



SUMMARY

Analysis and Findings

Residential and Community Buildings of the First Nations in Québec

Transition énergétique Québec (TEQ) – First Nations Committee



FNQ/SLDI
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SUSTAINABLE DEVELOPMENT INSTITUTE

**Transition
énergétique**

Québec



This analysis provides an overview of the energy issues facing the residential and community buildings of First Nations in Québec. It was prepared thanks to the partnership established within the TEQ-First Nations Committee with the First Nations of Québec and Labrador Sustainable Development Institute and members of First Nations.

Climate change knows no borders and the resulting energy transition is an issue that affects the entire population of Québec. With this in mind, Transition énergétique Québec (TEQ) published the Energy Transition, Innovation and Efficiency Master Plan in 2018, which serves as the main building block in Québec's energy transition advancement efforts. This plan includes a chapter dedicated to First Nations that sheds light on their specific needs and interests in relation to the energy transition. With the goal of implementing concrete actions that are suited to their context, the TEQ-First Nations Committee was created and entrusted with the responsibility of developing a specific energy transition, innovation and efficiency action plan for First Nations.

In its approach to developing the action plan, the Committee chose to address several topics, including the residential and community buildings of First Nations. To develop beneficial actions that would encourage First Nations to participate in the energy transition, the Committee, in collaboration with various Aboriginal and government building experts, began by conducting an analysis to effectively determine and understand the energy issues and needs of the communities. Although this analysis is not exhaustive, it highlights the main issues facing the residential and community buildings of the 41 First Nations communities in Québec. It discusses the obstacles that are hindering efforts to improve their energy efficiency and reduce their GHG emissions. It also presents inspiring initiatives and solutions to advance the energy transition of the buildings.

This analysis considers three types of buildings found in First Nations communities in Québec, each of which differs in use and ownership:

- > community residential buildings: dwellings owned and administered by First Nations councils and rented to First Nations members;
- > private residential buildings: dwellings owned by First Nations members;
- > community buildings: buildings owned by a First Nation council, but used for the benefit of the entire community.

DESCRIPTION OF THE BUILDING INVENTORY

In 2018, the building inventory within the territory of First Nations communities in Québec comprised 15,541 residential units, of which approximately 85% were single-family dwellings.

According to several reports, in particular the report of the Standing Senate Committee on Aboriginal Peoples and the Assembly of First Nations (AFNQL), many community residential buildings in these communities need to be renovated or built. This situation can be explained in part by greater demographic growth in the communities, which is putting pressure on housing availability because existing buildings are outdated, substandard and need to be replaced or because many First Nations members want to live within the borders of their communities. In response to the demand for additional housing, communities are often forced to use available funds to build as many dwellings as possible, rather than build better quality or energy-efficient dwellings. Due to community-specific geographical and socioeconomic issues, the communities

are not all able to carry out effective energy transition actions for their buildings to the same degree. Other considerations include the higher construction costs in remote regions, as well as the potentially complicated and hazardous process of transporting material to them. Furthermore, the building inventory is limited to the territory of the reserves, which makes it less attractive to invest in energy-efficient renovations because they do not increase the value of the residences.

ENERGY BASELINE OF FIRST NATIONS COMMUNITIES IN QUÉBEC

Of the 41 First Nations communities located in Québec, 33 are connected to Hydro-Québec's main grid. Three communities are supplied energy from off-grid hydropower systems with additional diesel generators, and five communities are powered by fossil fuels.

Based on the data provided by Hydro-Québec, an electricity consumption baseline was developed for the buildings in the communities with some margin for error. Overall, this figure was estimated at 0.72 TWh. Consumption in the residential sector of the communities increased by about 17% between 2010 and 2017, compared to an average increase of 11% among all residential clients in Québec served by Hydro-Québec. While this analysis did not uncover the causes of the different consumption levels, the fact that the number of consumption sites increased 8% during this period suggests that the dwellings consume more electricity on average than in 2010.

Aside from the electricity consumption data recorded by Hydro-Québec, not much information is available on the entire range of energy sources used, the energy efficiency levels of the buildings, the consumption habits of the communities, the consumption rates of the appliances used, and the greenhouse gas (GHG) emissions linked to their energy consumption. For these reasons, an exhaustive energy consumption baseline could not be developed for First Nations buildings.

PARTICIPATION IN PROGRAMS BY FIRST NATIONS

The scale of renovation and new housing needs in the communities is preventing First Nations councils and individuals from being able to apply energy efficiency measures in their buildings. In addition, First Nations may very well have their pick of energy efficiency programs offered by various government bodies and energy suppliers, but the analysis revealed that they are not necessarily taking advantage of them, and this finding is corroborated by their participation rates in TEQ programs. While a more in-depth analysis could not be conducted to explain the low participation rates of First Nations in TEQ programs, several issues were noted: communication concerning these programs, eligibility criteria, program structures, and their suitability to the communities' interests and needs. Still other obstacles, such as a lack of human resources in the communities, may be keeping them from applying for these programs. Finally, while carrying out its work, the Committee discovered that the various provincial and federal government bodies are finding it difficult to harmonize their programs. These findings suggest that First Nations may not even be considering many programs that are available to help them improve the energy efficiency of their buildings.

SUCCESS STORIES AND INNOVATIVE PRACTICES

During its research and discussions, the TEQ-First Nations Committee discovered that few communities in Québec promote their successful energy transition projects for buildings. On that note, the analysis discusses a few inspiring initiatives that deserve to be shared and replicated. However, unlike Québec, many provinces have funded energy efficiency, GHG emission reduction

and renewable energy deployment programs aimed specifically at Aboriginal communities. Québec could definitely use these innovative practices as a basis for advancing the energy transition of its First Nations.

ISSUES AND FINDINGS

This analysis uncovered a number of potentially key findings and issues for the energy transition of the residential and community buildings of First Nations.

1. First Nations' needs differ based on their specific socioeconomic and geographical context

A few findings

- > Buildings are a priority issue for First Nations councils.
- > The socioeconomic differences of the communities as well as the limited funds available to meet their renovation and construction needs encourage quantity over quality and energy performance when it comes to housing construction projects.
- > It is complicated and expensive for remote communities to transport materials, which increases construction and renovation costs.

2. A range of services tailored to the specific needs of First Nations

A few findings

- > The communities are discouraged from taking the proposed energy transition actions because they lack the human resources to manage the buildings and the external support they need to apply for financial assistance programs.
- > There is a low participation rate among First Nations in TEQ energy efficiency programs.
- > The eligibility criteria, financing structure, and types of incentives in some programs may seem ill-suited to the First Nations' realities.

3. Insured financing for a sustainable energy transition

A few findings

- > The communities find it difficult to raise funds for renovations because the homes cannot be used to insure the loan.
- > The money available in certain financial assistance programs is exhausted before the communities are able to take advantage of it.

4. A harmonized range of services between the different levels of government and government organizations

A few findings

- > The communities are unfamiliar with some of the energy transition-related financial assistance programs.

- > There is a lack of harmonization and consistency between the financing programs of the different levels of government.

5. Awareness of the energy transition among various segments of the First Nations population (community members and young people, First Nations councils, technical personnel)

A few findings

- > There are many inspiring and innovative energy efficiency projects in a number of communities that could serve as examples.
- > The First Nations have a real desire to innovate and are very sensitive to climate change issues.
- > The tools are poorly suited to raising awareness in the communities. For example, they are not always translated into Aboriginal languages and this creates a language barrier.

6. Development of energy transition-related expertise and resources in the communities

A few findings

- > There is a lack of familiarity with the benefits of energy efficiency and not enough human resources and expertise within the communities to advance energy transition efforts.

In light of the findings and issues uncovered by this analysis, potential solutions were successfully targeted and incorporated into consistent, effective actions that are designed to support the energy transition of First Nations' residential and community buildings. The next step will be to develop a specific energy transition action plan for First Nations.