article/james-bay-and-northern-quebec-agreement>.

[28] Harvey, Helen. "$42 billion Maori economy about more than just Treaty settlements." Stuff.co.nz, 3 Feb 2017. Web. 15 Mar 2019. <http://www.stuff.co.nz/business/88915435/maori-economy-about-more-than-just-treaty-settlements>.

Social media and the internet, combined with the previously noted court decisions, self-government agreements, awareness of UNDRIP, and growing pools of capital, has revolutionized Indigenous aspirations about what is possible in their lands. The internet has transformed Indigenous political, community, business negotiation and individual organizing.[29] While some Indigenous communities lack basic infrastructure and are located in remote regions, many people have access to a computer or a smartphone and have an internet connection.[30] The result is that what happens to one Indigenous community is often instantly transmitted to other Indigenous communities worldwide. If an energy or mining company is operating unethically in a local mine or energy project in one part of the world, Indigenous communities elsewhere will likely become aware of it very quickly. Further, details of positive information – such as progressive public policy, business agreements and revenue sharing deals, or environmental protection concessions – will be shared with Indigenous people elsewhere. In this way, precedents regarding Indigenous political, social, and business deals are being set and communicated around the world.

Mongolia

One of the most direct examples of the power of the internet to disrupt a resource project occurred in 2005 around the Oyu Tolgoi mining project in Mongolia. Mr. Friedlander, a Canadian and then CEO of Ivanhoe Mining, while attempting to raise capital for the mining project at a Tampa, Florida investment conference, boasted that mining in Mongolia was like "you're making T-shirts for five bucks and selling them for $100."[31] Mr. Friedland's speech was posted on the internet and portions of the speech – especially the references to a 1,900% markup -- were translated into Mongolian. According to media reports, "even in the most remote corners of the Gobi, it seems that every nomad can quote from the Tampa speech."[32] Mongolians, outraged, launched protests in the capital Ulan Bator where Mr. Friedland was burned in effigy.[33] The government of Mongolia was eventually changed the mining tax regime to eliminate windfall profits and in time, Mr. Friedlander was forced to relinquish the project.

Canada

In 2014, the Supreme Court of Canada finalized the earlier mentioned *Tŝilhqot'in v. B.C.* case, a decision that established Aboriginal land title for the Tŝilhqot'in Nation. Within hours of the decision being announced by the Supreme Court, the Tŝilhqot'in Nation

[29] "The Indigenous Internet." ScienceDaily, 25 Jan 2016. Web. 15 Mar 2019. <http://www.sciencedaily.com/releases/2016/01/160125090810.htm>.

[30] Cisler, Steve. "The Internet and Indigenous Groups." Cultural Survival, Mar 2000. Web. 15 Mar 2019. <http://www.culturalsurvival.org/publications/cultural-survival-quarterly/introduction-internet-and-indigenous-groups>.

[31] York, Geoffrey. "Desert Storm." The Globe and Mail, 30 Sep 2005. Web. 15 Mar 2019. <http://beta.theglobeandmail.com/report-on-business/rob-magazine/desert-storm/article18249363/?ref=http%3A%2F%2Fwww.theglobeandmail.com&page=all>.

[32] Ibid.

[33] Kneen, Jamie. "Mining Mongolia: Ivanhoe, T-shirts, NGOs, and Wikileaks." MiningWatch Canada, 5 Jun 2011. Web. 15 Mar 2019. <http://miningwatch.ca/blog/2011/6/5/mining-mongolia-ivanhoe-t-shirts-ngos-and-wikileaks>.

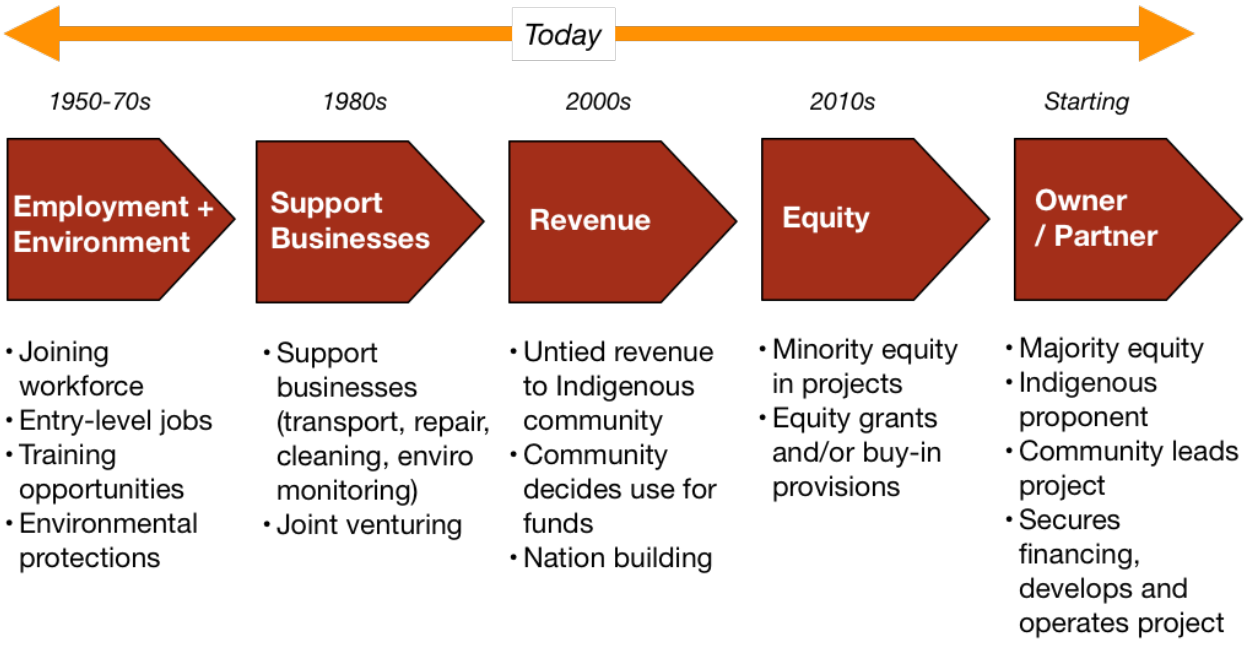
received phone calls from Indigenous groups in Belize who learned of the decision via the internet seeking information about how the Canadian Indigenous nation achieved their victory, and if there was a way that they could replicate the Tŝilhqot'in example in their territories.[34]

INCREASED INDIGENOUS PARTICIPATION IN PROJECTS

Indigenous peoples are capitalizing on these legal, capital and internet-related changes. Impact Benefit Agreements (IBAs) are written participation agreements between Indigenous communities, governments and/or companies to manage project impacts and ensure that environmental impacts are mitigated and that employment and economic benefits accrue to local Indigenous communities. They have become a common way for communities, governments, and project proponents to advance mutual interests around projects.[35]

Viewed from their first use in the 1970s to today, IBAs provide a roadmap of Indigenous peoples' interests in projects.

Figure 3. Evolution of Global Indigenous Impact Benefit Agreements



Source: Nlaka'pamux Legacy Trust.[36]

[34] Interview with the Tŝilhqot'in Central Government.
[35] The Gordon Foundation makes available a free agreement toolkit to assist Indigenous communities to negotiate participation agreements. Gibson, Ginger and Ciaran O'Faircheallaigh. "IBA Community Toolkit." The Gordon Foundation, 25 2015. Web. 15 Mar 2019. <http://gordonfoundation.ca/resource/iba-community-toolkit/>.
[36] Compilation of 100+ Indigenous, government and company participation agreements / Impact Benefit Agreements from around the world.

Timeline of Indigenous Participation in Projects

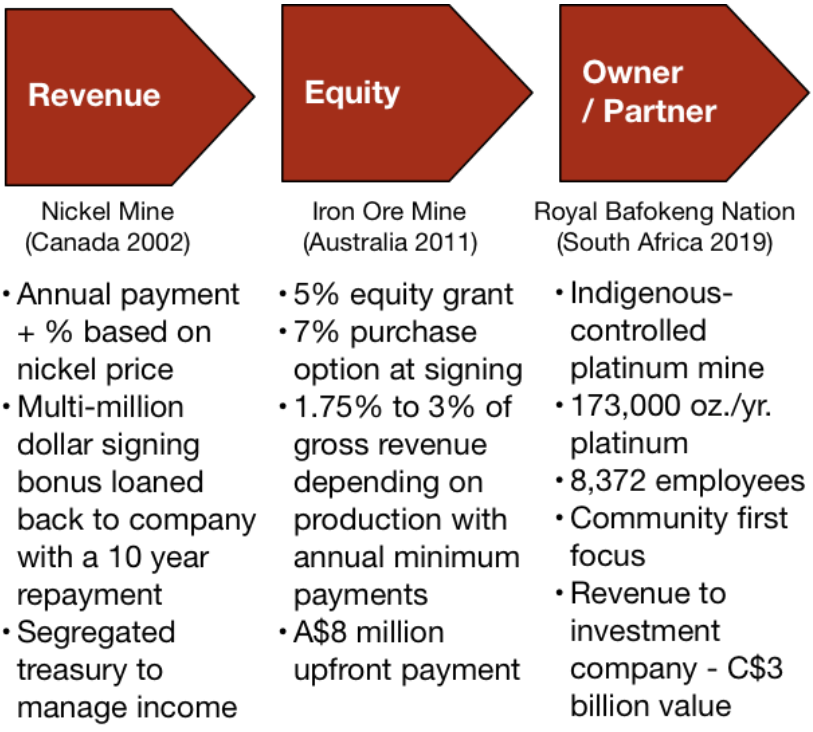
1970s: Employment & Environment

In the early 1970s, early versions of IBAs started to include employment and environmental provisions that encouraged Indigenous participation in entry-level jobs and training opportunities. At that time, environmental protections such as wildlife, food water and air protections, as well as agreements on environmental monitoring and remediation protocols became the new standard in agreements between Indigenous communities, governments, and companies.

1980s: Support Businesses

Around 1980, agreements that fostered the establishment of Indigenous-owned support service businesses to service the projects began to appear. These agreements encouraged Indigenous people to establish employee transportation services, repair contractor agreements, catering/cleaning service companies, etc., to service project construction and operations. In some cases, joint ventures between Indigenous nations and the company/proponent were encouraged as a means for Indigenous people to participate in the economic value of projects.

Figure 4. Indigenous Revenue Sharing, Equity, and Owner/Partner Examples



Source: Nlaka'pamux Legacy Trust.[37]

[37] Ibid.

2000s: Revenue

At the start of the century, revenue sharing clauses from projects to Indigenous communities started to be included in agreements. The early revenue agreement provisions were restricted by companies and governments who would decide how the revenues could be spent. However, funds are now increasingly unrestricted allowing the communities to decide how best to invest for future prosperity.

In Canada, one Indigenous nation's participation agreement for a new nickel mine included provisions that saw the community receive a multi-million dollar signing bonus plus an annual payment and a percentage of mine revenue based on annual mineral production. In order to reduce the cash flow impact on the company in the early years of mine production, the Indigenous nation loaned their proceeds back to the company for ten years at a guaranteed interest rate. The nation subsequently established a segregated treasury to manage the income stream at arms-length from their political operations ensuring that the funds were invested in a non-political manner.[38]

2010s: Equity

In this decade, some communities have negotiated minority, and increasingly majority, equity stakes in projects via grants or buy-in provisions that have seen Indigenous project ownership become a reality. The first Indigenous equity holdings were small, but the examples have been increasing in percentage terms.

In 2011, an Australian iron ore mining operation reached an agreement with an Indigenous nation that included a 5% equity grant with an additional 7% purchase option available at signing. In addition, the community received an A$8 million upfront payment (which they applied to the 7% equity purchase option) along with 1.75% to 3% of annual gross mine revenue scaled to production with annual minimum payments.[39]

Now and Going Forward – Majority Indigenous Equity Ownership/Partnership

There are now numerous examples of Indigenous communities holding majority equity interests in projects. In this way, majority Indigenous equity ownership/partnership is becoming the new norm. In South Africa, the Royal Bafokeng Nation holds a 52% majority controlling interest over a platinum mine and employs 8,372 permanent employees and contractors.[40] While not the result of a negotiated IBA, the Royal Bafokeng started with a minority interest in the mine and slowly increased their ownership over time. Revenue from the mine has been used to set up Royal Bafokeng Holdings (RBH), a community-based investment company

[38] The identity of this Indigenous community is withheld due to non-disclosure agreements signed between the company and the community.
[39] Ibid.
[40] "Royal Bafokeng Holdings." Royal Bafokeng Nation, 2018. Web. 15 Mar 2019. <http://www.bafokengholdings.com/index.html>.

focused on creating intergenerational wealth for their community members. With assets in mining, telecommunications, real estate, oil and gas, mining services and financial services, RBH's current net value is nearly C$3 billion.[41] RBH's commercial acumen and their focus on community improvement has become an inspiration for many Indigenous communities.

ELECTRICITY INFRASTRUCTURE - APPLICATION EXAMPLES

The global trends of Indigenous participation in major projects – from environmental and employment provisions, through to joint venture agreements, to revenue sharing, to minority and eventually majority equity stakes -- is also happening in electricity infrastructure.

The First Nations Major Project Coalition (MPC) was asked by its members to research comparative examples of Indigenous participation in electricity infrastructure for possible adaptation to First Nations across Canada.

Figure 5. Membership, First Nations Major Projects Coalition

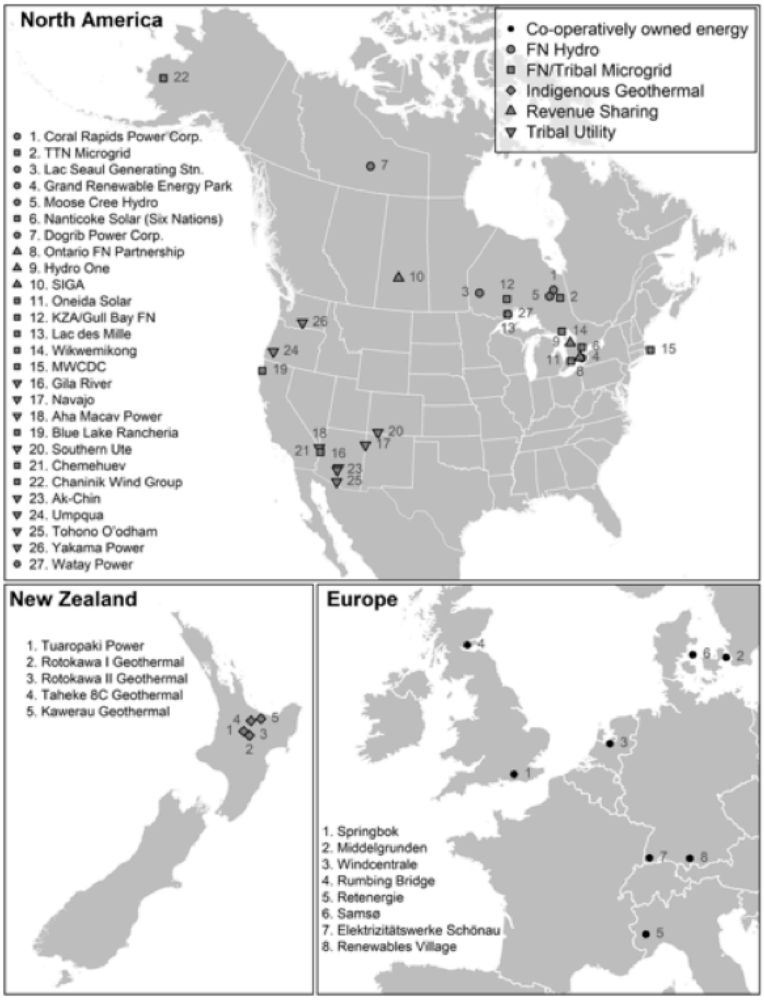
Source: First Nations Major Projects Coalition.[42]

The MPC found over 60 examples of Indigenous and local equity participation in a wide range of electrical infrastructure projects around the world. The complete list of projects is included in Appendix A.

[41] Ibid.

[42] "The First Nations Major Project Coalition." The First Nations Major Project Coalition, Web. 15 Mar 2019. <http://www.fnmpc.ca/structure-governance>.

Figure 6. Examples of Indigenous and Locally-Owned Electrical Infrastructure



SOURCE: First Nations Major Project Coalition

This list of Indigenous and local equity participation examples is growing. While researching this topic, the MPC discovered that the World Bank/International Finance Corporation is compiling a similar database of Indigenous-owned energy projects in the developing world and will be sharing their information with MPC members.

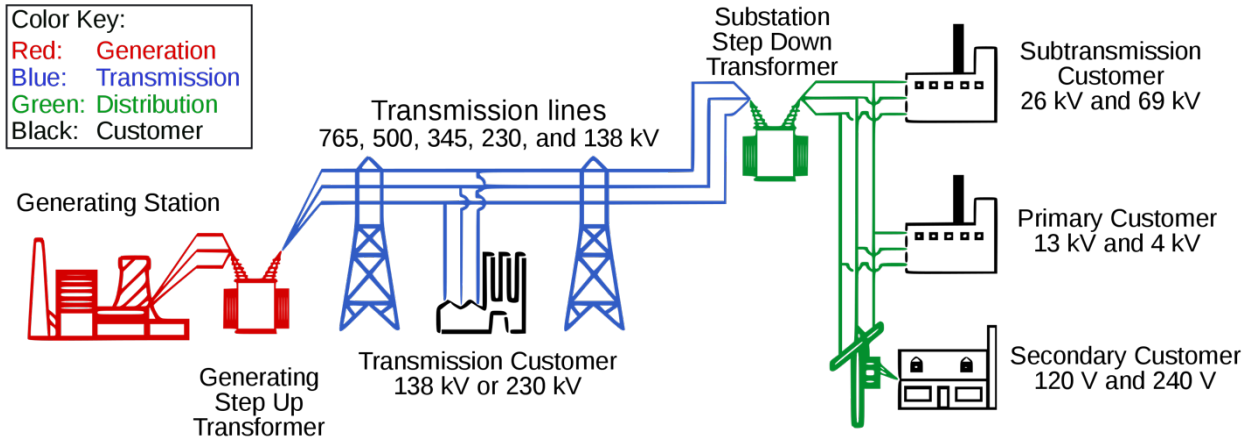
Each of the Indigenous nations and local communities from the 60+ examples has unique reasons for wanting to be owners of electricity infrastructure. Given the wide geographic, technological and political diversity of these examples, it is impossible to detail each of the examples in this report. For brevity, a selected number of examples are highlighted here as case studies. These examples are divided into the categories of co-ownership, generation, transmission, and distribution.

BACKGROUND – ELECTRIC INFRASTRUCTURE

An electric power system is divided into three distinct elements:

- Generation
- Transmission
- Distribution

Figure 7. Electric Power System



SOURCE: United States Department of Energy. Wikipedia.[43]

In the research for this paper, MPC found examples of Indigenous equity ownership in each of these three areas. In some cases, Indigenous nations/communities were co-owners in multiple elements of an electric power system.

CO-OWNERSHIP

A co-owner is an individual or group that shares ownership in an asset with another individual or group. The co-owner of an asset owns a percentage, though the amount may vary according to the ownership agreement. The rights of each owner are typically defined in accordance with a contract or written agreement, which often includes treatment of revenue and tax obligations.[44]

[43] "Electricity generation." Wikipedia, Apr 2004. Web. 15 Mar 2019. <http://en.wikipedia.org/wiki/Electricity_generation#/media/File:Electricity_grid_simple-_North_America.svg>.
[44] Kenton, Will. "Co-Owner." Investopedia, 17 Feb 2018. Web. 15 Mar 2019. <http://www.investopedia.com/terms/c/co-owner.asp>.

Selected Case Studies of Indigenous Co-Ownership

ONTARIO - Hydro One (Partial Privatization and Indigenous Ownership)

In Ontario, 129 First Nations are co-owners in Hydro One, Ontario's electricity transmission and distribution service provider.

In 2015, the Ontario government partially privatized the provincial power utility. As part of the province's reconciliation efforts with Ontario First Nations, the province made 2.4% of the power utility's shares available to all First Nations governments across Ontario. The shares were valued at $18 each and 14,391,012 common shares were offered to Ontario First Nations. The Ontario government owns 47.4% of the common shares with the remainder held by the general public and investment firms.

To assist First Nations governments in acquiring the Hydro One shares, the Ontario government provided the First Nations a low-interest loan of $259,038,216 to be repaid over time from the power utility equity share revenues.[45] The interest rate for the loan is at the province's relevant borrowing rate, plus 15 basis points. The shares sold in the transaction were pledged as security for the loan.[46]

In addition, the Ontario government provided First Nations with seed capital of $29 million to assist in the establishment of a First Nations Indigenous Sovereign Wealth Fund that will hold the shares and manage the resulting revenue of behalf of all Ontario First Nations.[47]

This province-wide model of sharing provincial revenues is becoming more common in Canada. First Nations in British Columbia, Saskatchewan and Ontario each share provincial gaming revenue in a similar all-First Nations manner. This benefit-sharing model is increasingly seen by many First Nations as a form of economic reconciliation.

Questions for further research:

- How are the Hydro One shares divided among First Nation?
- What are the repayment terms of the low-interest loan?
- Can First Nations sell or leverage their shares or the revenue streams?

[45] Rice, Waubgeshig. "Ontario First Nations acquire 14 million shares of Hydro One." CBC - Canadian Broadcasting Corporation, 4 Jan 2018. Web. 15 Mar 2019. <http://www.cbc.ca/news/indigenous/ontario-first-nations-hydro-one-shares-1.4473126>.

[46] "Ontario completes sale of Hydro One shares to First Nations." Torys LLP, 2 Jan 2018. Web. 15 Mar 2019. <http://www.torys.com/work/2016/07/ontario-completes-sale-of-hydro-one-shares-to-first-nations>.

[47] "Ontario Completes Sale of 14 Million Shares of Hydro One to Ontario First Nations." NetNewsLedger, 2 Jan 2018. Web. 15 Mar 2019. <http://www.netnewsledger.com/2018/01/02/ontario-completes-sale-14-million-shares-hydro-one-ontario-first-nations/>.

- What is the management structure of the Ontario First Nations Indigenous Sovereign Wealth Fund?
- How is management appointed to the Fund?
- Is there a regular reporting of the Fund to the Ontario government?
- What are the purposes (if any) of the Fund?
- What legislation was used to implement the Ontario First Nations Sovereign Wealth Fund? Is the legislation specific to First Nations?
- Did some First Nations oppose the share ownership offer?
- Can First Nations divest their Hydro One shares?
- What happens if an equity-owning First Nation initiates legal actions against Hydro One?

NEPAL – Mandated local equity in hydro-electric projects

The Government of Nepal requires hydropower developers to sell up to 10% of their projects to individual community members. With a goal to develop an additional 10,000 MW of power generation capacity over the next ten years, the Nepali Government has estimated that as much as US$439 million in equity could be raised from project-affected communities. For example, in the last three years over US$10 million was raised through local shares by thirteen small to medium hydropower companies.

The International Finance Corporation (IFC) reports that this investment model offers potential to create local ownership and increase public support for hydropower projects. However, as a downside, it also found a widespread lack of understanding among community members of how the market mechanism works, and a lack of effective safeguards to reduce risk to investors. This has been especially true for women and others who are socially, economically and culturally disadvantaged.

Many poor, rural households borrow at high interest rates or sell primary assets to invest in local shares. The study found they often have unrealistic expectations of returns and are unclear on the risk of loss. That could explain why, despite a fall in value since their peak in 2014, demand for local shares continues to grow.[48]

Discussions with the Nepal-based IFC representative indicates that this minimum local equity requirement is being considered for all privately developed infrastructure in the country.

[48] Hermann, Quade. "IFC Study Says Nepal's Most Vulnerable Investors Will Benefit from Improved Safeguards on Local Shares." International Finance Corporation, 17 Sep 2018. Web. 15 Mar 2019. <http://www.ifc.org/wps/wcm/connect/industry_ext_content/ifc_external_corporate_site/hydro+advisory/news/press+releases/ifc+study+says+most+vulnerable+investors++in+nepal+will+benefit+from+improved+safeguards+on+local+shares>.

The IFC report, *Local Shares: An In-depth Examination of the Opportunities and Risks for Local Communities Seeking to Invest in Nepal's Hydropower Projects*, offers more information about the local equity policy.[49]

Questions for further research:

- How is 'local' defined per project? Are only those citizens within a specific radius of a project able to participate?
- Are the community member shares in a specific project able to be sold or transferred? Is there a 'market' for shares to be traded after they are purchased by citizens?
- Are community entities such as town councils, or regional governments, allowed to own shares?
- What community-level education is there for citizens to understand the characteristics of equity ownership?
- How are the projects valued and subsequent share prices set?
- Is there a government regulator who approves projects for the local shareholder process?
- Is there a process for citizens to finance their share purchases?
- Can the shares be used by citizens as collateral for loans or other investments?
- How is a 'local citizen' defined?

FIJI – Energy Fiji Limited (Partial Privatization with Free Shares to Citizens)

In 2017, the Fiji government announced the partial privatization of the Fiji Electric Authority, the national electric utility.

Renamed Energy Fiji Limited (EFL), the government authorized the issuance of 500,000,000 shares of the company with the state retaining 51% ownership. An additional 5% of shares was set aside to be granted for free to Fiji citizens.[50] The remaining 44% of shares are to be made available to general investors. EFL was valued at approximately $1.40 per share. The free shares are non-voting and do not allow shareholders to vote in the company Annual General Meeting or have any say in appointing company directors. Non-voting shareholders do however have the right to receive dividend payments on future company revenues.

[49] "An In-depth Examination of the Opportunities and Risks for Local Communities Seeking to Invest in Nepal's Hydropower Projects." International Finance Corporation, 2018. Web. 15 Mar 2019. <http://www.ifc.org/wps/wcm/connect/14a602d4-080e-4a4c-b200-c57e8d87bb5c/Local+Shares+Report+-+final.pdf?MOD=AJPERES>.

[50] Nath, Rachael. "All domestic FEA customers will be given free shares." FBC News, 12 Mar 2018. Web. 15 Mar 2019. <http://www.fbc.com.fj/fiji/60969/all-domestic-fea-customers-will-be-given-free-shares-ag>.

Figure 8. Nadarivatu Weir

Source: Energy Fiji Limited.[51]

The free shares were distributed at the rate of 150 shares per domestic electricity account holders who are Fijian citizens and residing in Fiji. Account holders whose income is below F$30,000 and had previously applied for EFL subsides were granted 250 shares.

The shares can only be sold or transferred once the company has been listed on the South Pacific Stock Exchange (SPSE).[52] The government anticipates that that the listing is expected to happen no later than March 31, 2020. When that happens, non-voting shareholders will then be able to buy or sell their shares through the SPSE platform.[53]

Eligible Fijians were asked to apply for their free shares via online and mail in applications.[54] The first 40,000 EFL share certificates were issued to the public in June 2018.[55] Dividend payments are directed to the shareholder's bank account or are deducted from their regular monthly EFL bills.

[51] "Nadarivatu Weir." Energy Fiji Limited, Web. 15 Mar 2019. <http://efl.com.fj/about-us/newsroom/photo-gallery/photo-gallery-view/?album=1905>.
[52] "Shares." Energy Fiji Limited, 2019. Web. 15 Mar 2019. <http://efl.com.fj/shares/>.
[53] "Offer Document: An offer of Non-Voting Shares in the capital of Energy Fiji Limited." Energy Fiji Limited, Web. 15 Mar 2019. <http://efl.com.fj/wp-content/uploads/2018/04/offer-letter.pdf>.
[54] "Apply Now." Energy Fiji Limited, Web. 15 Mar 2019. <http://efl.com.fj/shares/apply-now/>.
[55] Kate, Talebula. "First batch of free EFL shares issued." The Fiji Times, 18 Jun 2018. Web. 15 Mar 2019. <http://www.fijitimes.com/first-batch-of-free-efl-shares-issued/>.

Figure 9. EFL Free Share Certificates Issued.

Source: The Fiji Times.[56]

According to conversations with the International Finance Corporation, which actively works with the Fijian government, the public reaction to the free shares has been generally positive but there has been some confusion among some new shareholders that the share certificates are like cheques that can be redeemed for cash. There is now an effort to educate Fijians on the role of the stock market and share certificates.

Questions for further research:

- What happens to future customers once all the allocated shares are subscribed by current customers?
- Will current customers be able to sell their shares without restriction on the stock exchanges? (i.e. to non-Fijians.)
- Will citizen shareholders be protected from stock dilution if the company issues additional shares?
- Will communities or regional governments be able to purchase or hold the citizen stocks?
- What happens to a citizen's stocks in the case of a shareholder's death and closure of the utility account?

[56] Kate, Talebula. "First batch of free EFL shares issued." The Fiji Times, 18 Jun 2018. Web. 15 Mar 2019. <http://www.fijitimes.com/first-batch-of-free-efl-shares-issued/>.

TRANSMISSION

Figure 10. 500 kV Three-Phase Electric Power Transmission Liines

Source: Wikipedia.[57]

Electric power transmission is the bulk movement of electrical energy from a generating site, such as a power plant, to an electrical substation. The interconnected lines which facilitate this movement are known as a transmission network.[58]

Selected Case Studies of Indigenous-Owned Transmission Infrastructure

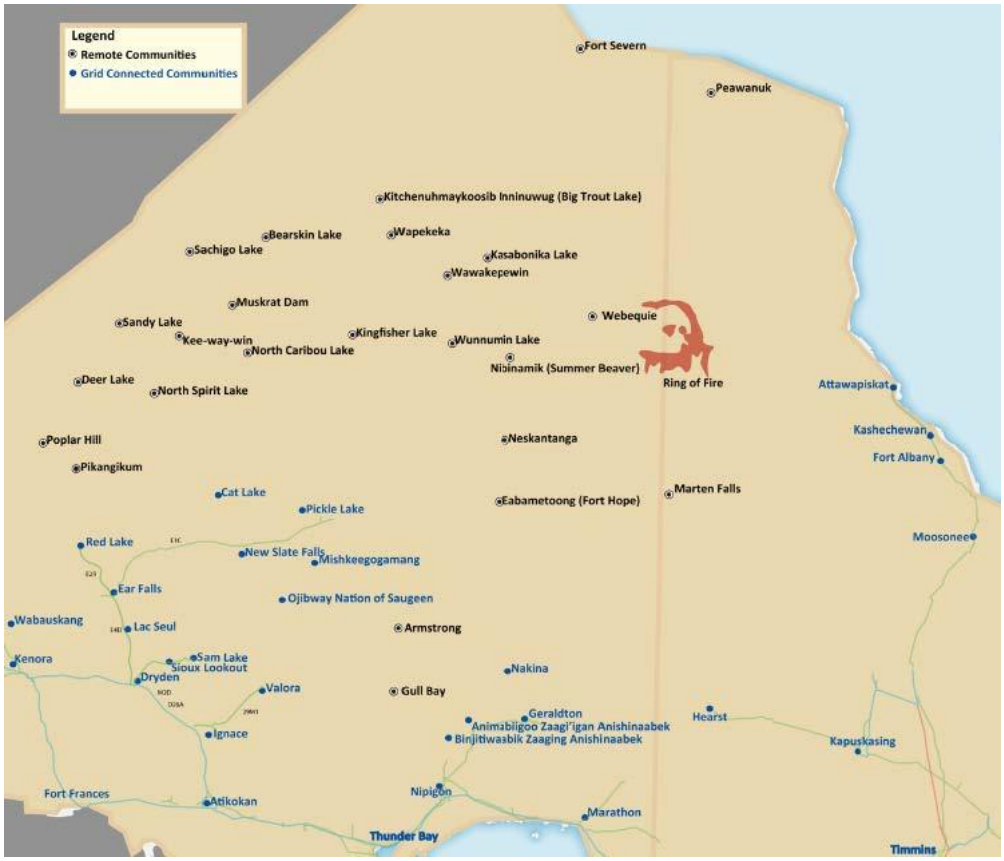
ONTARIO - Wataynikaneyap Power – 24 First Nations-Owned Electricity Transmission Company

Wataynikaneyap (Watay) Power is a 24 First Nation majority-owned (> 51%) electricity transmission company located in Northwest Ontario.[59] Watay was established by

[57] "Electric power transmission." Wikipedia, Web. 15 Mar 2019. <http://en.wikipedia.org/wiki/Electric_power_transmission#/media/File:500kV_3-Phase_Transmission_Lines.png>.
[58] "Electric power transmission." Wikipedia, Web. 15 Mar 2019. <http://en.wikipedia.org/wiki/Electric_power_transmission >.
[59] "Two more Ontario First Nations join project to connect remote communities to hydro grid." The Star, 17 Jan 2019. Web. 15 Mar 2019. <http://www.thestar.com/news/canada/2019/01/17/two-more-ontario-first-nations-join-project-to-connect-remote-communities-to-grid.html>.

Northwestern Ontario First Nations communities to connect 24 First Nations to the main provincial electricity grid. In total, Watay will build (and has begun to build), own and operate 1,800 km of 230 kV, 115 kV, and 44 kV lines transmission lines worth approximately $1.9 billion.[60]

Figure 11. Map of Watay Power Transmission Lines



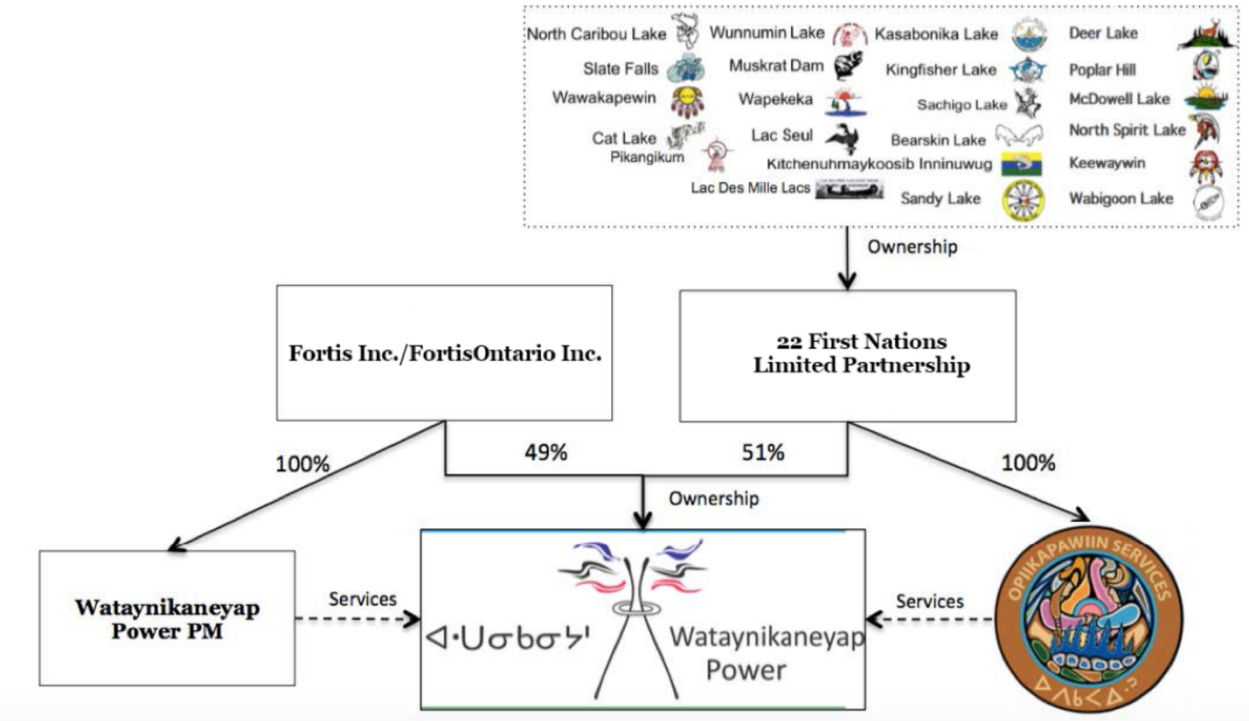
Source: Wataynikaneyap Power.[61]

Watay will, and now does, provide clean, reliable power to communities across Northwestern Ontario, replacing expensive, unreliable, and carbon-intensive diesel generated power. Watay envisions the transmission lines eventually connecting to planned mines and other industrial users in their traditional territories.

[60] "Economy." Wataynikaneyap Power, Web. 15 Mar 2019. <http://www.wataypower.ca/benefits/economy>.
[61] "Background." Wataynikaneyap Power, Web. 15 Mar 2019. <http://www.wataypower.ca/project/background>.

Watay has partnered with Fortis Ontario Inc.[62] and RES Canada[63] to build and operate the initial 300 km and subsequent 1,800 km of power lines. The 24 First Nations will become 100% owners of the project over time.[64]

Figure 12. Ownership Structure of Wataynikaneyap Power



Source: Wataynikaneyap Power.[65]

Questions for further research:

- While operationally the 24 First Nations are equal decision makers in the operation of Wataynikaneyap Power, there are differences in their equity percentage ownership. What was the formula or rational used to determine these percentages?
- Funding for the initial seed funding for the project came from federal and provincial governments. What were the terms to the First Nations and/or corporate partners for this funding?

[62] "FortisOntario Inc." FortisOntario Inc., Web. 15 Mar 2019. <http://www.fortisontario.com/>.
[63] "Canadian renewable energy developer, constructor and operator." RES - Global Renewable Energy Company, Web. 15 Mar 2019. <http://www.res-group.com/en/countries/canada/>.
[64] "The Wataynikaneyap Transmission Project." FortisOntario Inc., Web. 15 Mar 2019. <http://fortisontario.com/node/120>.
[65] "Corporate Structure." Wataynikaneyap Power, Web. 15 Mar 2019. <https://tinyurl.com/y5934uo6>.

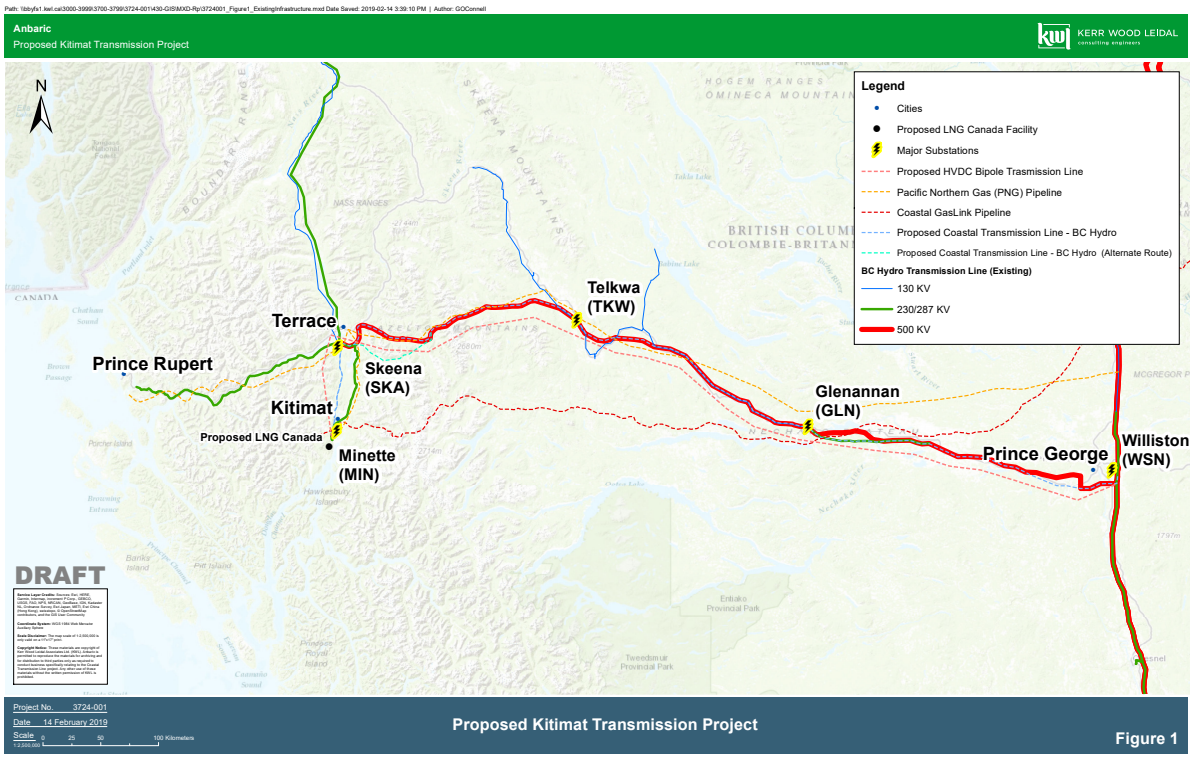
- How are the officers of Wataynikaneyap chosen? Are they appointed by the First Nations' councils, or is there a different process?
- What is the role of the private sector partners in the operations of the company?
- How is capital repaid by Wataynikaneyap? And at what rate?
- Is there an ongoing role for the government funders in the project?
- Is the company active in training current and future officers in corporate governance?
- What is the process for including additional First Nations into the ownership of the company after its initial formation?
- Are there unique tax considerations on the company?
- What is the management role of the non-First Nations partners?
- How are the First Nations members addressing training and employment issues?

BRITISH COLUMBIA – Kitimat Transmission Project

In Northern BC, 16 First Nations are pursing a joint-venture to develop a 530 km electricity transmission project from Prince George to Kitimat. The First Nations propose to develop two, $1.8 billion, 500kV direct current (DC) transmission lines to provide power to the proposed Chevron-Woodside liquid natural gas (LNG) facility in Kitimat, BC. The transmission lines would be a First Nations majority-owned project.

The current Prince George to Kitimat transmission line does not have the capacity to transmit the energy needed to power energy-intensive LNG refrigeration units. The transmission lines would allow the LNG facility to use clean hydroelectric power instead of greenhouse gas (GHG) intensive natural gas-fired power plants to produce LNG. The construction of the two transmission lines will ensure that BC LNG will be the cleanest LNG in the world in terms of GHG per unit.

Figure 13. Kitimat Transmission Project



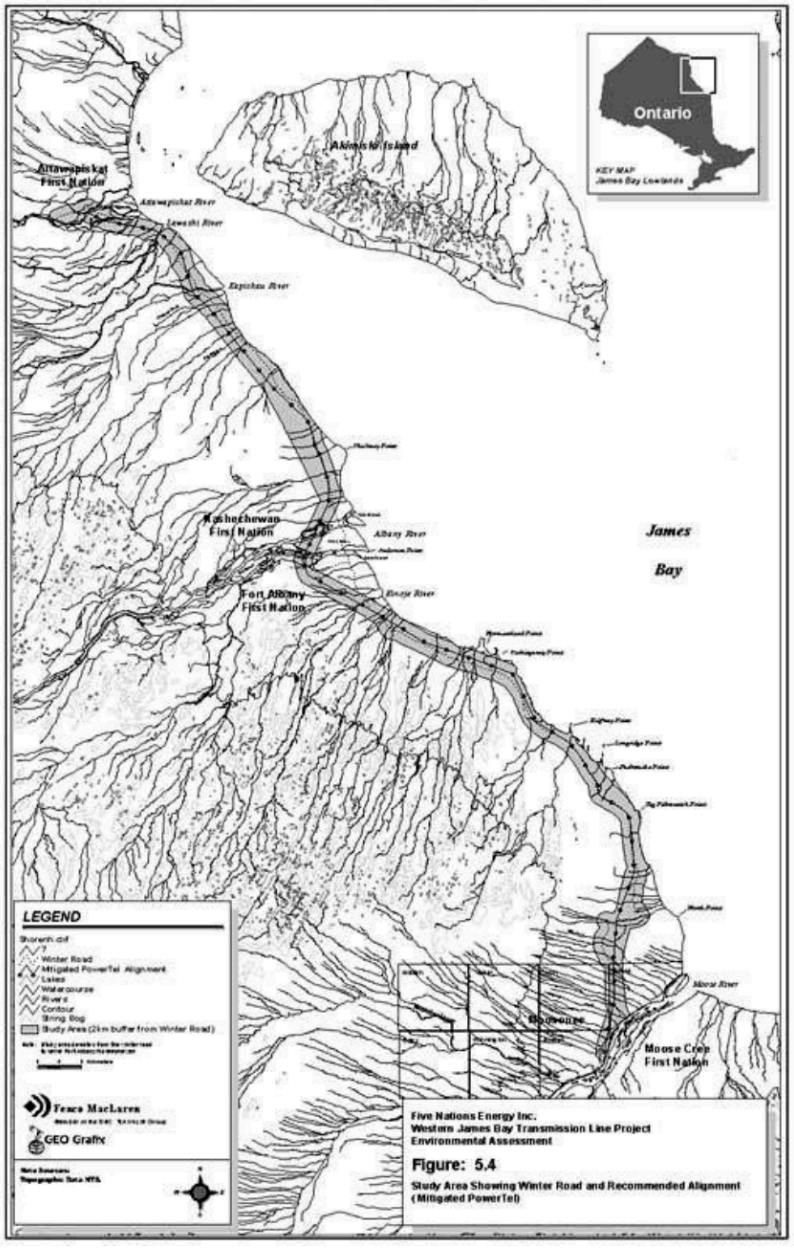
Source: Anbaric Development Partners.

Questions for further research:

- How will the First Nations secure capital for their part of the transmission line joint-venture?
- How will the 16 First Nations work together in a corporate structure?
- What will be the role of the development partners once the project is built?
- Could the transmission lines be extended into Prince Rupert or to other areas to service additional industrial or residential customers? If so, what are other potential projects such as microgrids that could be connected to the line?
- How will the 16 First Nations address the issues of shared traditional territory/overlap?
- Would this project qualify for Infrastructure Bank of Canada funding?
- How will the First Nations raise their part of the capital for the project?
- Does this project require a government loan guarantee? Other government funding?
- What number of jobs and in which areas would the First Nation be eligible?
- How will the project income be distributed to the communities?
- Would the multiple First Nation ownership require a Sovereign Wealth Fund or trust fund to manage/distribute income?

ONTARIO – Five Nations Energy Inc. (Omushkego Ishkotayo Project a.k.a. Western James Bay Transmission Line Project)

Figure 14. Map of Western James Bay Transmission Line Project



Source: Five Nation Energy Inc.[66]

Five Nations Energy Inc. (FNEI) owns the Omushkego Ishkotayo Project (Western James Bay Transmission Line Project), a 270 km 115 kV long transmission line that serves Attawapiskat,

[66] "Map of James Bay Transmission Lines." Five Nations Energy Inc., Web. 15 Mar 2019. <http://www.fivenations.ca/images/MapofJamesBayTransmissionLines.pdf>.

Fort Albany, and Kashechewan First Nations in Northern Ontario. The company is owned equally by Attawapiskat Power Corporation, Fort Albany Power Corporation, and Kashechewan Power Corporation.

The line connects to Ontario Hydro One facilities at Moosonee and follows much the existing winter road, passing through the traditional territories of the Moose Cree, Fort Albany, Kashechewan and the Attawapiskat First Nations. Substations are located in Moosonee, Fort Albany, Kashechewan, and Attawapiskat.[67] FNEI also supplies power to a line that connects the De Beers Canada Victor Diamond Mine project north of Attawapiskat.[68]

Figure 15. Kashechewan Sub Station

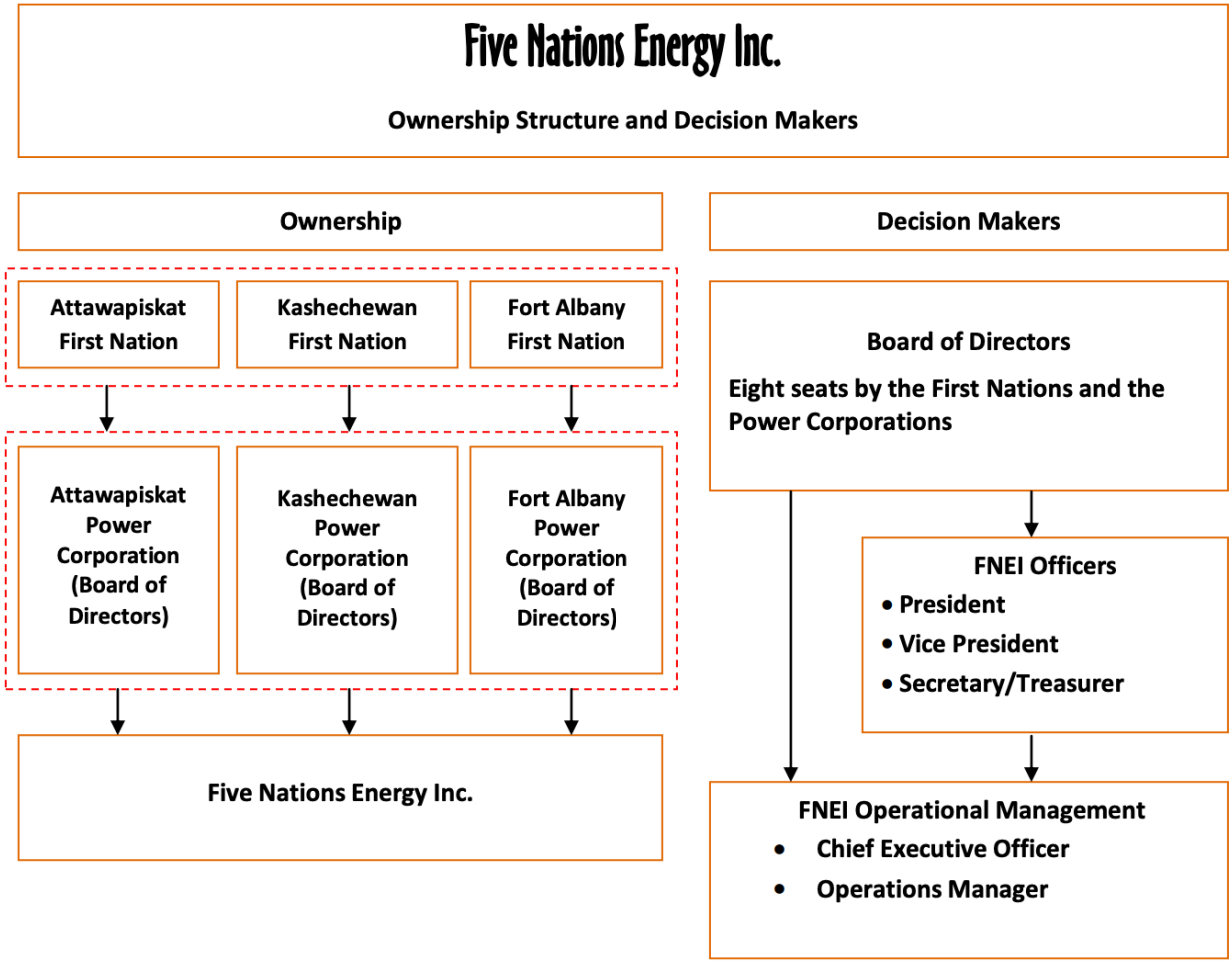
SOURCE: Five Nations Energy Inc.[69]

Prior to the construction the transmission line, power in the communities was produced by unreliable diesel generators. The limited capacity of the diesel generators prevented the communities from expanding housing, water and sewage plants, schools, recreation facilities and other community infrastructure.

[67] "History of Five Nations Energy Inc.." Five Nations Energy Inc., Web. 15 Mar 2019. <http://fivenations.ca/index.php/about8/history-of-fnei>.
[68] "Five Nations Energy Inc.." Five Nations Energy Inc., Web. 15 Mar 2019. <http://www.fivenations.ca/index.php/about8/what-is-fnei>.
[69] "Photo Gallery." Five Nations Energy Inc., Web. 15 Mar 2019. <http://fivenations.ca/index.php/gallery/photo-gallery/category/7-kashechewan>.

The communities reviewed wind, solar, biomass, small hydro, and diesel generation power generation options and concluded that an extension of Ontario's transmission system from Moosonee to the north was the most feasible energy solution. When Ontario Hydro refused to build the transmission line, the communities undertook to build the lines themselves. Until the line was build, approximately 5,000,000 litres of diesel fuel was transported to the communities by barge, winter road and air to produce power.

Figure 16. Corporate Structure of Five Nations Energy Inc.



Source: First Nations Energy Inc.[70]

Under an agreement between the then-named Indian and Northern Affairs Canada (INAC) and Hydro One, the diesel generation plants and the local distribution lines were paid for by INAC and then ownership was transferred to Hydro One. The distribution network operation,

[70] "Organizational Structure." Five Nations Energy Inc., Web. 15 Mar 2019. <http://www.fivenations.ca/images/FNEIOrganizationalChart.pdf>.

maintenance and administration - including the billing and collecting – are now conducted by Hydro One.

FNEI's operations are overseen and regulated by the Ontario Energy Board (OEB) and the Independent Electricity System Operator. FNEI must seek the OEB's approval prior to carrying out any major new construction or establishing the transmission rates that it charges. The OEB also monitors FNEI's financial performance and service quality to its customers.[71]

Questions for further research:

- What was the value of the INAC's contribution to the financing of the FNEI project?
- What was the total cost of the project?
- Is there an ongoing financial contribution to the communities from INAC?
- How are expenses/income allocated to the First Nations?
- Is there an ongoing role for the government funders in the project?
- Is the company active in training its current and future officers in corporate governance?
- How much employment was generated for the First Nations?

[71] "Regulatory Information." Five Nations Energy Inc., Web. 15 Mar 2019. <http://www.fivenations.ca/index.php/regulatory/regulatory-2>.

GENERATION

Electricity generation is the process of generating electric power from sources of primary energy. For electric utilities in the electric power industry, it is the first stage in the delivery of electricity to end users.[72]

Figure 17. Turbo Generator

Source: Wikipedia.[73]

[72] Ibid.

[73] "Electricity generation." Wikipedia, Web. 15 Mar 2019. <http://en.wikipedia.org/wiki/Electricity_generation>.

Selected Case Studies of Indigenous-Owned Electricity Generation

NEW ZEALAND – GEOTHERMAL MAORI TAUHARA NORTH NO 2

Tauhara North No 2 is an Indigenous trust owned by the New Zealand Maori. Currently valued at C$513 million,[74] the trust is an equity partner in two geothermal power generation plants with Mercury NZ,[75] a majority-owned government electricity generation and electricity retailing company and their subsidiary Mighty River Power. The two plants deliver sufficient energy to the national grid to power 265,000 homes.[76]

The trust provides grants in the areas of education, health, funeral expenses, maintenance and upkeep of Marae (traditional meeting places), youth development, sports, arts, and Maori cultural activities.[77]

Revenues from Trust's energy business, farming and other trust ventures are channeled through a charitable company, giving preference to the 6,000 owners and descendants of the Trust, then persons belonging to the iwi (tribe) Ngāti Tahu-Ngati Whaoa, and finally to the public of New Zealand.[78]

In 2015 Mercury NZ and the trust were finalists in the Deloitte Energy Excellence Awards in the category of "Community Initiative of the Year." According to the entry document for that award:

> *"Both the trust and Mighty River Power say the initiative has gone far beyond an `intervention' and is proving to be a long-term, community-wide, social turn-around project with broader benefits for the region and New Zealand as a whole.*
>
> *As well as specific health and educational programs, the local community has gained a greater sense of local resource ownership, and sustainable use, from their direct participation in geothermal generation development.*

[74] "Māori half-billion-dollar mega trust buys popular Rotorua tourist attraction for whopping $15 million." 1NewsNow – TVNZ. 24 Nov 2018. Web. 15 Mar 2019. <http://www.tvnz.co.nz/one-news/new-zealand/m-ori-half-billion-dollar-mega-trust-buys-popular-rotorua-tourist-attraction-whopping-15-million?variant=tb_v_1>.
[75] Mercury NZ, Web. 15 Mar 2019. <https://www.mercury.co.nz/>.
[76] "Indigenous Peoples Steaming Ahead." United Nations Social Development Network, 4 Aug 2016. Web. 15 Mar 2019. <http://unsdn.org/2016/08/04/indigenous-people-steaming-ahead/>.
[77] Ibid.
[78] Interview with Tauhara North No. 2 Trust officials.

The trust and the company say the scale and breadth of the community's benefits marks the initiative out from others.

Community grants, ranging from dental treatments and eye tests through to school tuition and tertiary scholarships, are expected to total $1.6 million this year.

While the partnerships are underpinned by aligned values, the trust says an unexpected benefit of the partnership has been the increased interconnectedness it has achieved among beneficiaries and other stakeholders."[79]

Figure 18. Turbine Rotor at Nga Awa Purua Geothermal Power Station

SOURCE: Waikato Times.[80]

The first plant, Rotokawa I, is a 34 MW[81] 50/50 joint venture between Mercury NZ Limited and Tauhara North No. 2 Trust.

[79] "Indigenous Peoples Steaming Ahead." United Nations Social Development Network, 4 Aug 2016. Web. 15 Mar 2019. <http://unsdn.org/2016/08/04/indigenous-people-steaming-ahead/>.
[80] Steven, Robert. "GNS scientists say geothermal energy could help reduce global warming." Stuff.co.nz, 8 Aug 2018. Web. 15 Mar 2019. <http://www.stuff.co.nz/waikato-times/news/taupo-times/105723272/gns-science-scientists-say-geothermal-energy-could-help-reduce-global-warming>.
[81] "Rotokawa Power Station." Wikipedia, Web. 15 Mar 2019. <http://en.wikipedia.org/wiki/Rotokawa_Power_Station>.

Figure 19. Nga Awa Purua Geothermal Power Station

SOURCE: Mercury NZ.[82]

The second plant, Nga Awa Purua Power Station (a.k.a. Rotokawa II Geothermal Power Station), is a 162 MW facility co-owned by Mighty River Power, a subsidiary of Mercury NZ (65%) and Tauhara North No. 2 Trust (35%). Nga Awa Purura Power Station is New Zealand's second largest geothermal power facility is currently the largest single turbine geothermal power station in the world.[83]

[82] Richter, Alexander. "Successful maintenance work concluded at Nga Awa Purua geothermal plant, NZ." Geothermal Energy News. Think GeoEnergy, 13 Nov 2017. Web. 15 Mar 2019. <http://www.thinkgeoenergy.com/successful-maintenance-work-concluded-at-nga-awa-purua-geothermal-plant-nz/>.

[83] "Nga Awa Purua Power Station." Wikipedia, Web. 15 Mar 2019. <http://en.wikipedia.org/wiki/Nga_Awa_Purua_Power_Station>.

Figure 20. Tauhara North No. 2 Trust

SOURCE: United Nations Social Development Network.[84]

Questions for further research:

- There are 800 individuals who qualify as benefit recipients or owners of the Trust. From phone conversations with Tauhara North No. 2 Trust officials, these individuals are responsible to distribute benefits to other people affiliated with the Trust. This appears to be similar to Canada's Status Indian designation but further information is required on how this operates.
- How much annual revenue is earned by the Trust?
- How are revenues distributed to Trust beneficiaries?
- What is the governance structure with the other co-owners of the plants?
- What is the tax structure of the Trust? Is there a separate legislative regime for Indigenous trusts in New Zealand?
- How are the Trustees and/or company directors selected?
- What is the involvement of the Tauhara North No. 2 Trustees in Mercury NZ?

[84] "Indigenous Peoples Steaming Ahead." United Nations Social Development Network, 4 Aug 2016. Web. 15 Mar 2019. <http://unsdn.org/2016/08/04/indigenous-people-steaming-ahead/>.

ONTARIO – CORAL RAPIDS POWER CORPORATION – TAYKWA TAGAMOU NATION

Coral Rapids Power Corporation, a Taykwa Tagamou Nation-owned company, in a joint venture with Ontario Power Generation (OPG), is a 33% owner of a run-of-river 28 MW hydroelectric generating facility in Northern Ontario. The $300 million project will produce enough power for 25,000 homes and provide the community with a reliable revenue stream for community investments. More than 200 people worked on the planning and construction of the facility including approximately 50 Indigenous individuals. Indigenous contractors supplied $50 million worth of goods and services to the project.[85] According to conversations with Coral Rapid Power Corporation officials, power generated at the facility is sold to the provincial power grid at an undisclosed but "extremely lucrative" rate.[86]

Figure 21. TTN Community Members and Elders Helping to Open the Generating Station

Source: Coral Rapids Power Corporation.[87]

[85] "Coral Rapids Power Corporation." Taykwa Tagamou Nation, Web. 15 Mar 2019. <http://www.coralrapidspower.com/wp/>.
[86] Phone conversation with Coral Rapid Power Corporation officials. January 17, 2019.
[87] "Photos." Coral Rapids Power Corporation, Web. 15 Mar 2019. <http://www.coralrapidspower.com/wp/?attachment_id=386>.

Figure 22. Coral Rapids Powerhouse

Source: Coral Rapids Power Corporation.[88]

Initial capital for the First Nation portion of the project came from an OPG grievance settlement for hydroelectric facilities built without community consultation in Taykwa Tagamou territory from the 1900-1980s, and from funding applications to government programs. Once OPG was a partner, capital from other sources became available.

Questions for further research:

- How much initial capital was invested in the project by the First Nation?
- How is the 33% equity interest held? Is it in a trust or directly held by the First Nation?
- What is the board structure of Coral Rapids Power Corp.?
- Has the First Nations leveraged their cash flow from the project?
- Are there limitations on how money generated from the project can be used?
- What are the tax implications project cash flows on the First Nation?
- Is the First Nation considering additional power projects?

[88] Ibid.

BRITISH COLUMBIA – KENNY DAM FACILITY (proposed)

Figure 23. Kenney Dam

Source: RioTinto.[89]

Four Northwest BC First Nations – Chelslatta, Nadleh Whut'en, Saik'uz, and Stellat'en -- are proposing the construction of a 45 MW, $250 million hydroelectric generation water release facility at the Kenney Dam on RioTinto Alcan's[90] hydro reservoir near Burns Lake, BC. The construction of the facility would alleviate the negative effects of the current annual water release practices from the dam and would provide the First Nations with a revenue stream from the sale of electricity generated by the station.

Kenny Dam is one of ten dams on the Nechako River system that form the Nachako Reservoir, a 233 km long water facility that provides hydroelectric power to RioTinto Alcan's Kitimat smelter.[91] Constructed in 1952, the reservoir inundated a chain of lakes and rivers resulting in

[89] "Images." Rio Tinto, Web. 15 Mar 2019. <http://www.riotinto.com/images/img_BCWorks_nechako.jpg>.
[90] RioTinto, Web. 15 Mar 2019. <http://www.riotinto.com/>.
[91] "Nechako Reservoir." Rio Tinto, Web. 15 Mar 2019. <http://www.riotinto.com/canada/bcworks/nechako-reservoir-17850.aspx>.

the displacement of the Chelslatta First Nation and has negatively impacted the Nadleh Whut'en, Saik'uz and Stellat'en First Nations downstream on the Nechako River.

Each spring water levels in the reservoir rise and RioTinto Alcan releases large volumes of water from the facility via a single flood gate at one of the dams. The resulting rush of water scours the Nechako River bed destroying salmon and steelhead habit. During times of lower water volume, the lack of constant water flow raises river temperatures and results in the death of juvenile salmon and other aquatic life.

Coordinated by the First Nation Major Project Coalition, the four First Nations have engaged Kiewit Corporation and[92] BluEarth Renewables[93] as partners to develop the project.

Questions for further research:

- What is RioTinto Alcan's perspective on the water release facility?
- What is the internal sharing formula for the four First Nations?
- Is there an agreement to sell the power to BC Hydro or another customer?
- Are there provisions under the original reservoir agreement for First Nations water allocations?
- What is the process for environmental assessment if the First Nations are the project proponents?
- Would this project qualify for Infrastructure Bank of Canada funding?
- How will the First Nations raise their part of the capital for the project?
- Does this project require a government loan guarantee?
- What number of jobs and in which areas would the First Nation be filling?
- How will the project income be distributed to the communities?
- Would multiple First Nations ownership require a Sovereign Wealth Fund or trust fund to manage/distribute income?
- How will other First Nations join the project if desired?

[92] Kiewit, Web. 15 Mar 2019. <http://www.kiewit.com/>.
[93] BluEarth Renewables, Web. 15 Mar 2019. <http://bluearthrenewables.com/>.

DISTRIBUTION

Selected Case Studies of Indigenous-Owned Distribution/Microgrids

Included in this section is one example of electric power distribution and one example of a microgrid. Electric power distribution is the final stage in the delivery of electric power; it carries electricity from the transmission system to individual consumers.[94] This includes power wholesaling, buying power from a larger electric utility to serve residential and industrial clients within the boundaries of a smaller region like a reservation or reserve. Microgrids are discrete energy systems (including demand management, storage, and generation) that usually consist of distributed energy sources (often solar, wind or both) and loads capable of operating in parallel with, or independently from, the main power grid.[95]

In Canada, there are an increasing number of Indigenous-owned, microgrid-type initiatives that are central to remote reserve communities being able to replace expensive and polluting diesel power generation. A number of these microgrid projects are noted in Appendix A.

Individually, these smaller community distribution systems and microgrid endeavors do not meet MPC's definition of a major project. When 'bundled' together into a collection of energy and distribution systems, they could form a version of an Indigenous-owned power utility. In the United States, some Native American communities are starting to build Indigenous utilities that include electricity, cable, telecommunications plus water delivery to achieve better economies of scale.

USA - WASHINGTON – TRIBAL UTILITY - YAKAMA POWER

Yakama Power[96] is a tribally-owned wholesale power and transmission company located in Washington State. Yakama Power's current customers are mostly tribal members and entities, including the Yakama Nation Legends Casino, the Tribal Campus, and Yakama Forest Products. Yakama Power plans eventually to serve all electric loads within the 1.4 million acre Yakama Reservation.

Yakama Power's Board of Directors consists of seven of the fourteen tribal council members. Yakama Power is instrumental in the Yakama Nation's efforts to provide energy related development and partnerships. In 2007, the Yakama Nation entered into a settlement with Grant County Public Utility District regarding the relicensing of two Columbia River dams, known as the Priest Rapids Project. This settlement provided some start-up funds for Yakama Power and created a partnership between the entities through which they work together on renewable energy development projects and pursue other opportunities. Eventually, Yakama

[94] "Electric power distribution." Wikipedia, Web. 15 Mar 2019. <http://en.wikipedia.org/wiki/Electric_power_distribution>.
[95] Kroposki, Benjamin, Robert Lesseter, Toshifumi Ise, Satoshi Morozumi, Stavros Papathanassiou and Nikos Hatziargyriou." IEEE Power and Energy Magazine." Making microgrids work 2 May. 2008: 40-53. Print.
[96] Yakama Power, Web. 15 Mar 2019. <http://www.yakamapower.com/>.

Power could directly receive electricity from the Priest Rapids Project to serve utility customers.[97]

Figure 24. Yakama Power Crews Place Utility Poles

Source: Yakima Herald-Republic.[98]

In 2006, Washington State Utilities and Transportation Commission approved the transfer of distribution assets from PacifiCorp[99] to Yakama Power, which allowed Yakama Power to meet Bonneville Power Authority[100] (BPA) "Standards for Service". The company began serving electricity to retail customers using distribution facilities acquired from PacifiCorp and other facilities constructed by Yakama Power.

Questions for further research:

- Are there plans for Yakama Power to provide power services off the reservation?
- How is income from the company distributed to tribal members?
- What training programs does the company provide tribal members?

[97] "Tribal Authority Process - Case Studies: The Conversion of On-reservation Electric Utilities to Tribal Ownership and Operation." U.S. Department of Energy: Tribal Energy Program , Sep 2010. Web. 15 Mar 2019. <http://www.energy.gov/sites/prod/files/2016/04/f30/tribal_authority_case_studies_report.pdf>.
[98] Prengaman, Kate. "Yakama Power eyeing $24M expansion deal." Yakima Herald, 23 Jul 2016. Web. 15 Mar 2019. <http://www.yakimaherald.com/news/local/yakama-power-eyeing-m-expansion-deal/article_4508e85c-513e-11e6-8a09-a3f1d8914d86.html>.
[99] PacificCorp, Web. 15 Mar 2019. <https://www.pacificorp.com/>.
[100] Bonneville Power Authority, Web. 15 Mar 2019. <https://www.bpa.gov/Pages/home.aspx>.

- Does Yakama Power have access to preferred rate capital? If so, how was that negotiated?
- Are their plans for the company to acquire an equity stake in power generation assets?

ONTARIO - Grand Renewable Energy Park

The Grand Renewable Energy Park consists of a 67 turbine, 149 MW wind farm and a 100MW photovoltaic (PV) solar facility. The wind farm began operations in December 2014 and the solar facility in March 2015. The majority of the power generation equipment is located off-reserve but within Six Nation's traditional territory.

The Park is a joint venture between Samsung Renewable Energy, Pattern Energy and the Six Nations of the Grand River Development Corporation. The value of the Park is approximately $7 billion, of which Six Nations is a 10% owner.

The power generated by the two projects, is collected at a collector substation, and is then transmitted to the Ontario electricity grid through a 20km-long, 230kV overhead transmission line. The 149 MW and 100 MW facilities produce clean, renewable electricity equal to the needs of 67,000 Ontario homes each year. The Grand Renewable Energy Park sells 100% of its electrical output to the provincial crown utility network under a 20-year power purchase agreement.[101]

Questions for further research:

- What was the capital source for the Six River's 10% equity share? Was it a First Nations buy-in, a grant, or both?
- Is there ongoing government support for the project?
- Is there provision for the First Nation to increase their equity stake?
- Does Six Nations have a governance role in the management of the partnership?
- How does Six Nations distribute revenues among their membership?
- Are there specific tax provision arrangements for the First Nations and their partners?

CONCLUSION

Indigenous communities, working individually or in collectives like the First Nations Major Project Coalition, have expressed their desire to be full participants in all aspects of major projects and infrastructure within their traditional territories.

[101] "Harvesting the Wind for Ontario." Grand Renewable Wind, Web. 15 Mar 2019. <http://grandrenewablewind.com/>.

The Indigenous-owned electricity infrastructure projects like those presented in this paper are informing Indigenous peoples about what is possible for projects on their lands.

Indigenous people are reaching out to and collaborating with other Indigenous peoples to access ideas, skills, talent, capital, media, political resources, and comparative experiences to protect and enhance their lives and their community members.

The planning, construction, operation and ownership of major projects and infrastructure without Indigenous participation is no longer acceptable to Indigenous communities. The desire by Indigenous people to advance their homelands and communities with environmental protections, employment, base infrastructure, education and income that major projects can provide will continue to drive communities to pursue greater involvement in projects in their traditional territories.

APPENDIX A (Examples of Indigenous and Community Ownership of Energy Infrastructure)

Table 1. Canadian Examples

Name	Type	Location	Utility Type	Formed	% Owner
Bruce to Milton Transmission Line	Transmission	Southampton, Ontario	Hydro	2013	30%
Coral Rapids Power Corporation (Taykwa Tagamou Nation)	Generation	Cochrane, Ontario	Hydro	2017	100%
Five Nations Energy Inc. (Western James Bay Transmission Line project)	Transmission	Fort Albany, Ontario	Hydro	2001	100%
Grand Bend Wind Farm	Generation	Grand Bend Ontario	Wind	2016	50%
Grand Renewable Energy Park	Transmission and (mostly) Microgrid	Haldimand County, Ontario	Wind-solar microgrid	2015	10%
Hydro One	Transmission and Generation	Ontario	Hydroelectric	2017	2.40%
Keeyask Hydropower Limited Partnership	Generation	Thompson, Manitoba	Hydro	2012 (under construction)	25%
Kiashke Zaaging Anishinaabek (KZA) / Gull Bay First Nation	Microgrid	Thunder Bay, Ontario	Solar microgrid	2018	100%
Kwagis Power	Generation	Namgis First Nation, BC	Hydro	2006	25%
Kwoiek Creek Hydro	Generation	Kanaka Bar Indian Band	Hydro	2014	50%
Lac des Mille Lacs First Nation	Microgrid	Thunder Bay, Ontario	Solar microgrid	Pending	n/a
Lac Seul/ Obishikokaang Waasiganikewigamig Generating Station	Generation	Ear Falls, Ontario	Hydro	2009	25%
Lake Superior Link Project/East-West Tie Transmission Line	Transmission	Thunder Bay, Ontario	Hydro	2019 (proposed construction start date)	20%
McLean's Mountain Wind Farm	Generation	Manitoulin Island, Ontario	Wind	2014	50%

Mesgi'g Ugju's'n Wind Farm	Generation	Gesgapegiag, Quebec	Wind	2019 (under construction)	50%
Moose Cree First Nation (Lower Mattagami River Hydroelectric Project)	Generation (dam revival)	Kapuskasing, Ontario	Hydro	2005	25%
Nimschu Iskudow Inc	Generation	Whapmagoostui, Quebec	Wind	Pending	n/a
Oldman River Hydroelectric Plant	Generation	Pincher Creek, Alberta	Hydro	2003	25%
Oneida Nation of the Thames	Microgrid	Southwold, Ontario	Solar microgrid	2016	n/a
Ontario First Nations Ltd. Partnership	Non-power related	Ontario	Gaming Revenue Sharing	2006	1.70%
Piikani Nation	Transmission	Brocket, Alberta	Hydro (assumed)	2010	51%
Saskatchewan Indian Gaming Authority (SIGA)	Non-power related	Saskatchewan	Gaming Revenue Sharing	1995	50%
Six Nations Development Corporation (Nanticoke Solar)	Microgrid	Lake Erie	Solar	2017	n/a
Taykwa Tagamou Nation	Microgrid	Cochrane, Ontario	Solar microgrid	2016	n/a
Tazi Twé	Generation	Black Lake, Saskatchewan	Hydro	Pending	30%
Tlicho Investment Corp (Dogrib Power Corp.)	Generation	NWT	Hydroelectric	1996	100%
Upnit Power Corporation	Generation	Hupucasath First Nation, British Columbia	Hydro (run of river)	2006	72.50% (10% to Ucluelet Nation)
Walden North	Generation	Cayoose Creek, British Columbia	Hydro (run of river)	2016 (acquisition)	n/a
Wataynikaneyap Power LP	Transmission	Northern Ontario	Hydro		51%
Wikwemikong Unceded Indian Reserve	Microgrid	Wikwemikong, Ontario	Solar-microgrid	2016 (funded)	n/a
Winchie Creek Hydro	Generation	Tla-o-qui-aht First Nation, BC (Tofino)	Hydro (run of river)	2018	100%

Wuskwatim Power Limited Partnership	Generation	Thompson, Manitoba	Hydro	2012 (under construction)	33%

Table 2. United States Examples

Name	Type	Location	Utility Type	Formed	% Owner
7G Renewable Energy	Generation	Pine Ridge, South Dakota	Wind	2018	51%
Aha Macav Power Service	Transmission and (mostly) Wholesale power & services	Fort Mojave Reservation, California	Electricity & Natural Gas	1991	100%
Ak-Chin Indian Community Electric Utility Authority	Wholesale power & services	Maricopa, Arizona	Hydro + other sources	1997	100%
Blue Lake Rancheria	Microgrid	Humboldt County, California	Solar microgrid	2016	n/a
Chaninik Wind Group	Microgrid	Lower Kuskokwim, Alaska	Integrated microgrid system	2005	100%
Chemehuevi Indian Tribe	Microgrid	Lake Havasu, California	Solar microgrid	2017	0%
Gila River Indian Community Utility Authority	Wholesale power & services	Chandler, Arizona	Hydro	1998	100%
Mashpee Wampanoag Community Development Corp (MWCDC)	Microgrid	Cape Cod, Massachusetts	Solar microgrid	Pending	n/a
Navajo Tribal Utility Authority	Wholesale power & services	Fort Defiance, AZ	Electricity, water, natural gas, wastewater, solar	1959	100%
Pelton/Round Butte Hydroelectric Project	Transmission and (mostly) Generation	Jefferson County, Oregon	Hydro	2001	100%
Southern Ute Indian Tribe Department of Energy	Generation	Ignacio, Colorado	Natural Gas; Solar (Ground mounted photovoltaic)	2017	100%

Name	Type	Location	Utility Type	Formed	% Owner
Tohono O'odham Utility Authority	Wholesale power & services	Tohono O'odham Nation. Arizona	Electric, water, wastewater, and telephone	1960	100%
Umpqua Indian Utility Cooperative	Wholesale power & services	Roseburg, Oregon	Hydro	2001	100%
Yakama Power	Transmission, wholesale power, & services	Toppenish, Washington	Hydro	2000	100%

Table 3. International Examples

Name	Type	Location	Utility Type	Formed	% Owner
De Zuidlob/Windcentrale	Generation	De Zuidlob, Netherlands	Wind	2012	n/a
Elektrizitätswerke Schönau	Generation	Schönau, Germany	Electricity & Gas	1991	n/a
Hepburn Wind Project	Generation	Leonards Hill, Australia	Wind	2008	n/a
Middelgrunden	Generation	Copenhagen, Denmark (offshore)	Wind	1997	50%
Nga Awa Purua Geothermal Power Station (NZ)	Generation	New Zealand	Geothermal	2016	35%
Renewables Village	Generation	Wildpoldsried, Germany	Wind, biogas, photovoltaic, hydroelectric	1997	n/a
Retenergie	Generation	Piedmont, Italy	Solar	2007	n/a
Rotokawa II Geothermal Power Station Project (NZ)	Generation	New Zealand	Geothermal	2010	35%
Royal Bafokeng Platinum	Non-power related (mining)	South Africa	Mining	1998	52%
Rumbling Bridge Community Hydro Society	Generation	Kinross, Scotland	Hydro	2016	n/a
Samsø	Generation	Samsø, Denmark	Wind	1998	n/a
Springbok Sustainable Wood Heat Co-operative	Generation	Alfold, England	Biomass	2016	n/a

Name	Type	Location	Utility Type	Formed	% Owner
Taheke 8C Geothermal	Generation	New Zealand	Geothermal	2010	50%
Te Ahi O Maui geothermal plant	Transmission and Generation (mostly)	New Zealand	Geothermal	2018	6%
Tuaropaki Power Company (NZ)	Generation	New Zealand	Geothermal	1994	75%