

Atlantic First Nation Environmental Awareness Project

***Assessing Challenges and Needs for First Nations
Economic and Renewable Energy Opportunities***

Final Report

Prepared for the Atlantic Policy Congress of First Nations Chiefs



Submitted March 31, 2017 by:

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Forward by Atlantic Policy Congress of First Nations Chiefs Secretariat

This research project was done for the purpose of getting a sample of interests, capabilities, and plans for Atlantic and Gaspe First Nation communities and organizations with respect to renewable energy. It is a snapshot in time and will hopefully lead to informed decision-making for the APC and our Chiefs. The results are based on the generous information provided by our participants and we will plan to do more work in this area to enable successful renewable energy projects in our region.

Woliwon,

Ken Paul

APC Director of Fisheries and Integrated Resources

Introduction – renewable energy and economic development in a changing climate

Climate change is the most pressing environmental issue of our generation, affecting Canadians on a daily basis. Canada's Indigenous people are more disproportionately affected by the impacts of climate change and Atlantic First Nations are no exception – coastal erosion on Lennox Island and the Gaspé Peninsula, changes to fish habitat in the rivers of New Brunswick, extreme weather events in Newfoundland, and increased pests and impacts to forest habitat in Nova Scotia are but a few examples.

As our governments adopt policies to reduce greenhouse gas emissions, the energy sector is a clear target. As a result, renewable energy targets are being implemented to curb climate change and 'green' local economies. Both Nova Scotia and New Brunswick aim to have 40% renewable energy generation by 2020 while Prince Edward Island is currently sourcing over 30% of its power generation from wind farms and Newfoundland already generates over 85% of its electricity from hydropower.

With renewable energy targets in place, Atlantic First Nations are poised to participate in the greening of the grid. As expressed in interviews with First Nations' Band leadership for this research, participation in renewable energy projects aligns with the mandate of First Nations on various fronts by way of environmental goals and greenhouse gas reductions, economic development, jobs and training, and increased project development capacity. But for many Indigenous communities, involvement in renewables now goes beyond jobs and financial compensation to 'partnership' and 'ownership' roles that allow for deeper and longer-lasting benefit (Association of Power Producers, 2016).

According to Chris Henderson, author of *Aboriginal Power*, there are over 250 Indigenous-led or partnered renewable energy projects in Canada who are benefiting from steady revenue streams (Personal Communications, 02/22/2017). In Atlantic Canada, Nova Scotia and New Brunswick are home to small-scale First Nations-led wind and solar projects currently in operation or under development while the 150 MW *Mesgi'g Ugju's'n Wind Farm* in Gaspésie is one among an increasing number of large-scale Indigenous-owned projects that are dotting the Atlantic energy landscape.

Lumos Energy, a clean energy advisor to Indigenous communities, states that "*Potential exists to develop over 2,500 MW of Indigenous renewable energy, along with new clean technologies and associated infrastructure, by 2024*" (Aboriginal Power Information, 2016). To do so, governments must foster Indigenous participation in the renewables sector and eliminate barriers to procurement while Indigenous communities must ready themselves opportunities by way of capacity building. This report highlights the potential for Atlantic First Nations' renewable energy development and the challenges and opportunities for participating in the sector.



Mesgi'g Ugju's'n Wind Farm. Image from www.muwindfarm.com

Research methodology

The **goal** of this research project was to identify the challenges, needs and gaps as well as opportunities that exist for First Nations participation in major environmental projects, in this case renewable energy developments, and provide recommendations to both communities and government on ways to better support the development of such projects by Atlantic First Nations.

The project used a mixed-methodology of **a policy scan and literature review** as well as **meetings/interviews with key informants** from provincial utilities, energy departments, and First Nation communities/groups engaged in renewable energy development.

A policy scan examined the various renewable energy procurement opportunities that exist in Quebec, Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland. To supplement the procurement scan, interviews were held with various representatives from provincial departments of energy or local utilities to better understand current and future programs that foster First Nation participation in renewable energy development.

A literature review identified:

- **common challenges and barriers** to First Nations' participation in renewable energy and large economic development opportunities more generally; and
- **tools and activities** used by First Nations to increase participation in renewable energy and large economic development opportunities.

Meetings and interviews were also held with First Nation communities and groups that have developed or are in the process of developing renewable energy projects. The purpose of the interviews was to understand:

- the type of renewable energy development undertaken
- management structure of the renewable energy development
- reasons for engaging in renewable energy development
- challenges faced with regard to engaging industry and government
- tools and activities used to address challenges
- continued gaps in capacity
- project benefits
- future aspirations

This final report outlines the findings from the meetings and interviews with First Nation communities, identifies renewable energy procurement programs currently available to Atlantic First Nations, and shares opportunities and recommendations related to government funding and First Nation capacity building.

The table below provides an overview of the meetings and interviews held with participating First Nation communities and organizations.

First Nation Engagement Sessions

Community/Group	Interview Status
Pictou Landing, Nova Scotia	<i>Meeting - phone</i>
Millbrook, Nova Scotia	<i>Meeting - phone</i>
Beaubassin Wind Management, Eskasoni, Nova Scotia	<i>Meeting - phone</i>
Union of Nova Scotia Indians, Membertou, Nova Scotia	<i>Meeting – in person</i>
Tobique, New Brunswick	<i>Meeting – in person</i>
Abegweit, Prince Edward Island	<i>Meeting – in person</i>
Lennox Island, Prince Edward Island	<i>Meeting – in person</i>
Mesgi'g Ugnu's'n Wind Farm, Quebec	<i>Meeting – phone</i>

Government Energy Department and Utility Interviews

Department/Office	Interview Status
PEI Energy Corporation, Government of PEI	<i>Email correspondence</i>
New Brunswick Power	<i>Interviewed</i>
Nova Scotia Department of Energy	<i>Interviewed</i>
Newfoundland Department of Natural Resources – Electricity Division	<i>Interviewed</i>
Clean Foundation	<i>Interviewed</i>
efficiencyPEI	<i>Interviewed</i>
Newfoundland and Labrador Hydro	<i>Interviewed</i>

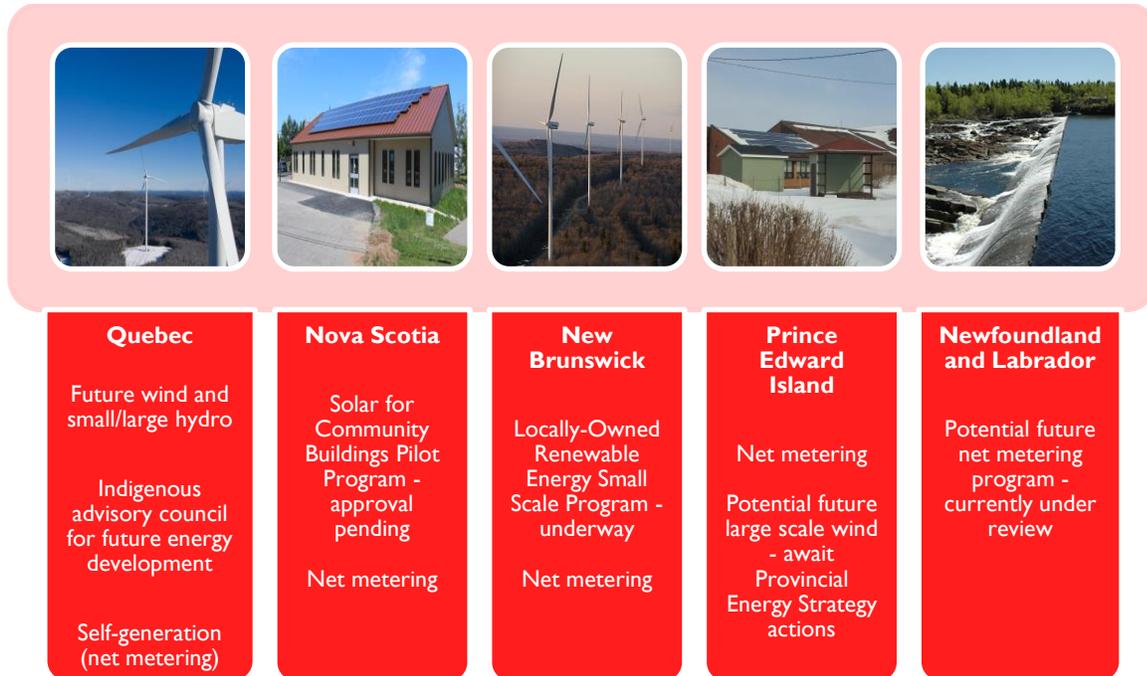
Other Interviews

Department/Office	Interview Status
Atlantic Canada Opportunities Agency	<i>Interviewed</i>
Indigenous and Northern Affairs Canada	<i>Interviewed</i>
Federation of Canadian Municipalities	<i>Email correspondence</i>
Ulnooweg Development Group	<i>Interviewed</i>
20/20 Catalysts Program	<i>Interviewed</i>

Renewable energy procurement programs for Atlantic First Nations

With thousands of kilometers of windy coastlines, the highest tides in the world, a good solar resource, and hundreds of river systems, the Atlantic Provinces are rich in renewable energy resource potential. As such, the provinces are developing green energy targets and each building a robust portfolio of renewable energy projects. To clearly identify current renewable energy opportunities in the Atlantic region, the section below demonstrates the programs open to First Nation participation.

Summary of renewable energy opportunities for Atlantic First Nations



Quebec

2030 Energy Policy - Energy in Québec: A Source of Growth

The Province of Quebec supplies 45% of its electricity needs from renewable energy sources, most of which come from extensive wind and hydro resources. The Province's 2030 Energy Policy - Energy in Québec: A Source of Growth has plans for more hydroelectricity and wind power with the goal of increasing renewable energy output by 25%. The policy also prioritizes the participation of Indigenous populations by outlining how:



"...Aboriginal communities will be closely associated with the development of the projects in the territories that they inhabit. Through these nation-to-nation relationships, the government will work in cooperation with the Aboriginal communities to define the needs and solutions specific to each project and to each community." (Government of Quebec, 2016, p.50)

Further, the policy states that an advisory council of Indigenous peoples will be created to guide communications and information sharing on future energy developments in the province.

Currently, the Quebec government is fulfilling its 500 MW wind power set-aside reserved for regions and Indigenous communities as outlined in their 2006 - 2015 Energy Strategy. As part of this set-aside, Indigenous projects include the 150MW *Mesgi'g Ugu's'n Wind Farm* co-owned by the Mi'gmaq communities of Listuguj, Gesgapegiag, and Gespeg (currently in operation - see case study on p. 25) while the 18MW *Saint-Cyprien Wind Farm* led by Kahnawa:ke Sustainable Energies Inc. and the 200MW Innu Nation's *Apuiat Wind Farm* are currently under development.

Further outlined in the 2030 Energy Policy, there will be support for First Nation participation in small-scale hydro projects that may serve as significant economic development opportunities for such communities. To read more about the 2030 Energy Policy, visit:

<http://mern.gouv.qc.ca/english/energy/strategy/pdf/The-2030-Energy-Policy.pdf>

Nova Scotia

Solar for Community Buildings Pilot Program

Nova Scotia's Department of Energy has developed draft regulations to launch the **Solar for Community Buildings Pilot** program that is designed to solicit participation from municipalities, Mi'kmaq Bands, academic institutions and non-profits in the installation of solar photovoltaic panels for electricity generation on and around suitable buildings. Projects can be a maximum of 50kW and must be located on or within 25 meters of a Mi'kmaq Band-owned building.



As outlined on the Department of Energy website, the program aims to:

- “enable communities to participate in Nova Scotia’s transition to a cleaner energy future
- help identify the role for Solar Electricity in the Province’s electricity system
- contribute to the conversation and education surrounding solar power in Nova Scotia” (Nova Scotia Department of Energy, 2017)

Draft regulations have been released with potential program launch in Spring/Summer 2017 pending final approval. The program will include three Request-for-Proposal (RFP) rounds, one in 2017, 2018, and 2019. A First Nation set-aside will be put in place for the program to encourage Mi'kmaq participation. The RFP will be a competitive process - a third-party administrator will receive and review proposals from qualified groups and will select projects that provide the least-cost option for electricity. Selected projects will then enter into a 20-year power purchase agreement with the utility (Nova Scotia Power or one of the municipal utilities) at the electricity price outlined in the applicant's proposal.

Pending program approval, the Department of Energy will host stakeholder sessions in central locations to share information about the program and

To receive notifications via email or to learn more about the program, contact the following.

Solar for Community Buildings Pilot Program Lead Contact:

Peter Craig
Email: Peter.T.Craig@novascotia.ca
Office: 902-424-4115

Department of Energy Aboriginal Consultation Coordinator:

Jordan Nikoloyuk
Email: Jordan.Nikoloyuk@novascotia.ca
Office: 902-424-7891

answer applicant questions. The Department of Energy's Aboriginal Consultation Coordinator will also serve as a primary resource to assist First Nations in their application preparation while guidance materials and videos will be made available online. More information on this program will be released here: <http://energy.novascotia.ca/renewables/solar-energy>

We'koqma'q and Paq'tnek Energy Efficiency Projects with the Clean Foundation

Clean Foundation (Clean) has been working with the communities of We'koqma'q and Paq'tnek to develop collaborative solutions to address their energy needs and concerns through low-cost energy efficiency measures, deep energy retrofits, and community engagement and education programs.

The scope of the initial pilots (Phase I) was to conduct energy assessments and manage retrofits for a number of homes in each community that were both electrically heated and where power was paid for through the respective Band Councils. Due to the initial success of these pilots, Clean was approached by We'koqma'q to expand the project to include additional energy assessments, the installation of LED bulbs, and an education program to further reduce energy consumption in the community (Phase II). This second phase is currently underway and is supported by the We'koqma'q First Nation.

Based on the early success of the pilot project, Clean hopes to use the lessons learned in both Paq'tnek and We'koqma'q to develop a program that could be offered to other Nova Scotia Mi'kmaw communities. Clean is looking to identify and work with key partners in the development of a more provincially-focused program. For more information on the project, contact **Project Manager Laura Gareau at (902) 420-3478, lgareau@clean.ns.ca**.

New Brunswick

Locally-Owned Renewable Energy Small Scale (LORESS) Program – First Nations Opportunity

In 2016, New Brunswick Power and the New Brunswick Department of Energy launched a two-phased **Locally-Owned Renewable Energy Small Scale (LORESS) Program (80MW capacity)**.



Phase 1 - 40MW of renewable energy projects from First Nations

Phase 2 - 40 MW of renewable energy project from municipalities, co-operatives, not-for profits, and First Nations

The 40MW First Nations set-aside opportunity was launched in January 2016 and closed in April 2016; however, due to overwhelming participation and issues arising with the process, an extension to the *Request for Expressions of Interest* was granted until January 27th, 2017.

The second phase of the LORESS program for community-based projects was launched on February 7th, 2017. This round is identical to Phase 1 in that projects must be a maximum of 20MW and be in-service by December 31st, 2020 to meet the government's goal of producing 40% electricity from renewable sources. Applications must be submitted by April 28th, 2017 and will be evaluated on the following

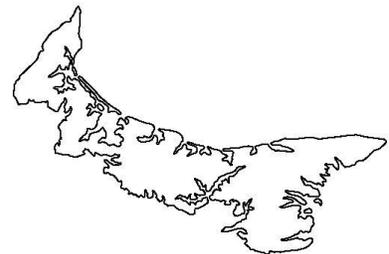
criteria – project information, developer information, financial information, ownership model, and social and economic benefits. The Request for Expressions of Interest document # **XXXX-17-107** can be found on the Service New Brunswick website: <https://nbon-rpanb.gnb.ca/welcome?language=En>

NB Power Efficiency Programs

New Brunswick Power offers three energy efficiency programs that may be of interest to First Nations: the *Home Insulation Energy Savings Program*, *Commercial Buildings Retrofit Program* and *Low Income Energy Savings Program*. The *Home Insulation* program allows electrically heated homes that have received a home energy audit to tap into financial incentives for insulation and air leakage reduction upgrades. The *Commercial Buildings Retrofits Program* offers financial incentives of up to \$3,000 towards an evaluation of energy efficiency upgrades and a maximum of \$75,000 for energy retrofitting costs. Finally, the *Low Income Energy Savings Program* targets homes in need of major energy efficiency upgrades using compact fluorescent lighting, domestic hot water pipe insulation, low flow showerheads, insulation, faucet aerators, heat pumps, and air sealing. For more information on these programs visit: <https://www.nbpower.com/en/smart-habits/energy-efficiency-programs>.

Prince Edward Island

Prince Edward Island is home to 204 MW of wind, the highest per capita wind generation in Canada; however, none of the ten wind farms were developed in collaboration with the island's First Nations. To date, the primary mechanism for First Nations' participation in renewable energy on PEI has been through the net metering program of which Abegweit and Lennox Island First Nations have participated with small-scale rooftop solar projects.



Provincial Energy Strategy

The PEI Energy Corporation has developed a **Provincial Energy Strategy** that makes recommendations on further renewable energy development in the province. The draft Provincial Energy Strategy outlines a need for continued engagement with the Mi'kmaq to ensure that development does not infringe on treaty rights. It further outlines the need for greater distributed generation where individuals or businesses create their own electricity through net metering as well as recommendations for utility-scale wind developments. As such, PEI First Nations should prepare to participate in future large-scale wind procurement by way of training, project management capacity-building, as well as project site and potential partner scoping.

To view a copy of the draft **Provincial Energy Strategy** released in June 2016, visit: http://www.peiec.ca/uploads/6/6/6/4/66648535/pei_2016_provincial_energy_strategy_-_second_draft_for_public_inputwith_tracked_changes_2016.06.20_.pdf

efficiencyPEI

All efficiencyPEI's programs are open to First Nation participants and according to staff, there are plans to re-engage local First Nations in program recruitment. In 2012, efficiencyPEI conducted home energy efficiency upgrades through their *Home Energy Low-Income Program (HELP)* to Lennox Island with approximately eighty homes participating. Through the *HELP* program, a tradesperson performs comprehensive air-sealing (e.g. caulking, weather-stripping, sealing gaskets) free of charge and installs a programmable thermostat, a low-flow showerhead, provides a voucher for a free furnace cleaning (up to \$80 value) and ENERGY STAR® CFL and LED light bulbs.

Other fee-based programs that may be of interest to First Nations Bands include the *Home Energy Audit Program* (\$150 per audit) and the *Equipment Upgrade Rebate* that offers rebates for ENERGY STAR® furnaces, solar domestic water heaters, and other heating equipment.

For more information visit: www.princeedwardisland.ca/en/topic/efficiencypei

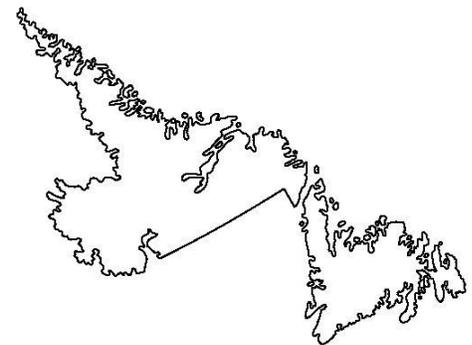
To learn more about efficiencyPEI programs, contact:

Mike Proud

Manager, efficiencyPEI
PEI Transportation, Infrastructure and Energy
Phone (902) 620-3792
Toll-free 1-877-734-6336
mpproud@gov.pe.ca

Newfoundland and Labrador

Newfoundland and Labrador is home to vast hydroelectric resources and have developed large hydro power stations such as the Churchill Falls (5,428MW) and Lower Churchill Falls (3,000MW). The existing hydroelectric dams and small amount of wind power (55MW) mean that renewables produce 85% of the province's power generation – this will jump to 98% once the Lower Churchill project comes online.



The Newfoundland and Labrador government has been focused on energy security in its twenty-one isolated diesel generating communities, most of which are located in Labrador. Since 2008, the provincial government has invested \$3.5 million in renewable energy studies to help promote cleaner alternatives and reduce reliance on diesel fuel. Further, the Nunatsiavut government overseeing the five Inuit communities in Labrador (Nain, Rigolet, Hopedale, Postville, Makkovik) released an Energy Security Plan in November 2016 that outlines plans for biomass, solar, hydro and wind integration.

To review the Nunatsiavut Energy Security Plan visit: <http://www.nunatsiavut.com/wp-content/uploads/2017/01/Nunatsiavut-Energy-Security-Plan.pdf>

For island interconnected communities like Miawpukek, a potential net-metering program would provide an opportunity for small-scale renewable energy development. On July 28, 2015, the government announced its net metering policy framework that provides guidance to Newfoundland Power and Newfoundland and Labrador Hydro for the development of a net metering program for small-scale generation (under 100 kilowatts). The utilities submitted applications to the Board of Commissions of Public Utilities in December 2016 and the regulatory review process is currently underway to ensure the net metering program is appropriate for all ratepayers. See more on net-metering programs in Atlantic Canada on p.12.

Newfoundland and Labrador net-metering contact:

Christine Boland
Manager of Electricity Markets and Alternative Energy
Department of Natural Resources
Email: christineboland@gov.nl.ca
Office: (709) 729-5714
Mobile: (709) 699-0138

takeCHARGE program

Newfoundland Labrador Hydro and Newfoundland Power are leading the takeCHARGE program that offers residential-scale rebates on ENERGY STAR® appliances and electronics, a heat recovery ventilator, programmable thermostat, and home insulation. To learn more about this program visit: <https://takechargenl.ca/residential/>

Where can I find out more about energy efficiency programs in my area?

Natural Resources Canada has a quick and easy online tool to identify grants and financial incentives related to energy efficiency offered by different organizations across the country.

www.nrcan.gc.ca/energy/funding/efficiency/4947

Energy

- Energy Sources and Distribution
- Energy Efficiency
- Energy Resources
- Energy Pipeline Projects
- Mission Innovation
- International Energy Cooperation
- Funding, Grants and Incentives
- Calls for Proposals
- Current Funding Programs
- Grants and Financial Incentives**

Grants and Financial Incentives

Select your province to see what grants, financial incentives or programs are available.

A grouping of grants and financial incentives related to energy efficiency from different organizations across Canada are offered below:

To access this online resource, visit: <http://www.nrcan.gc.ca/energy/funding/efficiency/4947>

What is net metering and how does it work?

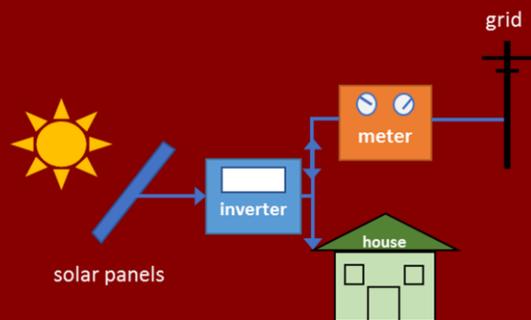
Net metering allows customers to generate their own electricity from small-scale renewable energy sources.

A participating customer will install a renewable energy generator at their residence/business and connect that system to the electricity grid. Typically, the system is limited in size to produce no more electricity than is consumed by the customer over the course of one year.

A bi-directional meter is installed and measures:

- electricity supplied to the grid when the renewable energy system is over-producing
- electricity provided by the grid when the renewable energy system is under-producing

At the end of the monthly billing period, the meter is read and the difference between electricity produced and electricity consumed will be owed to the utility OR subtracted from the customer's electricity bill. This amount reflects the net-usage of electricity – hence the term “net” metering.



The benefits?

By participating in a net metering program, a customer can:

- Save money or in some cases make money on their electricity bill
- Reduce their carbon footprint
- Increase their energy literacy
- Become more energy secure

Net Metering

Net metering programs in Quebec, Nova Scotia, New Brunswick and Prince Edward Island allow customers to generate small scale renewable energy for systems no larger than 100kW. For specific information on each Province's program, see the links below.

Quebec - <http://www.hydroquebec.com/self-generation/>

Nova Scotia - <http://energy.novascotia.ca/renewables/programs-and-projects/enhanced-net-metering>

New Brunswick - www.nbpower.com/en/products-services/net-metering/

Prince Edward Island -

http://www.maritimeelectric.com/environment/env_energy.aspx

Newfoundland – program under review, not yet approved

Atlantic Net Metering Examples:

Pictou Landing First Nation in Nova Scotia is participating in the enhanced net metering program by installing a 30.5kW solar photovoltaic system on their new energy efficient Band office. This project was a partnership between the First Nation, general contractor *MacGregors Industrial Group* in New Glasgow, and Halifax-based solar panel installer *Solar Global Solutions*.



Pictou Landing First Nation Band Building. Photo source: www.solarglobalsolutions.com

Abegweit First Nation in PEI has installed a 6kW solar PV system on their Band office and a 9kW system on their non-commercial hatchery.



Solar PV on Abegweit Hatchery. Photo source: Mary-Frances Lynch

Literature review - barriers to First Nation participation in economic development and renewable energy opportunities

For some First Nation communities, pursuing renewable energy opportunities can be a way of contributing to a broader climate change solution (Porter, 2010). Though eager to participate in renewable energy developments and other large scale economic opportunities, First Nations face challenges and barriers to doing so. According to the literature, these challenges can range from access to financing, perceptions and uncertainty of working with First Nations, workforce capacity, and socio-political pressures within the communities themselves. Increasingly over the last couple decades, hundreds of First Nation communities Canada-wide have developed their own renewable energy projects, demonstrating that these challenges are not insurmountable; rather require considerable time, effort, and a steep learning-curve to work through.

The following sub-sections highlight the barriers faced by First Nations in economic project development as identified in the literature from experiences across Canada. These findings will put into context the experiences expressed by Atlantic First Nation leaders during key informant interviews and will set the stage for opportunities and recommendations presented later on in this report.

Barrier – Access to financing

According to research conducted by the Indian Resource Council (2016) on First Nations' engagement in the energy sector in Western Canada, low financial literacy and limited project management experience pose a challenge to energy development. In addition, access to conventional sources of capital is limited or offered at a higher interest rate requiring communities to borrow money from Indigenous Financial Institutions - e.g. *Ulnooweg, First Nations Bank of Canada, First Nations Finance Authority* - or from government grant programs (Canada's Public Policy Forum, 2014; Indian Resource Council, 2016).

In some communities where there has been limited interaction with the large banks, greater uncertainty and perceived risk leave banks unwilling to lend money to a First Nation at an affordable rate or without a loan guarantee (Canada's Public Policy Forum, 2014; Pembina Institute, 2006). As a result, First Nations have historically relied heavily on government funding for capital projects. To demonstrate this, Canada's Public Policy Forum (2014) states:

“The private-sector makes up 95% of investment in the overall Canadian economy, with less than 5% coming from government sources. Yet these trends are reversed on reserve, where the private sector accounts for less than 40% of capital investment. (p.9)”

This statistic demonstrates how limited private sector investment is in First Nation communities. Nonetheless, there is a growing trend of Indigenous partnership with the private sector, providing new access to a partner's source of equity and debt (Canada's Public Policy Forum, 2014; Pembina Institute, 2006). As a result, there has been a marked shift over the last twenty years with First Nations playing an equity role in renewable energy projects in addition to increased consultation and compensation outlined in Impact Benefit Agreements (Indian Resource Council, 2016).

Barrier - Perceptions and lack of understanding of First Nations

Non-Indigenous investors, lenders and potential project partners typically have limited understanding of First Nations' economies, business opportunities, culture, and political structure. This lack of understanding coupled with the remoteness of some Indigenous communities can leave potential partners uncertain and hesitant about partnering on large capital projects. As a result, both the private sector and First Nations leadership must find opportunities to network and bridge the gap of unfamiliarity (Canada's Public Policy Forum, 2014).

Barrier - Training and skills capacity

In 2014, there were over \$315 billion of identified major resource developments in or near Indigenous communities nationwide (Canada's Public Policy Forum, 2014) while currently every province and territory has approved or is planning renewable energy developments that are wholly or partly-owned by Indigenous groups (Aboriginal Power Information, 2017). Recent growth in First Nations' renewable energy is contrasted by the lack of census data on the Indigenous workforce in this sector. However, interviewees for this research have expressed a lack of specialized or technical training in the renewable energy field among their First Nation community members.

Nonetheless, there is optimism that workforce trends from the broader natural resources sector will apply to the renewable energy sector as it matures and partnerships take form. Across Canada, trends in Indigenous employment in the natural resources sector showed a positive trend from 2001-2011, especially in mining and oil and gas where Impact Benefit Agreements have become commonplace (Indian Resource Council, 2016). In the Atlantic region in particular, Statistics Canada's 2011 National Household Survey showed that Indigenous people made up 4% of Atlantic Canada's population (3.6% of the adult population) on par with 3.5% of the workforce in mining, quarrying and oil and gas extraction and 5.4% of the workforce in agriculture, forestry, fishing and hunting (The Conference Board of Canada, 2015).

For any type of resource extraction or energy development/partnership, technical training and capacity building will serve as the foundation for First Nations' meaningful participation in the sector for years to come (Assembly of First Nations, 2011; TREC Education, 2017). Significant un-tapped renewable energy resources on reserve coupled with a rapidly growing Indigenous population mean that there is tremendous opportunity to develop a skilled renewable energy workforce (Assembly of First Nations, 2011; Webb, 2014).

Barrier - Socio-economic and political pressures in First Nation communities

The above-stated barriers are compounded by ongoing pressing issues managed by Band administration on a daily basis. With Chief and Council balancing issues of housing, health, education, economic development, treaty rights, land claims, and multi-level government relations, it can be difficult to

Impact Benefit Agreements

A partner/developer will enter into an **Impact Benefit Agreement** if an Indigenous community will be potentially impacted by a project and/or under the guiding principle that benefits should be shared among all project parties.

Mutually agreed upon benefits can include:

- *Job opportunities*
- *Indigenous content formulas*
- *Training and skills development*
- *Knowledge sharing*
- *Revenue sharing*
- *Financial compensation*
- *Environmental regulation*
- *Joint monitoring*
- *Social and cultural provisions*

(Office of Aboriginal Affairs, 2012)

develop new capital projects that have their own set of complexity and risk. Echoing this point, the Assembly of First Nations (2005) released a report on the barriers of implementing renewable energy projects in First Nation communities by stating that:

“Many First Nations face issues that require immediate attention and the allocation of resources, such as ensuring drinking water is safe, and cleaning up contaminated sites. As a result, First Nations generally do not have the time, financial and human resources or capacity to address longer-term, strategic planning issues, such as emergency preparedness, comprehensive community planning and climate change. These issues are important and deserve attention but are often, by necessity, given a lower priority than the more immediate, “crisis” issues we must address.”

In this operational climate, shorter-term business ventures with a promise of a quicker financial return are often prioritized over more complex longer-term energy opportunities (Canada’s Public Policy Forum, 2014). Finally, with increased resources dedicated to economic opportunity identification and project management, First Nations would be able to better explore renewable energy opportunities that provide longer term economic benefit to the community.

Findings from meetings with Atlantic First Nations

All information in the table below was provided by Atlantic First Nation community participants during meetings for this research. Notably, the table outlines the challenges, recommendations, and opportunities expressed by communities that have developed or are in the process of developing renewable energy projects. Details such as project type, size, and structure are also provided. Challenges expressed by interviewees relate to those experienced during project development while specific tools and actions were recommended as a way of addressing their challenges. Finally, interviewees spoke about opportunities as they directly relate to current renewable energy assets and to future developments in their communities.

Community	Province	Energy Type	Project Details	Challenges	Recommended Tools and Actions	Opportunities
Beaubassin Wind Management (on behalf of 13 NS Mi'kmaw Bands) and Eskasoni First Nation	NS	Wind	Beaubassin Wind Management: <i>Amherst Wind (6MW)</i> = partnership with <i>Natural Forces</i> <i>Whynotts Wind (6MW)</i> = partnership with <i>Firelight Infrastructure Partners</i> Eskasoni: <i>Truro Heights Community Wind (4MW)</i> = partnership with <i>juwi Wind</i>	<ul style="list-style-type: none"> Initial lack of knowledge – low energy and financial literacy Lack of specific training among community members High developer costs Lack of First Nation decision-making ability when partnered with a Limited Company Limited ability to hire First Nation construction workers when dealing with Union contract Wind project opposition from local residents 	<ul style="list-style-type: none"> Impact Benefit Agreement – stipulating economic and social benefits Set up a ‘general partnership agreement’ with partner to allow for a seat at the table Encourage First Nation skilled workers to join their trade union Provide training opportunities for community members – e.g. Wind Turbine Technician at Holland College in PEI Ask questions to project partner in order to learn and fully understand development process 	<p>Open to future development of other wind farms given expertise gained on wind project development</p> <p>No need for full developer services on future projects</p> <p>Current projects provide revenues for 13 Bands that in turn create spending opportunities in other needed areas</p>

Community	Province	Energy Type	Project Details	Challenges	Recommended Tools and Actions	Opportunities
Millbrook First Nation	NS	Wind	<p><i>Millbrook Community Wind (6MW)</i></p> <p>Partnership with <i>juwi Wind</i></p> <p><i>Millbrook Community Wind and Truro Heights Community Wind</i> are co-located on the same site</p>	<ul style="list-style-type: none"> • In the beginning, limited energy project development experience by the Band • As a result of partnership and the expertise of the private sector partner, there were few development challenges • Limited ability to hire First Nation construction workers when dealing with union contract 	<ul style="list-style-type: none"> • Develop a partnership with a qualified private sector developer to help guide through development process 	<p>Open to future development of other wind farms given expertise gained</p> <p>Future project(s) would require less dependency on wind developer</p> <p>Future wind project economics would be dependent on COMFITT program guaranteed price for energy produced</p> <p>Current project provides revenue stream enabling Millbrook to spend on economic development and other areas</p>
Pictou Landing First Nation	NS	Small-scale solar PV	<p>30.5kW rooftop solar PV on new energy efficient Band office</p> <p>Net-metered project</p> <p>Band-owned project - hired general contractor and solar PV installer</p>	<ul style="list-style-type: none"> • Band inexperience and lack of expertise with new energy efficient building and solar PV • Lack of dedicated human resources to manage project • Project delays and troubleshooting with contractors • Challenge of managing Band and community expectations on project timeline 	<ul style="list-style-type: none"> • Establish dedicated Band resources in form of project management team • From onset, hold consultation between Band personnel and contractor to have clear vision that is aligned with community needs • Open and clear communication between Band and contractor 	<p>Open to similar developments in the future – e.g. energy efficient new school, rooftop solar PV</p> <p>To serve as a model for other First Nations communities on how to set up energy efficiency and small-scale renewable energy projects</p>

Community	Province	Energy Type	Project Details	Challenges	Recommended Tools and Actions	Opportunities
Union of Nova Scotia Indians	NS	Solar	Yet to be developed	<ul style="list-style-type: none"> Lack of understanding by non-First Nation developers on importance of engaging the community and Elders as well as incorporating traditional knowledge in the decision-making process Lack of 'Two-Eyed Seeing' approach used by developers – must value both western and Mi'kmaw knowledge Reserve system and lack of property ownership can make it difficult for project development Multiple levels of government – e.g. Federal owned land, Chief and Council decision-making – adds complexity to project development 	<ul style="list-style-type: none"> Proper community engagement and open channels for receiving feedback Partnerships are important and foster valuable knowledge sharing Pooling resources/projects can tap into economies of scale A 'Two-Eyed Seeing' approach should be applied to project development Proper compensation for First Nation community should be negotiated so that important social, health, and emergency services can be provided 	<p>Small scale solar through net-metering program and upcoming competitive solar initiative in NS</p> <p>Building community capacity, training, education through renewable energy</p> <p>Renewable energy as an education opportunity – teaching community about renewables can shift attitudes and habits related to energy consumption</p> <p>Renewable energy as an opportunity to bring community and Elders into decision-making process</p>
Lennox Island First Nation	PEI	Solar	<p>Rooftop solar on Lennox Island school</p> <p>Rooftop solar on Mi'kmaq Confederacy of PEI building in Wilmot</p> <p>Net metered projects</p>	<ul style="list-style-type: none"> Difficulty finding credible private developers Need greater contractual/legal support when working with developers Managing cost overruns from private contractors Lack of proper compensation on large resource projects in general Daily Band administration 	<ul style="list-style-type: none"> Collaboration with other First Nations in order to pool resources and information Create a database of credible contractors to work on renewable energy projects with communities 	<p>Chief and Council wish to pursue other renewables that can offset costs on Band buildings – e.g. solar, geothermal, wind</p>

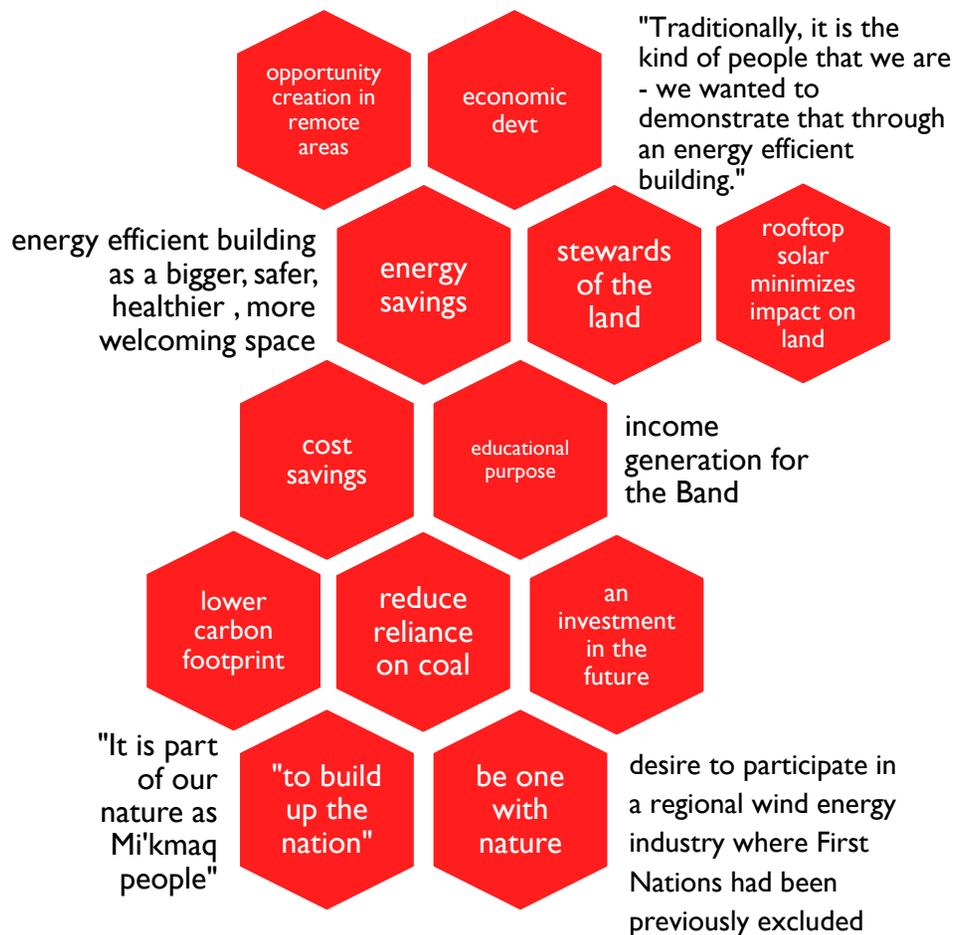
Community	Province	Energy Type	Project Details	Challenges	Recommended Tools and Actions	Opportunities
				<p>tasks limit full focus on renewable energy project management</p> <ul style="list-style-type: none"> • Current lack of federal government funding for renewable energy projects • Energy inefficient homes and lack of proper infrastructure on reserve 		
Abegweit First Nation	PEI	Solar	<p>6kW rooftop solar on Band office</p> <p>9kW rooftop solar on non-commercial hatchery</p> <p>Net metered projects</p>	<ul style="list-style-type: none"> • Few challenges during project development – Abegweit’s Director of Natural Resources with 20+ years of experience managed the community’s solar projects • Current lack of federal government funding for renewable energy projects 	<ul style="list-style-type: none"> • Project size matters – pooling resources and combining projects taps into economies of scale • Present strong business case to Band Council • Conduct needs assessment in community • Align project with community needs in order to gain community acceptance 	<p>Desire to expand existing solar system on non-commercial hatchery if opportunity presents</p> <p>Ability to provide guidance to other communities who wish to develop solar due to gained in-house expertise</p> <p>Idea = with government support, establish a First Nations solar panel manufacturing facility</p>
Tobique First Nation	NB	Wind Solar	Proposed grid-tied wind and solar	<ul style="list-style-type: none"> • Existing home energy inefficiencies • Lack of energy efficiency and conservation literacy among community members • Under valuation of community engagement on 	<ul style="list-style-type: none"> • Knowledge is KEY - Band administration participation in the Catalyst 20/20 program – e.g. Band CEO Tanna Pirie-Wilson received this training (see more about 	<p>Home energy efficiency upgrades</p> <p>Biomass and biofuel opportunities given the geographic location and forest resources available</p>

Community	Province	Energy Type	Project Details	Challenges	Recommended Tools and Actions	Opportunities
				<ul style="list-style-type: none"> behalf of industry Lack of consensus from community on renewable energy priorities and on how they wish to be engaged High costs associated with proper community engagement Lack of policy framework on behalf of NB Power and gvt on how First Nations will play a role renewables – program decisions are often unilateral Difficulty finding a suitable private partner who has community interest in mind Limited project development capacity within the Band due to over-worked admin staff Limited federal funding support for renewables and government inability to effectively distribute funds 	<ul style="list-style-type: none"> this program on p.26) Networking among First Nations to learn from each other’s renewable energy development experiences Education and job training for community members to ready themselves for the workforce 	<p>in the community</p> <p>Follow-through on wind and solar opportunities</p> <p>Further networking within the Indigenous Clean Energy Network on behalf of Band CEO</p>
Listuguj, Gesgapegiag, Gespeg First Nations	Qc	Wind	<p>150 MW <i>Mesgi’g Ugju’s’n Wind Farm</i></p> <p>50/50 partnership with Innerjex</p>	<ul style="list-style-type: none"> Need to understand how many resources are required on wind farm to help prepare your community Community readiness for participating in renewable energy project development and workforce 	<ul style="list-style-type: none"> Conduct a Mi’kmaw sensitization program with private partner to familiarize them with First Nation culture and needs Have First Nation hiring clause laid out in partnership agreement 	<p>Share their success story with other communities</p> <p>Revenues from wind farm to be shared among the three Mi’kmaw communities</p>

Community	Province	Energy Type	Project Details	Challenges	Recommended Tools and Actions	Opportunities
				<ul style="list-style-type: none"> • Lengthy project development - communities began project visioning in 2004 • Ability to maximize opportunities in project operations and maintenance phase • Ensure project partner is fully aware and sensitive to First Nation culture and needs 	<ul style="list-style-type: none"> • Identify training needs and provide training to community members early • Ask questions to partner – understand process clearly to prepare community and become a project development expert 	<p>Mi'kmaw wind farm workers are now part of their respective unions and can work on other projects in the region = career building</p>

“What are the reasons why renewable energy was developed or is being explored in your community?”

“What types of benefits has your community received from your renewable energy project?”



- new source of steady revenues
- electricity cost savings
- increased energy literacy
- gained project management experience
- participation in an environmental solution
- increased employment and career building
- community pride

All information and quotes on this page were provided by Atlantic First Nation interview participants as answers to questions posed during the research interviews. Graphic display of the findings was created by Woven Communication.

Barriers to readiness for First Nations participation in major economic development opportunities

As outlined in meetings with Atlantic First Nation participants and from a literature review, there still exist barriers to Indigenous participation in major economic development opportunities. By understanding these barriers, government and industry can implement programs or take action to address them. Barriers to readiness for participating in major economic development opportunities as identified in the literature review section (p.14) include:

- *Access to financing and funding*
- *Perceptions and lack of understanding of First Nations*
- *Training and skills capacity*
- *Socio-economic and political pressures in First Nations communities*

For more detail on these barriers, please see the literature review section on page 14 of this report.

The following list summarizes the barriers to readiness expressed by First Nation participants during meetings for this research:

Lack of prior knowledge and capacity in major economic development projects – e.g. lack of technical, environmental and energy expertise in addition to proficiency in project management and financing.

Lack of mobilized workforce ready and trained in the areas required to develop and implement large economic development projects.

First Nation community members who are trained in areas of skilled-labour may not already be enrolled in the proper unions in order to participate in the project workforce.

Important project management resources to assist in the development of large economic opportunities are limited at the Band Administration level.

There are several other pressing community issues for Band Administration to deal with resulting in lack of available time and resources for other major projects.

Current energy inefficiency of Band buildings poses a challenge to the effectiveness and success of renewable energy developments in particular.

Current lack of government funding to support First Nation participation in large economic or environmental projects.

Provincial renewable energy procurement policies do not always foster genuine First Nation participation and in instances where First Nation set-asides have been established, they have not always been done in full collaboration with local First Nations.

Notwithstanding the challenges faced by First Nation participants *during* the development of their respective projects, the above-stated points were expressed as clear barriers to *initial* participation. For the participating communities, the barriers to readiness were overcome through innovative and meaningful partnerships, considerable amounts of funding (previously existing), time and effort, and in many cases, simply by launching into the project and learning from mistakes made throughout the process (ie. learning-by-doing).

When asked **“What types of tools/activities did you find helpful in addressing the challenges you faced when developing your renewable energy project(s)?”** the following recommendations were presented by Atlantic First Nation interviewees:

- *Develop a partnership with a qualified private sector developer*
- *Dedicate Band resources to project management*
- *Have clear communication with project partner*
- *Hold proper community engagement sessions related to the proposed project*
- *Conduct a needs assessment in the community and align your project with community needs*
- *Establish an Impact Benefit Agreement with the private sector partner*
- *Establish a Partnership Agreement with the private sector partner – one that outlines First Nation benefits, compensation, training and hiring.*
- *Partnership should use a Two-Eyed Seeing approach*
- *Conduct an Indigenous sensitization program with project partner*
- *Collaborate with other First Nations if possible – pool resources*
- *Increased networking and knowledge sharing among First Nations*
- *Encourage First Nation skilled workers to join trade union*
- *Seek training opportunities for community members*
- *Build the capacity of Band staff through participation in the 20/20 Catalysts Program*

It is important to note, that once a community has successfully participated in a major economic development project, barriers for future opportunities are minimized due to the experience and confidence gained.

Recommendations for First Nations

Building upon the findings from the literature review and meetings with Atlantic First Nation communities, recommendations and best practices for First Nations are presented in the sub-sections below on **partnerships, capacity building, and funding**.

Partnerships

Phil Fontaine, former National Chief of the Assembly of First Nations has said of resource development that: *“Much of the future development will take place on First Nations’ lands and territories. This calls for partnerships, equity positions and joint ventures. The old way of doing business is out the window”* (Aboriginal Power Information, 2017, par. 9). Increasingly, this new way of doing business means more than just a seat at the table and includes the sharing benefits, risks, and revenues. In addition, as natural and energy resources are located further away from major centres on or near Indigenous territory, partnerships are key to their successful development (MaRSdd, 2013).

Canada’s Public Policy Forum (2014) is calling First Nations’ partnerships with companies and financial institutions one of the most promising tools for progress. These partnerships provide First Nations with business opportunities otherwise inaccessible while serving as an entry point into new sources of capital, new markets, access to capacity building and training, knowledge sharing and mentorship, and gained development experience (Canada’s Public Policy Forum, 2014).

It should go without saying that meaningful partnerships take trust and time to develop. Equal partnerships involve early engagement in the project formulation process and a full understanding among partners as to how First Nations’ wish to be involved, bearing in mind that each community has their own rights, needs, and ideas of how partnerships should operate (AFN, 2011). Outlined in an Assembly of First Nations (2011) report on a sustainable energy future, questions for partners to consider include:

- *What does a mutually beneficial partnership look like?*
- *How should a First Nation be engaged?*
- *When should a First Nations be engaged?*

Through an discussion that answers these questions, true collaborations and beneficial partnerships can be established. Ultimately, these meaningful partnerships can help forge a different type of relationship between Indigenous communities and the private sector, in turn changing the story of Canada going forward. The result is wealth created for both parties in many forms (MaRSdd, 2013).

Recommendations:

- ✓ ***Establish a clear picture of what you are looking for in a project partner and understand the role that you, as a First Nation community, want to play in the project.***
- ✓ ***Research local private companies, financial institutions and municipal entities that could serve as a potential partner on an energy/economic development project.***
- ✓ ***Reach out and meet with potential partners to evaluate partnership suitability.***

PARTNERSHIP CASE STUDY: *Mesgi'g Ugju's'n Wind Farm*



Until 2009, no benefits flowed to the Mi'gmaq from the 1,600 MW of wind farm electricity produced in the Gaspé region. Local Chiefs wanted to have a meaningful participation in the renewable energy sector and so three Mi'gmaq communities came together - Listuguj, Gesgapegiag, Gespeg - to develop a 150 MW wind farm. They identified workforce barriers within their communities and hosted open houses to measure interest in employment from their own community members.

Partnerships were essential to the success of the wind farm, notably partnerships with construction companies in Quebec and developer Innerjex Renewable Energy Inc. The three Mi'gmaq communities serve as a 50% partner in the project, and under the Indigenous-hiring clause that was mandated under a partnership agreement, the project provided training for community members and hired 110 Indigenous skilled-workers. The Mi'gmaq also delivered a cultural sensitization program to project partners to build an understanding and respect for Indigenous culture.

The project was recently commissioned and four Mi'gmaq operations staff will be working on the project going forward. Over the 20-year lifespan of the project, it will generate approximately \$200 million in revenues for the three Mi'gmaq communities. To read the most recent newsletter highlighting the project inauguration ceremony and the many benefits from the project, see Appendix A.



For more information on the Mesgi'g Ugju's'n Wind Farm, contact:

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Images of Mesgi'g Ugju's'n Wind Farm from www.muwindfarm.com

Capacity Building

There is a need for greater training and education in the technical and financial fields as well as project management if First Nations are to play a significant role in the energy sector (Assembly of First Nations, 2011; TREC Education, 2017; Webb, 2014). Chris Henderson (Personal Communications, 02/22/2017), president of Ottawa-based Lumos Energy, encourages Chiefs and Councils country-wide to look at their governance role in energy projects and recognize the need for increased capacity and investment in community resources.

Chris Henderson is the lead mentor for the **20/20 Catalysts Program** that offers energy-specific training to build capacity and business acumen for Indigenous participation in renewable energy development. The program is the only one of its kind in Canada, partnering with forty Indigenous and non-Indigenous mentors to provide training to twenty 'Catalysts' annually. This Spring, the program is offering its second annual program covering topics of:

- *community engagement and communications;*
- *economic development and business planning;*
- *employment creation and skills enhancement;*
- *project financing and equity capital; and,*
- *'smart' reinvestment and community legacy.*



The curriculum is rolled out over three one-week intensive sessions, bringing participants to three different locations across Canada. After having participated in the training, Catalysts return home with a new set of knowledge and skills to serve as advisors for renewable energy development in their communities. The Catalysts also benefit from an established network of mentors, coaches, and peers they have met from across Canada during the training and maintain their knowledge through the *Indigenous Clean Energy Network*.

The program has seen participation from Atlantic First Nations members from New Brunswick, Nova Scotia, and Labrador with the hopes of recruiting additional trainees from the region. To learn more about the *20/20 Catalysts Program*, visit: www.2020catalystsprogram.com

Recommendation – Have Band administration staff member(s) participate in renewable energy development training such as the 20/20 Catalysts Program.



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All images above from http://indigenoucleanenergy.com/2020-catalysts-program/about-the-program/#onsite_intensives

Government Funding Programs and Project Financing

Access to government funding was expressed as a challenge during interviews with Atlantic First Nations. As a first step in addressing this challenge, research was undertaken to compile a list of existing funding for First Nations related to clean technology and energy, environment, economic development and capacity building initiatives.

*It is important to note that on March 22, 2017, the Federal Liberal Party released their budget (pending approval by parliament) that outlines additional spending for Indigenous communities as well as areas of the ‘clean growth economy’. The government has earmarked \$3.4 billion for Indigenous communities over the next three years to improve health, education and infrastructure. Of particular interest to this research project is additional support for post-secondary education as well as the Aboriginal Skills and Employment Training Strategy that will help build community capacity. Further, the budget outlines funding for clean technology, renewable energy and green infrastructure. These budget priorities may be of interest to Atlantic First Nations communities as new programs will be created, in addition to those listed below, that may provide support for economic and renewable energy opportunities.

<p>Atlantic Canada Opportunities Agency</p>	<p>Innovative Communities Fund – invests in strategic projects that build economies of Atlantic Canadian communities. Non-repayable funding.</p> <p>Clean Technology Initiative - ACOA has issued a Call to Action inviting Atlantic Canadian companies, communities and non-profit organizations to develop proposals for projects that promote clean growth through clean technology. Ideally, applications should be submitted before March 31, 2017, though ongoing applications will be accepted. Call the 1800# to discuss the application process.</p>	<p>For more specific funding program information, visit: www.acoa-apecca.gc.ca/eng/ImLookingFor/ProgramInformation/Pages/Home.aspx</p> <p>For regional office contact info: http://www.acoa-apecca.gc.ca/eng/Pages/contactus.aspx</p> <p>Toll Free #1-800-561-7862</p>
<p>Indigenous and Northern Affairs Canada</p>	<p>Community Opportunities Readiness Program – for Indigenous communities that are pursuing or wish to pursue economic opportunities. Electrical and energy systems are listed as an example of a community economic infrastructure project.</p> <p>Lands and Economic Development Services Program – for Indigenous communities requiring economic development support, land support, or environmental management support.</p> <p>Professional and Institutional Development Program - funds projects that develop the capacity</p>	<p>For more specific CORP information, visit: http://www.aadnc-aandc.gc.ca/eng/1100100033414/1100100033415</p> <p>For more specific LEDSP information, visit: http://www.aadnc-aandc.gc.ca/eng/1100100033423/1100100033424</p> <p>For more specific PIDP information,</p>

	<p>of communities to perform ten core functions of governance, such as:</p> <ul style="list-style-type: none"> • leadership • membership • law-making • community involvement • external relations • planning and risk management • financial management • human resources management • information management/information technology • basic administration <p>Major Resource and Energy Development Program – no longer exists</p>	<p>visit: https://www.aadnc-aandc.gc.ca/eng/1100100013815/1100100013816</p>
<p>Federation of Canadian Municipalities</p>	<p>Green Municipal Fund – Energy Sector Funding for capital projects such as energy-efficient facilities (retrofits and new construction) and energy recovery or district energy projects. This funding is in the form of a low interest loan, 15% of which is grant-funding.</p> <p>GMF also provides grant-funding (50% eligible costs) for community sustainability plans, greenhouse gas reduction plans, energy project feasibility studies and pilot projects (e.g. new technology or solution).</p>	<p>For information on Energy Sector Funding for capital projects visit: https://fcm.ca/home/programs/green-municipal-fund/what-we-fund/projects/energy-funding.htm</p> <p>For more information on eligible plans, visit: https://fcm.ca/home/programs/green-municipal-fund/what-we-fund/plans.htm</p> <p>For more information on feasibility studies and pilot projects, visit: https://fcm.ca/home/programs/green-municipal-fund/what-we-fund/studies.htm</p> <p>To speak with a GMF advisor, call: 613-907-6208 or 1-877-997-9926</p>
<p>Employment and Social Development Canada</p>	<p>Skills and Partnership Fund – funding projects contributing to the skills development and training of Indigenous workers for long-term, meaningful employment.</p> <p>The last call for proposals was July 29th, 2016 and the department is no longer accepting applications. The department encourages interested parties to visit the Skills and Partnership Fund website regularly for updates on future rounds of funding.</p>	<p>See website for updates in the future: http://www.esdc.gc.ca/eng/jobs/aboriginal/partnership_fund/index.shtml</p>

Natural Resources Canada	<p>Clean Energy Fund – the objective of CEF was to support the development of the new, cutting-edge energy technologies that are essential for reducing greenhouse gas (GHG) and other air emissions in energy production, transmission, distribution and use.</p> <p>This fund has been fully allocated as outlined on the Clean Energy Fund’s website last updated in July 2016. The department encourages interested parties to visit the Clean Energy Fund website regularly for updates on future rounds of funding.</p>	<p>For more information on previous funding through the Clean Energy Fund, visit: https://www.nrcan.gc.ca/energy/funding/current-funding-programs/cef/4949</p>
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In addition to the funding programs above, renewable energy projects require debt financing for development. As identified in the literature review on the challenges to major project development faced by First Nations, access to conventional sources of financing has been limited as has private sector investment in First Nation communities. That said, there are financial institutions that work closely with First Nations on their business and project financing needs. The following is a list of Indigenous and non-Indigenous lending institutions that provide such support:

- **Ulnooweg Development Group** – for Atlantic Canada only, <http://www.ulnooweg.ca/>
- **First Nations Bank of Canada** – see business advice section of website, <https://www.fnbc.ca/Business/Advice/StagesInYourBusiness/StartingYourBusiness/>
- **First Nations Finance Authority** – they support energy projects <http://fnfa.ca/en/>
- **Business Development Bank of Canada** – see information for Aboriginal Entrepreneurs https://www.bdc.ca/en/i_am/aboriginal_entrepreneur/pages/default.aspx
- **Community Business Development Corporation** – for Atlantic Canada only, <http://www.cbdc.ca/en>

Recommendations

- ✓ **Contact the government departments listed above that provide funding support for your potential project and discuss how you can prepare an application for funding.**
- ✓ **Learn more about how the Indigenous and non-Indigenous lending institutions can support your initiative.**

Recommendations for government and industry

Below are recommendations for government and industry as it relates to supporting the development of major economic opportunities in First Nations communities, notably renewable energy projects.

Recommendations for Federal and Provincial Government Departments

1. Target funding for capacity building – e.g. funding for training and scholarships for education related to project management, environment, science and technology fields of study.
2. Facilitate relationship between First Nation communities and community colleges to encourage the offering of pertinent training in rural areas or on-reserve.
3. Target funding for major economic and energy related projects.
4. Increase funding for energy efficiency programs that target housing and buildings in First Nations communities.
5. Provide funding to support an *Atlantic First Nations Renewable Energy Opportunities and Networking* conference.
6. Provide financial support to Aboriginal Finance Institutions that offer low-interest loans for First Nations and advisory services that increase financial literacy.
7. Develop programs that foster partnership between First Nations and the private sector, utilities, or financial institutions.
8. Include First Nation set-asides into renewable energy procurement programs and directly engage First Nation communities in the initial planning of such programs.

Recommendations for Industry

Seek out partnerships with Atlantic First Nations on major economic development and renewable energy projects.

Partnerships should include:

- First Nation as equal partner on project that give them a seat at the decision-making table.
- Incorporation of First Nations' traditional knowledge into project development.
- A deeper an understanding of First Nation partner – e.g. through an Indigenous sensitization program.
- Support employment and training of First Nation communities members.
- Open lines of communication.
- Development of a partnership agreement or impact benefit agreement that outlines the nature of partnership and the social and economic benefits for First Nation partner/community.
- Consideralbe effort and time to engage closely with First Nation partner and their community in order to gain support and understanding of the project.

Concluding remarks

It is the hope that this research will provide a greater understanding of existing opportunities and encourage support for the participation of Atlantic First Nations' in large-scale economic and environmental opportunities in our region.

This research would not have been possible without the participation of many people who graciously offered their time, thoughts, ideas, and experiences during research interviews and meetings. A sincere thank you goes to First Nation community participants: General Manager Steve Parsons (Eskasoni), Chief Andrea Paul and CFO Wayne Teasdale (Pictou Landing), Director of Operations Terry French (Millbrook), Community Capacity Development Officer Louis Joe Bernard (Union of Nova Scotia Indians), Director of Natural Resources Roger Sark (Abegweit), Chief Matilda Ramjattan and Councillors Janet Banks, Mary Moore-Phillips, Gerry Thomas and Executive Director Mike Randall (Lennox Island), Project Director Terri Lynn Morison (Mesgi'g Ugiu's'n Wind Farm), CEO Tanna Pirie Wilson, Councillor Brad Perley and Consultation Coordinator Deana Sappier (Tobique).

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Appendix A - Mesgi'g Ugnu's'n Wind Farm Newsletter



MESGI'G
UGJU'S'N

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CHRONICLE 8 - FEBRUARY 2017
MESGI'G UGJU'S'N WIND FARM

MESGI'G UGJU'S'N WIND FARM

GWE, HELLO!

The Mi'gmaq communities of Gesgapegiag, Gespeg and Listuguj, and their partner, Innergex Renewable Energy Inc., can now say "mission accomplished." After nearly two years of construction, the MU (or Mesgi'g Ugju's'n, which means "Big Wind") wind farm is now generating electricity. The commercial commissioning of the MU's 47 wind turbines, with their 150-MW total installed capacity, officially took place on December 30, 2016.

INAUGURATION CEREMONY

The Mesgi'g Ugju's'n wind farm was inaugurated on December 1, 2016, during a lively ceremony that honoured Mi'gmaq traditions. Nearly 180 people attended, including chiefs and members of the Mi'gmaq communities, Innergex representatives, local mayors, contractors involved in the construction as well as various other guests.

Twenty or so Mi'gmaq dancers of all ages performed a traditional dance to commemorate the completion of the wind farm project, whose slogan is "Building a nation." Mi'gmaq youth were entrusted with the official ribbon-cutting, since part of the revenue generated by the wind farm will be invested in the education of community children.



Photo : Innergex



Photo : Innergex

MAINTENANCE AND UPKEEP

The operations building, located in the heart of the wind farm in the backland of the Escuminac municipality, in the Avignon RCM, is the command centre for the MU, so to speak. This is the base for the operations and maintenance staff who ensure the smooth running of the turbines and other MU infrastructures. Jean-François Boudreau and James Roy, respectively Lead Wind Farm Supervisor and Wind Farm Supervisor, monitor all of the wind farm's activities.

Manufacturer Senvion, meanwhile, is responsible for the turbines' upkeep for the first 10 years of the MU. Senvion employs 10 people, including four Mi'gmaq workers, to handle the maintenance.

Twice a year, each turbine will undergo preventive maintenance: in the spring and the beginning of fall. During the winter, maintenance operations are kept to a minimum, since that is when the electricity consumption and output are at their highest.

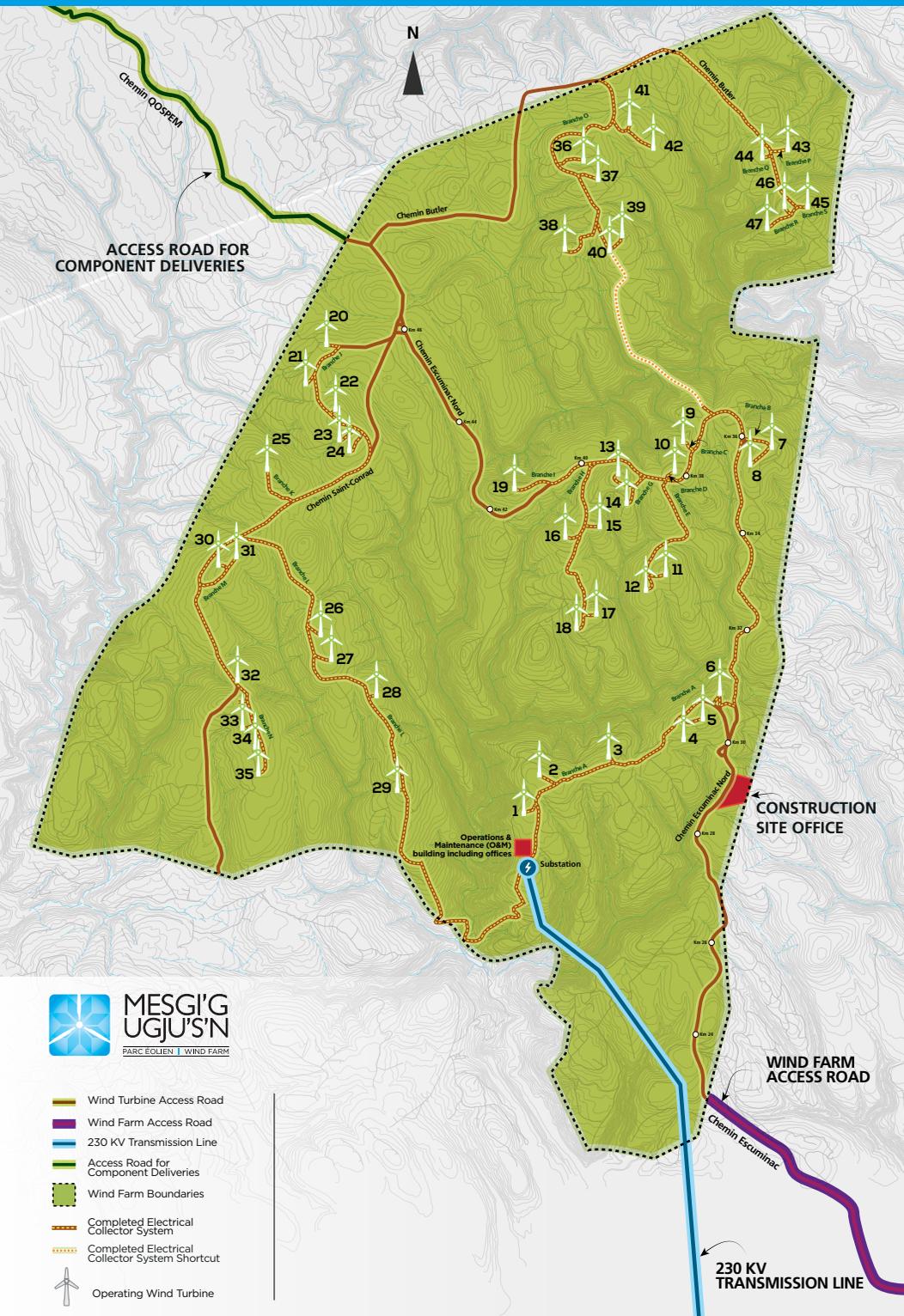
SPINOFFS

More than 850 workers participated in the construction of the Mesgi'g Ugju's'n wind farm, including 110 Mi'gmaq employees. This major project, which required more than \$330 million in investments, provides around 30,000 homes with power. The Gesgapegiag, Gespeg and Listuguj communities have a 50% interest in the MU, while Innergex has the other 50%—the first partnership of its kind. It is also the only wind farm in Quebec with 3.2-MW turbines.

This project will generate profits of approximately \$200 million for the Mi'gmaq over a 20-year period. What's more, Innergex will make an annual indexed contribution of \$675,000 to the Avignon RCM, and it will set up an indexed social development fund of \$75,000 to be paid annually.



WIND FARM MAP



THANKS AND WISHES

The Mesgi'g Ugu's'n wind farm team would like to express its heartfelt thanks to the three Mi'gmaq communities and the Avignon RCM for their warm welcome as well as recognize the tireless efforts of all of the workers involved. Without you, this major project—which marks a new chapter in the development of the Mi'gmaq communities—would not have been possible.

Finally, we wish you a wonderful 2017, filled with joy, health, happiness, love and, of course, wind at your back.

THIS WIND FARM IS SOMETHING WE CAN ALL BE PROUD OF.



WIND FARM INFORMATION

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