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# **Standing Committee on Indigenous and Northern Affairs**

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**EVIDENCE**

**Monday, October 29, 2018**

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**Chair**

**The Honourable MaryAnn Mihychuk**



## Standing Committee on Indigenous and Northern Affairs

Monday, October 29, 2018

• (1630)

[English]

**The Chair (Hon. MaryAnn Mihychuk (Kildonan—St. Paul, Lib.)):** We're going to quickly get started, because we have a shortened meeting today.

This is meeting 125 of the indigenous and northern affairs committee. Pursuant to Standing Order 108(2) we are conducting a study on northern infrastructure projects and strategies.

Canada is in the process of reconciliation, and we all do it in different ways, personally and publicly. We're on land that has never been ceded by the Algonquin people. It's important not only to say the words but also to reflect on the history of Canada's development, and how we move through reconciliation.

The Mining Association of Canada has agreed to be rescheduled.

We have one panel and four presenters. We're very anxious to hear from you. You're on the ground; you know what's happening. You have recommendations for our committee. Welcome.

First up is Denendeh Investments Incorporated. You're coming in from Yellowknife. Welcome to Ottawa. You have up to 10 minutes. I understand that you have all collaborated and agreed to make shorter presentations, if possible. We want to thank you for that, because it will allow us to ask more questions.

Welcome, Darrell.

**Mr. Darrell Beaulieu (President and Chief Executive Officer, Denendeh Investments Incorporated):** Thank you. I'd like to thank the committee for inviting me to make a presentation on northern infrastructure and strategies.

Denendeh Investments is a business arm of 27 Dene First Nations in the Northwest Territories. I'd like to again acknowledge the first nations territory we are on.

[Witness speaks in Dene]

I will start with plan B, since we have limited time.

In 2014, all of the Dene chiefs passed a historic resolution supporting and promoting the concept of working together and with other indigenous governments to support controlled resource exploration and development, including the establishment of resource development and export corridors. We have motions, and I believe that committee members may have been provided with motions, or copies of those resolutions.

Having said that, I'm going to get to a summary, and then I'll get into the body and close.

In terms of how we want to do that and where we want to go, part of the messaging is that we need to look at empowering indigenous business to lead northern infrastructure development. Last month, in collaboration with the Government of Northwest Territories—and I believe, Minister Wally Schumann mentioned it during his presentation on October 17—was a second or third meeting of the Dene, Métis and the Inuvialuit, looking at how we can improve the economy of the Northwest Territories. We've discussed various ways to do that.

As you are aware, in every northern jurisdiction there is a requirement for funding. We would probably look at five-year funding, looking at a joint secretariat to start doing the studies and the research that's required. A lot of it is non-starters in the north, because you just don't have the capacity, or the soft costs that are able to be covered.

Another item is to create an indigenous infrastructure investment fund. In 1996, the Royal Commission on Aboriginal Peoples stated it would cost about \$20 billion to meet the infrastructure needs of indigenous communities in Canada. In today's numbers, that would probably exceed \$30 billion to \$40 billion. A key component of the indigenous infrastructure investment fund would designate federal dollars for infrastructure as indigenous equity in lieu of tenure for industry use.

We'd like to ensure capacity building through funding programs, loan guarantees and seed capital to allow indigenous corporations and businesses to be major players, and to adopt and enforce indigenous procurement policies, providing incentives to industry, business and corporations that purchase indigenous goods and services.

We'd like to promote real government-to-government relations where indigenous governments manage developmental monitoring and cleanup work of their own territories using their own development corporations and local businesses.

Lastly, we'd like implementation of the recommendations from the Royal Commission on Aboriginal People, the Truth and Reconciliation Commission call to action, and the United Nations Declaration on the Rights of Indigenous Peoples.

•(1635)

In terms of the resolution that the Dene nation passed, Denendeh is seeking to fulfill this mandate and help facilitate the establishment of the concept of indigenous-led resource and infrastructure development in the Northwest Territories and across the north with other indigenous governments. It is seeking support from the federal government to achieve this goal.

We've been promoting this concept at numerous conferences, forums, round tables and meetings such as the Arctic policy round table and framework round table. I've just returned from the Arctic Circle assembly in Reykjavik, Iceland where I participated in breakout and plenary sessions with our premier, Bob McLeod, on North American Arctic infrastructure.

Indigenous-led resource and infrastructure development appears to be gaining momentum in this country with the federal and territorial governments, in industry and, most importantly, within the indigenous governments and their organizations and businesses. That's being discussed more and more in the communities, in the regions, and territory-wide or pan-territorially wide.

At this point in time, the NWT is at a crossroads. Diamond production will fall and all three operating mines will probably close by 2034, or 2043 at the latest. Diavik is closing. I think they're scheduled for 2024, which is in six short years. That's very fast. It will possibly be 2027 for Dominion and for De Beers.

As you're all aware, it takes anywhere from 10 to 20 years to build a mine into operation—once you find it—after going through the regulatory processes, etc. We're going to have a wine glass effect here in the next little while where we have all this work and then there's going to be nothing. Even if there is development of some of the base metal or the gold mines, the Chamber of Mines says that probably three or four base metal mines won't even replace a Diavik, which hires 1,400 to 1,600 people. That's not going to make up the decline of the diamond production.

All of the sectors in the territory are going to suffer as a result of that declining production. We commissioned a report in January 2016 called "Choosing a Path Forward". Of the several things it stated, one was that the greatest impact will be felt by NWT indigenous communities. Failure to understand and adapt to these changes could be disastrous for the long-term future of the communities and the regions in the north.

However, we do have a wealth of resources, as you're all aware. Indigenous governments have the power and the influence to create sustainable development policies. They're already being implemented through land claim agreements, etc. Certainly we can build societies of wealth through development policies and environmental solutions.

We do boast the highest median income in the country, but non-indigenous people in NWT have twice that of the indigenous population. Part of that report is that the NWT has the second highest poverty rate in the country. There's social infrastructure. There are various types of infrastructure such as roads, telecommunications and energy. Contributing to these challenges is the lack of infrastructure in the NWT.

I'm going to forgo a lot of this and just get directly to some of the benefits of indigenous-led infrastructure.

It's going to provide a pre-approved indigenous corridor for transportation, energy and communications infrastructure. It'll create its own source of revenue to indigenous governments through the land access agreements, royalties and tariffs. It will generate revenues for all other governments.

•(1640)

It will improve access to forestry, recreation, mining and isolated communities. It will create employment, training, skills development and business opportunities. It will provide certainty and control over the location, size and pace of development. It will provide environmental safeguards. It will create greater certainty for investment. It will help lower the cost of living in remote communities.

The Government of Northwest Territories has clearly acknowledged it cannot undertake the much-needed infrastructure and resource development without the full support and participation of the indigenous governments, their organizations and the respective businesses.

Recognizing the need to work together with a goal of finding a way for a collaborative approach, we hosted the indigenous leaders planning forum in May. We co-hosted the annual Arctic Indigenous Investment Conference. We collaborated with the economic symposium in October and we're having one in December.

Thank you.

**The Chair:** Thank you very much.

There's a lot to say in such a short time, but I want to say that even though this seems so condensed, your comments—whether they're in a brief or here in person or both—will be used to construct a report that will be presented to the ministry and to all Canadians, so we really value them.

We'll now go to Bruno, from the Qulliq Energy Corporation. Welcome.

**Mr. Bruno Pereira (President and Chief Executive Officer, Qulliq Energy Corporation):** Thank you, Madam Chair.

Qulliq Energy Corporation is the territorial power corporation for Nunavut.

I would like to begin by thanking you and the members of the standing committee for inviting me as the representative from Qulliq Energy Corporation to appear before you today. Opportunities such as this provide us with a chance to identify some areas of improvement and provide recommendations to the federal government. I will keep my comments short. I'm going to focus primarily on Qulliq Energy Corporation, QEC.

QEC is relatively small in size, with about 200 employees, 15,000 customers, and an annual operating revenue of about \$134 million. However, our reach is quite vast. The territory, Nunavut, is two million square kilometres, making up approximately 20% of Canada's land mass. This sizable area is serviced by our 25 power plants, one in each of Nunavut's communities. Every power plant is a stand-alone, so there is no grid connection between the communities or to the south.

The territory's lack of basic infrastructure—roads, ports, housing—and telecom infrastructure has a profound impact on the energy sector. Most importantly, each of the power plants generates electricity through the burning of diesel, something that has both financial and environmental impacts.

Funding infrastructure projects remains the corporation's biggest challenge as the territory's sole provider of electricity. QEC has 11 of the 25 remaining power plants that have exceeded their expected service life. This existing burden on capital resources means there is a significant restriction on the projects we're able to pursue or fund. I'm thinking about alternative energy projects as one aspect.

These restrictions hamper the corporation's ability to reduce the territory's reliance on diesel and to reduce carbon emissions. Expanding our use of renewable and alternative energy resources is, right now, largely dependent on federal funding. QEC has benefited from federal funding programs, but these programs are not always realizable in the north, specifically by Nunavut and QEC. However, QEC continues to apply to these various programs.

Financial support for the north and its residents must be accessible and relevant to really improve the lives of Nunavummiut. There should be discussions on the development of funding opportunities and how those apply specifically to the region.

I'm going a bit off-script here, but in Nunavut a significant cost of living is the energy cost—the cost of electricity, the cost of heating and the cost of transportation. Nunavut is the only jurisdiction in Canada that is 100% diesel or fossil fuel-based. All of our electricity is generated by diesel. All of our heat comes from fossil fuels. Of course, our transportation is, likewise, fossil fuel-based.

To really impact the energy picture in Nunavut, meaning the affordability, you would need to hit both electricity and heat. Collectively, for those two, if we could impact the price that our customers pay and that Nunavummiut have to bear, it would have a meaningful impact on their financial and economic prospects.

It's critical that the standing committee and the federal government as a whole understand the infrastructure challenges faced by QEC, the Government of Nunavut and all Nunavummiut. Without your support, our corporation will be challenged to rebuild critical infrastructure and to expand our use of renewable and alternative energy. I said “expand”, but right now, we have none, although we're hoping to change that in the near future.

A number of things that conspire against us—again off-script—are geography, logistics and capacity. In terms of geography, our 25 communities are spread out over two million square kilometres with no interconnecting infrastructure. We can't do anything about that.

• (1645)

On logistics, there are the costs and the sealift season. As many of you are probably aware, if you want to take anything of significance in terms of construction material up to Nunavut, you do it during the sealift season. That's basically the only time you can do it unless you're willing to fly it up at some other time, assuming the material is small enough.

Of course, even in terms of our neighbouring territories such as Yukon, with a lot of their population based in Whitehorse and to a lesser extent in Yellowknife, and with connecting infrastructure to a certain extent, we have none of that.

Also, of course, it's about capacity. We have small communities, so it's about the financing. It's about the human capacity and the partnering with organizations that have the skill sets, etc.

Those are all challenges that are tied to the infrastructure picture.

Madam Chair, this concludes my opening remarks. I'd be pleased to answer any questions. Thank you.

• (1650)

**The Chair:** Thank you.

We are moving now to the Northwest Territories Power Corporation on video conference.

Welcome to our committee. We're glad that you could find the time to join us. I'm sorry that we took some time to get going.

**Ms. Jay Grewal (President and Chief Executive Officer, Northwest Territories Power Corporation):** Good afternoon. My name is Jay Grewal. I'm the president and CEO of Northwest Territories Power Corporation, NTPC. Joining me today in Yellowknife is Paul Guy, chair of NTPC's board of directors and deputy minister of the Northwest Territories Department of Infrastructure.

Thank you for the opportunity to speak with you today, not only about the challenge that we have here in the north, in terms of power generation and distribution, but also about the opportunities that will help stabilize the cost of energy and foster a clean growth economy, for the benefit of northerners and all Canadians.

NTPC is a territorial crown corporation with the Government of the Northwest Territories being our sole shareholder. Our mission is to generate, transmit and distribute clean, reliable and affordable energy to residents, communities and businesses in the Northwest Territories. We do this to enrich the lives of northerners by providing power that encourages living, working and investing in the territory.

The reality is that this is becoming increasingly challenging. We serve a population of approximately 44,000 people in the third largest region in Canada, with an area of 1.3 million square kilometres. Fifty per cent of the customers we serve are indigenous. They are living in remote communities, the majority of which are only accessible by air, barge or winter road. These small communities have limited employment opportunity, yet unfortunately, the reality is that they have among the highest power rates in the country.

Though we are doing our best at NTPC to operate as cost-effectively as possible, electricity rates in the NWT are approximately five times the Canadian national average. We are at the point where, for some of our customers, they have to choose between buying groceries to feed their family or paying their utility bill to ensure they continue to have power. This is not a choice any Canadian should have to make.

The reality is that what many Canadians take for granted, we northerners live without. Only eight of the 33 Northwest Territories communities have access to hydroelectricity. Some of these facilities were built almost 80 years ago, thanks to federal investments. Unfortunately, there have not been significant investments in new hydro capacity for many decades. Thus, the remaining 25 communities in our territory are powered primarily by stand-alone diesel generation, at great financial and environmental expense.

Not only does this impact our residents, in terms of a high cost of living and their quality of life, but it also creates economic challenges and challenges for economic growth.

The Northwest Territories is rich in resources, which will remain largely untapped, unless we are able to provide cost-effective and green energy solutions. The lack of roads leaves mineral resources, like cobalt, gold, lithium, bismuth and rare earth elements necessary to fuel the global green economy, mostly inaccessible.

Power is typically the largest component of any mine's operating cost. In the Northwest Territories, the lack of energy infrastructure, particularly new hydro capacity and transmission lines, means remote mines have to rely on fossil fuels. They are trucked or flown thousands of miles to meet the power needs.

The likelihood of these potential mine projects coming into operation is low, as this is costly, so project economics are not viable. If this does not change, these valuable, globally desirable minerals will most likely never be extracted.

Our current reality is that we have a small customer base. Our two hydro systems are not connected to each other, nor are they connected to the North American grid. We have changing weather patterns, which result in low water levels one out of every 10 years. All of this leads to a greater reliance on costly diesel for backup generation and that results in higher power costs.

•(1655)

Investment in energy infrastructure is necessary to address the fundamental challenges we are facing in the Northwest Territories, as it will support the development of a stronger growing economy, lower the cost of living for all residents, create opportunities for indigenous partnerships and support Canada's international commitments on climate change through reduction of greenhouse gases.

To help address our challenges, NTPC has developed a 20-year strategic plan that is based on three pillars: reliability, economic sustainability and environmental sustainability. These pillars are well aligned with our shareholders' 2030 energy strategy, which we were a key participant in developing.

A key focus of the Northwest Territories' 2030 energy strategy is a reduction in GHG emissions from electricity generation. The Northwest Territories' plan will benefit our customers, since a foundational component is long-term investments in energy infrastructure that will address the cost of energy without negatively impacting reliability. With strong federal funding support through the investing in Canada infrastructure program, ICIP, important electricity projects such as the Inuvik wind project, the first megawatt-scale wind project built north of the Arctic Circle in Canada, will be able to proceed.

The project will be built in partnership with the regional Gwich'in and Nihtat first nations.

With the support of ICIP and other federal and territorial funding programs, NTPC plans to integrate solar and wind into the communities that currently rely primarily on diesel. We are also looking to displace diesel and reduce GHG emissions by constructing liquefied natural gas plants.

While these investments are beneficial and will support the Northwest Territories in its carbon footprint reduction commitments, it is not enough nor will it meaningfully contribute to reducing the gap between residential electricity rates here and the Canadian national average.

In order to achieve these goals, significant change is necessary. A transformational project would ensure that the NWT can do its part to meet commitments under the pan-Canadian framework, green the mining sector, create mutually beneficial indigenous partnerships and support long-term economic development for residents of the north.

The Taltson hydroelectric expansion is the project that can and must proceed, as it will transform the reality Northwest Territories residents face. We currently have two separate hydroelectric systems on either side of Great Slave Lake. The plan to expand Taltson's capacity and connect the north and south systems will result in cleaner and more reliable energy for over 70% of our residents and businesses. Significantly, it will also lay the foundation for greening current and future mining developments. The Taltson River currently has 18 megawatts of installed hydro power, but has 200 megawatts of potential capacity that could be harnessed through a phased approach. All phases of expansion would rely on run-of-the-river technology, with no need for flooding.

Phase 1 of the Taltson hydroelectric expansion would result in 60 additional megawatts of clean electricity being available to customers and would include the installation of a transmission line to connect the north and south systems. Over the longer term, the expansion would also make it possible to install a transmission line in the proposed Slave geological province access corridor. The combined benefit of increased road access, for more efficient resupply and development of mines in a resource-rich region, and reduced energy costs, through the Taltson project, would completely transform the investment environment for industry and the economic future of the territory.

• (1700)

**The Chair:** We might finish your report during the question period, and also please submit your brief in full for us to look at while we're preparing the report.

Thank you so much.

We are now moving to the Canadian Electricity Association. Welcome, gentlemen. You can start any time you're ready.

**Hon. Sergio Marchi (President and Chief Executive Officer, Canadian Electricity Association):** Thanks to you, Madam Chair, and the members of your committee for inviting CEA to testify before your very timely mandate. I am Sergio Marchi, president and CEO. I am accompanied by Doug Tenney, who was vice-president of northern development with ATCO.

Together with the remarks that you heard from Bruno and Jay, I think the committee will get a good perspective on the northern infrastructure needs as it relates to power.

Unfortunately, Madam Chair, our submission did not get back from the translators in time. You have a copy of my remarks, but we will have that submission to you ASAP in both official languages.

We offer five strategic recommendations for the government. Together, they outline ways to address the unique challenges and opportunities facing Canada's north, to ensure no one is left behind in Canada's energy transition to a low-carbon future.

First, a few quick words about the association. CEA, as you may know, is the national voice for the Canadian electricity sector. Our membership is comprised of generation, transmission and distribution companies right across Canada, as well as manufacturers, technology companies and consulting firms, representing the full spectrum of electricity suppliers.

The sector is uniquely positioned to contribute to a cleaner and greener energy era; however, Canada's remote and northern communities suffer from a significant level of energy inequality, where the cost of electricity in many communities is about 10 times higher than the Canadian average. This lack of affordable power has limited economic potential, and stifles the region's economic development and prosperity. It also impacts their social fabric; the three previous speakers spoke to this.

Simply put, this must change because the federal government has to recognize that this is demanded by the region's uniqueness. It has small and scattered populations, is isolated from power grids, and has limited economic development and harsh winter conditions.

This past June, CEA brought a rich variety of leaders to Carcross, Yukon, for an energy symposium entitled "Powering the Future: Partnering in Energy Development". It was a for-the-north, by-the-north session. We had a very engaging discussion, and we produced the report of those proceedings. Our submission today is an extract of that report to keep within the stated rules of length of submissions, as specified by your committee.

As I mentioned, we offer five recommendations. First, the federal government must support transformative renewable energy infrastructure projects in Canada's north, in terms of financial capital, as well as research, development and deployment. Access to capital must be improved, and technical barriers and operational constraints must be alleviated.

Second, the government must work to accelerate research under way to find innovative efficiencies in diesel generation, while concurrently promoting non-diesel alternatives. Diesel, as we heard from Bruno, will continue to play a significant role in the foreseeable future, as many northern communities have no option but to rely on diesel generation.

Third, the federal government should work to facilitate transmission interconnections within the territories and between the north and south in an effort to end its energy isolation. The three northern territories have isolated electricity grids, and in many cases, as we heard this afternoon already, the local communities within these territories themselves are further isolated from the main power grid.

Fourth, the federal government must find and implement flexible funding mechanisms for the territorial governments to achieve their climate objectives and targets. A flexible approach will help make transformative changes to the energy systems and chart a long-term path to energy sustainability in these regions.

Finally, the federal government must continue to build new and dynamic partnerships with indigenous communities, if those communities are to be economically prosperous and sustainable.

• (1705)

In good part, economic development and a sustainable future for these indigenous communities will indeed depend on such relationships.

Madam Chair, I would like to now invite Doug to share his thoughts on this topic from where the so-called rubber hits the road.

Thank you.

**Mr. Doug Tenney (Vice-President, Northern Development, ATCO Group; Representative, Canadian Electricity Association):** Thank you, Mr. Marchi.

It's a pleasure to be here today. ATCO is a proud member of CEA and has a long history in the north.

As mentioned by Mr. Marchi, ATCO and the three northern utility Crown corporations were actively involved in advancing the recommendations that Mr. Marchi just spoke to. ATCO is in complete agreement with the recommendations.

Our operations in the north face some challenges similar to what you've already heard here today. Our customer base is dispersed in small communities spread over a vast land base. We lack the industrial customers needed as anchor tenants for new electrical projects. Despite these challenges, we firmly believe that Canada's north deserves a better sustainable energy future.

To deliver this in the best possible way, and to better serve our customers who rely on us to heat their homes, power their businesses and move the economy forward in the north, we need to harness our collective strengths and collaborate for the benefit of all. From investor-owned utilities to Crown corporations, indigenous communities and all levels of government, now is the time to work together collaboratively to provide affordable, reliable and safe renewable energy sources to meet the needs of northerners.

ATCO serves several communities in Yukon and the Northwest Territories that rely solely on diesel generation for their electricity. We are working with the local indigenous communities, creating sincere, respectful and mutually beneficial partnerships that would see them as the owners and operators of local renewable energy generation projects that sell power back to the utility at the avoided cost of running our diesel facilities. But to ensure no increased cost to utility customers over the life of the project, financial support from government is critical.

This model is yielding positive results in Yukon. For example, ATCO and the Vuntut Gwitchin First Nation in Old Crow have executed an electricity purchase agreement for their solar project in the community of Old Crow. ATCO is also in advanced negotiations for an energy purchase agreement with the Kluane First Nation for their wind project in Burwash Landing. Work is also advancing in other communities served by diesel generation, including the development of transmission interconnection to existing hydro-electric generation for Fort Providence and Kakisa in the Northwest Territories.

ATCO is a strong advocate of the development of the vast hydroelectric potential in the north and the resulting transmission interconnections, both to power the region and to develop an export market to help reduce the use of thermal generation in southern Canada. It is our belief that this work will ultimately assist in reducing the cost of electricity in the north; but again, it requires true partnerships. Trust is the key and critical foundation to any lasting partnership, between not only indigenous communities and investor-owned utilities but with all partners involved, including Crown corporations and government. This requires patience, understanding, meaningful dialogue and the will to do the right thing, whereby all parties win.

We have a lot of work ahead of us. By fostering collaborative partnerships, we can face any challenge and be successful. We can show the many locations around the world that have similar weather and population densities how these challenges can be overcome, and we can do that together.

Thank you.

**The Chair:** All right. The committee has a challenge. We can look at three sessions of slightly less than seven minutes each, or we can look at a model of five minutes and three minutes for the second round.

What is the will of the committee?

Cathy.

• (1710)

**Mrs. Cathy McLeod:** I'm happy with five minutes.

**The Chair:** That's five minutes and three minutes, so that people have a chance to ask questions. Very good. Let's get started.

Our first on the speaking order is MP Robillard.

[*Translation*]

**Mr. Yves Robillard (Marc-Aurèle-Fortin, Lib.):** Thank you, Madam Chair.

I would ask our witnesses to put on their earpieces because my questions will be in French.

I'll start with you, Mr. Beaulieu. Could you tell us how private investment can support economic development? What about supply? How can it support northern development?

[*English*]

**Mr. Darrell Beaulieu:** We've discussed this question over time in terms of how government and the private sector can support indigenous economic development.

In terms of government, I think the key is setting the right policies to support indigenous businesses that are in supply and services, and providing incentives. I know the government has the procurement strategy for aboriginal business. I can tell you clearly that it does not work, does not apply, in certain areas of the north. I won't get into the details of that.

On the private sector side, I think there are ways. The U.S. government does have some policies. I think they have the AIDEA program, which the Alaska Native Corporations have used very successfully. I believe there are procurement incentives for large corporations to buy supplies or services from the U.S. tribes to stimulate their economies. They get a tax incentive or deduction for a certain percentage of the supplies and services that they buy.

[*Translation*]

**Mr. Yves Robillard:** My other questions are for Doug Tenney and Sergio Marchi.

We have heard about some interesting options for replacing diesel fuel. I know that your government is currently supporting a project to replace diesel use in northern Ontario.

What opportunities are created by connecting communities to the network? How do you think this strengthens Arctic sovereignty?

[*English*]

**Mr. Doug Tenney:** I'll take a first shot at the question.



Certainly, there are a lot of projects the government can help with in the north. The particular model that ATCO favours is to partner with the local community, to have them own the renewable generation. To the extent that the amount they want to generate maximizes the diesel reduction, it typically requires us to bring in a battery energy storage system so that if the sun stops shining or a cloud comes in front of it or a wind backs off and the diesel can't pick up the load in time, we need batteries to act like a generator one second and a load in another.

• (1715)

**The Chair:** We've run out of time, sorry. Five minutes goes very quickly.

Next is MP Cathy McLeod.

**Mrs. Cathy McLeod:** Mr. Albrecht will take 30 seconds.

**Mr. Harold Albrecht (Kitchener—Conestoga, CPC):** I have a quick question of Mr. Pereira.

I've had the privilege of visiting Iqaluit a few times and I've noticed the reliance on diesel fuel. As you've said, there are 25 plants, 25 communities, and seven are beyond their expected life service.

Has there been consideration of using gasification, both to deal with the garbage problem and also possibly provide electricity, or is it just considered not feasible?

**Mr. Bruno Pereira:** Actually, we're in the middle of having some discussions about doing some feasibility studies, particularly in Iqaluit, because of the size of the community and the resulting... Well, you've been to Iqaluit. You've probably seen the town.

**Mr. Harold Albrecht:** Yes, I've seen both. That's why I asked.

I don't want to take up the committee's time, but thank you. I'm glad it's being looked at.

Ms. McLeod.

**Mrs. Cathy McLeod:** Thank you.

You can tell, I think, that we all have so many questions. It's unfortunate that we've been cut short.

You've talked about the extraordinary costs. In spite of their looking at some remedy, I believe the carbon tax is still going to be very impactful in terms of the costs of living—in spite of rebates—because of course they're significantly higher.

What I'm going to really focus on is the new technology. Maybe I'm not as knowledgeable as you are. There's a lot of work being done in other countries.

There are 200 communities on diesel. We've talked about the sun; we know that in the winter it's very impractical... I think small nuclear reactors have really come a long way. There's no perfect solution, but if you had to offset the good and the bad, is this anything that anyone is talking about? I know that in other countries now there are small units that are good for about 60,000 homes. In Canada, is it just "forget it"?

Who wants to tackle that one?

**Hon. Sergio Marchi:** I hope we don't forget about nuclear. I think nuclear is a legitimate part of our mix, particularly when we have carbon targets and aspirations. We're going to be hard-pressed to reach those without recognizing the nuclear option, but of course, as we all know, nuclear has always had a challenge with respect to consumers, because often they think that we are one accident away... When you look at nuclear safety in our country, you see that it's exemplary.

I know that the Americans are talking a lot more than we are about small nuclear possibilities. I think we should be in there just like they are and talking about those small modules to see if they can complement the other technologies and the kind of hydro that we've been blessed with in this country.

**Mrs. Cathy McLeod:** I do appreciate gasification and solar. Some of those other options are important, but I don't know that in the long run they will accomplish as much as something like these new modular units, which I understand are much more effective and much safer.

Mr. Pereira.

**Mr. Bruno Pereira:** Thank you. I'd like to add a bit more.

Qulliq Energy Corporation, QEC, is part of the steering committee that's developing the SMR road map here in Canada. Whenever we talk about nuclear energy in Nunavut, I always throw in that we're exploring the feasibility, the business case, and that before we go any further, we will consult the communities to make sure it's acceptable to communities. We're very conscious of that.

One of the things we are doing, as an example, is developing a business case for communities and for some of the mining possibilities in the north. Now we're looking at the feasibility, because we seem to be doing a lot of that groundwork and foundational work that will probably be generational in nature in terms of outcomes.

Certainly we're looking at all potential options, and certainly the SMR is a possibility.

Thank you.

• (1720)

**The Chair:** Let's not forget that we have Jay by video conference.

**Ms. Jay Grewal:** In the Northwest Territories, we have not at this point been looking at the small nuclear option. We don't see it being feasible within the next 10 years, though it is within our energy strategy and is something that we are looking at in the longer term. I would say, as Bruno and others have identified, that there is a sensitivity in the communities to the concept of nuclear.

One of the items that we didn't touch on is what else is being explored, which is geothermal.

**The Chair:** We've run out of time.

Let's not forget wind too. I'll just throw that in.

MP Rachel Blaney.

**Ms. Rachel Blaney (North Island—Powell River, NDP):** Thanks so much to all of you for being here today.

I'm going to start with you, Jay, since that's where we left off.

You talked a lot about various methods of producing energy. You talked about run-of-the-river energy and solar and wind. You've just talked about geothermal. What I really want to get to the crux of is the reality of what I'm hearing, which is that this is a complex situation where there are multiple parts that may help, but there may not be one sole solution. You may have to look at a combination. As we're all trying to move forward and be more environmentally friendly, that's a specific challenge for your region.

Perhaps you could talk about where you see those things working together and where you really need the support in terms of infrastructure funding to go in that direction.

**Ms. Jay Grewal:** That's a very good question. With the ISED funding, we are looking at wind. The Inuvik wind project that I mentioned has been approved and is moving forward.

We are looking at LNG, which is 30% less GHG. We are looking at interconnectivity, including transmission. We are looking at solar, and we already have a number of solar installations.

I would say, though, that when we develop our 20-year strategic plan, when we map that all out and look at it, the reality is that, although that may allow us to reduce our carbon footprint, we will only achieve 50% of what we need to in the Northwest Territories. The only way we can see, at this point in time, the ability to address the other 50% as well as address reliability and the cost of power is to proceed with hydro power. That will allow us to support mining development. It will allow us to connect the two systems and move transmission up and connect diesel communities where currently, until battery power advances or variable speed generators improve, we really won't be able to come up with a solution to address it.

For now, we're looking at what we can do on an interim solution basis, but everything we've modelled and mapped out indicates that we need to work with the indigenous partners to advance Taltson.

**Ms. Rachel Blaney:** Thank you so much.

Bruno, I'm asking you the same question.

**Mr. Bruno Pereira:** I think that we're looking at all the possibilities. I think there are technical constraints and there are also other considerations. The nuclear option has considerations other than technical.

For us, we're looking at intermittent power sources, solar and wind versus on-demand, and the deep geothermal. We're looking to do a couple of test holes in a couple of communities to look at the deep geothermal. We're looking at options. In fact, we're going to throw it to the market. We're introducing an independent power producer program, and hopefully third parties can come up with solutions.

We're releasing a paper shortly that talks about all of the possibilities and how they apply to Nunavut. I think you're right, it's probably going to be a mix-and-match. If there are hydro possibilities in the community, we may be able to do that in community A. In community B, hopefully there's some deep geothermal, and I know there's at least one community in Nunavut that is interested in the nuclear option.

I do believe it's going to be a long-term proposition, particularly in Nunavut. We're really right at the starting line. I mentioned before 100% diesel, so to get the momentum going, often for us now, that

will mean double investments in infrastructure because if you do intermittent, you need the diesel backup.

Right now, if you look at solar and wind, there are some technical issues, but really for us, it's more financial. That's really what's holding us back.

Thank you.

**Ms. Rachel Blaney:** Thank you. I appreciate it.

Doug, do you have anything to add?

**Mr. Doug Tenney:** I would say there is no silver bullet for any of these. As we mentioned, the communities are a long way apart, so it's going to be difficult to see interconnections for all these communities. I think large-scale hydro with transmission interconnections to the south does allow, if the partnerships are set up correctly, the opportunity for those to reduce diesel costs in the north. You might still have diesel in a community, but you can subsidize it by the profits you make by selling the power to southern Canada.

• (1725)

**Hon. Sergio Marchi:** Could I say for ten seconds that one silver bullet is expensive, but one silver bullet may be the issue of interties. As we noted in our submission, Yukon is looking at trying to connect on the grid vis-à-vis British Columbia. NWT is looking at Saskatchewan, Manitoba and Nunavut. In other words, the silver bullet is expensive, and when the Department of Finance says, "Marchi, this is too expensive", I say, "Well, so was building a national road across the country. So was building a national broadcasting system. So was the space arm". We did all of those things for something called nation-building, and sometimes nation-building doesn't have a cheap price to it.

When I look at our north, we electrified our cities in the south first, we then electrified our rural communities, and you know what? We really haven't finished the job on the third part of our Canada triangle, the north. Not only do they not have affordable electricity, but let's be frank, they also don't have the same quality power system as we in the south. Does it cost a little bit to do those interties? Yes. Is it worth the nation-building concept of our country when we speak so passionately about the north? Absolutely.

**The Chair:** Mike, you're next, and you have two minutes.

**Mr. Mike Bossio (Hastings—Lennox and Addington, Lib.):** Are there hydro opportunities as well up in Nunavut?

**Mr. Bruno Pereira:** Yes, there are. I'll give you an example. We did a study. Right now we have in diesel about 20 megawatts of capacity in Iqaluit. That costs about \$40 million. There is a possibility for 20 megawatts of hydro. We just reviewed the costs earlier this year; it's \$350 million. Those are the challenges we face.

We also have run-of-river in some of the communities, etc., but all of it just illustrates the fact that we're talking about different logistics, different cost structures, and really it's a significant showstopper for us as an organization.

**Mr. Mike Bossio:** That was for 20 megawatts either way. For the hydro system, would it have been limited to 20 megawatts for \$350 million or could you have scaled that up to a much higher amount of power?

**Mr. Bruno Pereira:** That's actually for two different locations close to Iqaluit. That's the maximum from those two particular locations. You could build in other potential areas, but that would mean additional investment. That's the maximum for the \$350 million, the 20 megawatts.

**Mr. Mike Bossio:** If you were to take that \$350 million and build it in an area that actually makes more sense for hydro, has there been any study done to find out what the transmission costs would be to bring the lines from the hydro site to those centres and, just feeding off what Sergio is talking about, being able to feed that into other areas?

**Mr. Bruno Pereira:** In Iqaluit, we're remote from other communities. From Baffin Island, where we are, you can't get to a lot of the other areas. That's similar to a lot of other communities in

Nunavut. There is a potential transmission line from Manitoba to Nunavut, which would supply five communities going up the west side of Hudson Bay. That's being reviewed as we speak.

**Mr. Mike Bossio:** So geothermal would actually potentially be a better source because of the isolation that exists. If you can get that deep geothermal, that works. That to me sounds like it would be potentially the best opportunity.

**Mr. Bruno Pereira:** I think it's a possibility. I'm hesitating a little bit because we just did a desktop study. Three communities out of the 25 were identified for additional study to see if they were viable. Even if those three were realized, there are still the other 22 communities.

**Mr. Mike Bossio:** I've run out of time.

Thank you very much.

**The Chair:** Unfortunately, we've all run out of time. Please submit your briefs. We will be accepting briefs as the study goes on. I want to thank you for coming out and having such an engaging discussion.

The meeting is adjourned.

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