HOUSE OF COMMONS
CHAMBRE DES COMMUNES
CANADA

Standing Committee on Indigenous and Northern Affairs

INAN • NUMBER 121 • 1st SESSION • 42nd PARLIAMENT

EVIDENCE

Monday, October 15, 2018

Chair

The Honourable MaryAnn Mihychuk

Standing Committee on Indigenous and Northern Affairs

Monday, October 15, 2018

● (1530)

[*English*]

The Chair (Hon. MaryAnn Mihychuk (Kildonan—St. Paul, Lib.)): Welcome, everybody, to the beginning of a new study on northern infrastructure...and huge needs in Canada. Pursuant to Standing Order 108(2), we are conducting a study on northern infrastructure projects and strategies. We're going to try to prepare a comprehensive report in what seems like a very short amount of time.

We're very interested in new technologies, new approaches to providing what we all consider to be basic rights, like the Internet, to all Canadians. We look forward to hearing what you, as experts, have to tell us in terms of new and innovative approaches.

Before we start, we always recognize that we're on the unceded territory of the Algonquin people here in Ontario. This is an important step for all Canadians every time we meet, every time we have an event, a celebration. Let's remember our history at a time when we are finally moving through truth and reconciliation, an important movement for every Canadian.

The way this works is that we'll have 10 minutes for a presentation from each presenter. After the presentations, we'll have rounds of questions from the MPs.

Not to hold us up any further, I understand that we have what is officially the Department of Indian Affairs and Northern Development. Has it been split? Are you actually Northern Development now?

Mr. Wayne Walsh (Director General, Northern Strategic Policy Branch, Department of Indian Affairs and Northern Development): We are currently still the Department of Crown-Indigenous Relations and Northern Affairs.

The Chair: My sheet is still in the dark ages, because we haven't actually passed the bill. Your changes are exceeding our ability to actually have the right....

Welcome, Wayne. You're going to be talking on behalf of Crown-Indigenous Relations. Is that correct?

Mr. Wayne Walsh: It's Crown-Indigenous Relations and Northern Affairs.

The Chair: Crown-Indigenous Relations and Northern Affairs....

Mr. Wayne Walsh: That's correct.

The Chair: Welcome.

Please start.

Mr. Wayne Walsh: First of all, I'd like to thank you for the invitation to appear before the committee today.

[*Translation*]

My comments today will focus on what we're learning about the priorities of Arctic residents, as we continue to work toward a new Arctic and northern policy framework.

On December 21, 2016, Prime Minister Justin Trudeau announced that Canada would be developing a new Arctic policy framework, together with Northerners, territorial and provincial governments, the First Nations, Inuit and Métis people.

The development of the new framework and the co-development process drew from the work of Mary Simon, the minister's special representative on participation, and from advice for a new approach to leadership in the Canadian Arctic. Closing infrastructure gaps in the Arctic was a key theme of the report.

Since 2016, we've been holding consultations and working with residents and leaders in the North and with other stakeholders to support the development of the framework.

We're working directly with the territorial and provincial governments involved, with representatives of Nunavut, Inuvialuit, Nunavik and Nunatsiavut, and with other partners to draft a vision and common goals that will guide the federal government's activities to 2030. More than 30 departments and agencies have participated in the process.

[*English*]

The balance of my comments today will focus on what we heard and learned through this process. To support engagement, a discussion guide was co-developed with partners who identified six themes as a starting point for conversations on the future of the Canadian Arctic and northern policy, including comprehensive Arctic infrastructure. The discussion guide, and our conversations at round tables and other engagements, started with an acknowledgement of the gaps and challenges. These acknowledgements were, and remain, important for our co-development partners who live with these challenges daily.

The harsh environment, changing weather patterns, short construction and shipping seasons, lack of building resources and a small tax base create significant challenges and risks to building and maintaining infrastructure in the Canadian Arctic. We acknowledge that Canada's Arctic has a significant infrastructure deficit, one that is posing significant challenges to socio-economic growth, emergency management, resource development and the fundamental safety and quality of life of Arctic residents.

Climate change is also accelerating threats to existing infrastructure. Thawing permafrost is directly impacting the integrity of building foundations, roads, runways, pipelines and coastal infrastructure.

However, we agree that investments and improvement in infrastructure are linked to improved outcomes across many other sectors. For example, improving connectivity would help bridge the digital divide and provide new and enhanced opportunities for Arctic residents to access telehealth, e-health, and e-learning services and increase their potential to be engaged in the digital economy and support economic development.

Most importantly, we asked people what the key priorities for their region were. Throughout the engagement, we heard that infrastructure concerns were a common theme, including the need for transformative investments in Arctic and northern infrastructure, rather than the remedial approach that only perpetuates a state of crisis.

Almost everyone who spoke about infrastructure mentioned reliable broadband Internet access as a priority, enabling business, research, education and access to health services. Other infrastructure needs included navigation aids, better port facilities, better airport facilities, reliable rail networks and roads to access mineral resources and communities.

Northern communities and organizations emphasized their desire for partnership and opportunities to play a constructive role in infrastructure. Territorial governments, through their participation in the co-development process, and in strategic documents such as “Pan-Territorial Vision for Sustainable Development”, have pointed to large-scale infrastructure investments as foundational to creating economic opportunity and prosperity for northerners.

Through the ongoing co-development and co-drafting process, partners have a shared ambition for infrastructure to 2030 and beyond, and for a strengthened Arctic infrastructure that meets local, regional and national needs. Proposed infrastructure objectives are wide-ranging and include transportation, energy, connectivity, housing, community infrastructure, mapping, navigation and waste management.

Significantly, work is focused not only on the “what” of infrastructure priorities in the north and in the Arctic, but also on the “how”. Co-development partners are seeking policy commitments to explore new approaches to infrastructure development, including funding models, leveraging partnerships for financing and operations, and combining infrastructure projects to achieve multiple outcomes—for example, corridors and community infrastructure for food production.

They are also focused on innovations to increase the sustainability and resiliency of infrastructure, in relation to climate change and also given past experiences with shortages of material and expertise to support maintenance on a long-term basis.

The local element is key in the area of infrastructure, as in other themes. Northerners are seeking a framework with people at its core.

In closing, our discussions with partners started from immediate challenges and gaps, but quickly moved to the need for long-term approaches to meeting those challenges and addressing those gaps together. Nowhere is this need for a long-term, partnership-based approach more evident than in discussions on infrastructure.

I look forward to your questions and ongoing discussions on this. I want to thank you. *Merci* and *mahsi*.

● (1535)

The Chair: Thank you so much.

Now we have Infrastructure Canada, and Nathalie is presenting.

Please go ahead. You have up to 10 minutes.

[*Translation*]

Ms. Nathalie Lechasseur (Director General, Program Integrations, Infrastructure Canada): Good afternoon.

Thank you for inviting us to participate in this discussion today.

My name is Nathalie Lechasseur, and I’m the Director General of the Program Integrations Directorate of the Program Operations Branch of Infrastructure Canada. I’m joined by Sean Keenan, who is the Director General of the Economic Aanalysis and Results Directorate of the Policy and Results Branch.

Our department, Infrastructure Canada, is responsible for delivering the investing in Canada infrastructure plan worth over $180 billion, in coordination with other federal partner departments.

The plan was designed to support five key infrastructure priorities. These priorities are public transit, green infrastructure, social infrastructure, trade infrastructure, transportation infrastructure, and rural and northern communities' infrastructure. Our provincial, territorial, municipal and Indigenous partners identified these priorities as key to the health, success and sustainability of their communities.

Infrastructure Canada has signed bilateral agreements with all the provinces and territories. These agreements will provide $33 billion through various funding streams.

I'll focus my remarks today on the investments that Infrastructure Canada is making to benefit rural and northern communities.

We know that Canada's rural and northern communities have unique needs that require a more targeted approach. Issues such as road access, Internet connectivity and reducing a community's dependence on diesel can make a real difference in peoples' lives and contribute to Canada's overall success.

That's why the investing in Canada plan includes $2 billion in dedicated funding through the rural and northern communities' infrastructure funding stream to address the communities' unique priorities. Our approach is designed to take into consideration the priorities of rural, remote and Indigenous communities while helping to grow local economies, build strong and inclusive communities, and safeguard the environment and health of Canadians.

This stream will provide smaller communities with funding for infrastructure projects such as local roads, broadband, air and marine infrastructure, and food security. It will also provide funding for the improved health and education facilities that support the Truth and Reconciliation Commission of Canada’s calls to action.

In addition, the new $400 million Arctic Energy Fund will support renewable energy and improve existing energy systems in the territories, including in Indigenous communities.

Under the rural and northern communities infrastructure stream, we've increased the federal share of project funding to 60% for communities with populations of fewer than 5,000. In communities in the territories, the federal share can be up to 75%.

For Indigenous community projects, the federal cost share can also be up to 75%. Indigenous project recipients can combine federal funding up to 100% from a number of sources. As a result, projects led by Indigenous organizations can advance local priorities with this access to federal funding.

Rural and northern communities can access funding programs administered by other federal departments, in addition to the other funding streams under the investing in Canada plan. These communities also benefit from existing programs and funding managed by Infrastructure Canada, such as the federal Gas Tax Fund and the New Building Canada Fund.

We're working with the provinces and territories to support the projects that will contribute to the health, sustainability and success of Canada's rural and northern communities.

I want to thank the committee for inviting us and for giving us the opportunity to participate in today's discussions. Mr. Keenan and I will be happy to answer your questions.

● (1540)

[*English*]

The Chair: Thank you very much.

We are going to the third presentation. This one is from the Department of Natural Resources.

Please go ahead.

[*Translation*]

Mr. Marco Presutti (Director General, Electricity Resources Branch, Department of Natural Resources): Good afternoon, everyone.

My name is Marco Presutti, and I'm the Director General of the Electricity Resources Branch. I'm pleased to be here to share my perspective.

[*English*]

My branch is responsible for the electricity-related policy issues. We're also responsible for a number of federal programs that support the development of new energy infrastructure across Canada, including in the north.

One of our current areas of focus, on which we're working to support the government right now, is helping rural and remote communities reduce their dependency on diesel fuel and helping them to move toward newer and cleaner sources of electricity generation. To put the challenge into perspective, there are about 200 communities in Canada that are not connected to the North American electricity grid and are entirely dependent on diesel fuel for electricity. Most are located far from large population centres, of course. It can come at great expense to try to build transmission infrastructure to get electricity to these communities.

We're focused on these communities for a number of reasons. It's expensive to transport diesel fuel to them and to service them. It poses a number of risks to human health and the environment. We're talking about spills, greenhouse gases and air pollution from combustion. Also, the government has made a strong commitment to support indigenous communities. Two-thirds of the target communities here are indigenous. We know that energy projects can have a wider array of socio-economic benefits. Ownership of these assets can be a key part of self-determination.

Through budget 2017, the government launched a new program that's led by our department. It's called the clean energy for rural and remote communities program. It has about $220 million over six years to fund energy infrastructure projects that reduce diesel dependency in communities across Canada. It supports a number of federal priorities, including clean growth, climate change and indigenous reconciliation. We're not the only funding source. One of my colleagues has already talked about the others. The Arctic energy fund and the northern REACHE program are other important ones.

In terms of the program and where we're at, it's early days. We launched the program in the new year. Since then, we've received and reviewed about 130 project proposals. We've shortlisted 43 of them and we're considering them for funding. We're now conducting the due diligence to make sure we've picked the best projects across the country.

What I can tell you is that we've seen strong demand for the program. The program is oversubscribed. We have more proposals than we're able to fund. We're also very happy that 93% of the projects we're reviewing are targeting indigenous communities, and many of them are led by the communities themselves.

We're also happy about the types of new and innovative technologies that are being proposed. We're looking at demonstrations and deployments of small-scale hydro, biomass, wind and solar.

We have a continuous intake process for applications. The initial projects that we're funding are not the only projects. We're still looking at other projects. We have a small amount of funding, about 5% of the envelope, for community capacity. That's to ensure that communities that are less advanced, less prepared to present projects, have some funding to put their proposals together and work with us.

I'll keep it short. I'll conclude by saying again that we're very encouraged by the first wave of project proposals we've received. We're doing our homework to make sure they're solid. We know this is a long-term endeavour. The program is not going to eliminate diesel use in Canada—that's a much bigger challenge—but it's going to make an important contribution, a down payment, if you will.

Thank you.

● (1545)

The Chair: Great. Very good.

I understand that the departments have agreed to shorten their presentations. I just found out that it was supposed to be around five minutes, to give MPs the opportunity to ask more questions. I think we all appreciate your consideration.

Thank you very much.

Mr. Daniel Lebel (Director General, Geological Survey of Canada, Department of Natural Resources): Madam Chair, if I may?

For NRCan, we have another statement to continue.

The Chair: Uh-oh, that sounds as if it might disturb my whole routine here.

Voices: Oh, oh!

The Chair: Please, go ahead.

[*Translation*]

Mr. Daniel Lebel: Thank you, Madam Chair.

I represent the lands and minerals sector of Natural Resources Canada.

We play an important role in the development of natural resources in the North, in particular with regard to the policies related to the mining sector and the technical surveys associated with the lands sector.

Natural Resources Canada is working collaboratively with provincial and territorial governments to develop the Canadian minerals and metals plan, a national mining plan with a singular goal of establishing Canada as the leading mining nation not just today, but for years to come.

The mining sector provides high-paying jobs, training and opportunities to enhance the quality of life for Northerners and to build more resilient communities.

[*English*]

Mining requires investments in roads, ports, rail, energy transmission, airports, and telecommunications, especially in northern, isolated, and remote communities. Our northern stakeholders have told us that they need government support for basic infrastructure so that more mining projects with potential can be considered and developed. NRCan is playing a leadership role in the development of the Arctic and northern policy framework. As the framework aims to close the socio-economic gaps that currently exist in the north, resource development, especially mining, will be the central driver for this change.

We see NRCan geoscience as being fundamental knowledge infrastructure required to achieve the framework vision by directly supporting the exploration sector in the north. We also believe that the acquisition of new geospatial data and capacity-building for northerners to be able to use that data and derived knowledge will be a determining factor for sound decision-making about land and infrastructure development in the north.

NRCan science also plays a key role in linking resilience to climate change adaptation practices—for instance, as it pertains to coastal erosion mitigation, disaster mitigation, and permafrost. Climate change is recognized as a key driver of change in the north, both in terms of the impact it has on existing infrastructure and in terms of how it leads to increased access in the north, thereby necessitating new infrastructure. If you wish, I could speak to many examples where NRCan science has supported the establishment of sound infrastructure in the north and reduced risks and costs for the future.

In addition, public geoscience is critical to unlocking benefits from the discovery and extraction of new mineral deposits, extending the life of existing mines. We also have several examples where investments in geomapping made through NRCan programs have led to such benefits.

I am keeping it short, Chair. This is all I have to say.

I thank the committee for inviting us to speak.

● (1550)

The Chair: Thank you very much.

We have a series of questions that we'll start. The first MP to begin the questioning is MP Will Amos.

[*Translation*]

Mr. William Amos (Pontiac, Lib.): I want to thank the public servants for their presentations. I agree that the subject of our study is very broad.

I want to address two aspects. I first want to look at the digital and cellular aspect, then at the diesel aspect referred to by Mr. Presutti.

[*English*]

Maybe I'll start with the diesel aspect. I'm very pleased that our government has seen it fit to invest so significantly in clean energy transmission for northern and remote communities. It's really important, and these communities have been calling for this for some time. I'd like to know what investments were made prior to 2015 to shift communities away from diesel and toward clean energy. I just don't know if this is the first time it's been done.

Second, I wonder how far south communities need to be in order to benefit from this program. For example, would a community like Rapid Lake, in the northern end of the Pontiac, be a potential beneficiary of this kind of transition, were it to seek funding to shift away? In that same context, there may be communities that seek to shift to hydroelectricity rather than wind or solar, so they need to be hooked up to the grid.

If that's the situation, what kind of support is available to such communities? Typically, they are not used to paying hydro rates. They're used to having diesel paid for by the federal government. I wonder how that transition happens, when the energy needs of a community cease to be provided for by the federal government and are suddenly provided for by a provincial energy company.

Mr. Marco Presutti: To tackle the first part of your question in terms of programming prior to 2015, I can speak with fair certainty that within NRCan there wasn't any specific programming targeted at this particular objective. We've had programs in the past and continue to have programs that support the development of renewable energy, but not specifically targeted to rural or remote communities. I think it's the first of its kind within NRCan. I can't speak on behalf of my other colleagues; I think there may have been other programs within other departments that did target this particular focus.

In terms of your question about other communities and how far south they have to be to qualify for our particular program, the criteria are really simple. It's for communities that are not connected to the grid. It doesn't matter how far north or south the community is located. If they're disconnected from that grid, they're one of those 200-plus communities and they're eligible to be part of the program. The program's objective isn't to connect communities to the grid. It's specifically targeted at renewable energy and projects that are started to help communities become self-sufficient.

Within NRCan, we have been doing some work in terms of grid connections. Over the course of the last two years, we've had a program for regional dialogues on electricity co-operation. We've worked in eastern Canada and in western Canada with provinces and territories and with utilities to try to get a sense of where the most promising transmission lines and grid connections could exist. We've done some modelling work, and we've identified some promising projects. Of course, these types of investments are transformational. They're investments in the billions of dollars—I'm talking about a program here that's $220 million—so projects for establishing larger grid connections are usually generational. They take decades to put in place and are fairly expensive.

● (1555)

Mr. William Amos: Thank you for that.

I'd like to give the opportunity to any of your federal colleagues to respond if there is any additional information about previous projects that had, as their objective, shifting rural and remote communities off diesel. Or is this new?

I'll take the silence to mean that there hasn't been anything in the past, then. Thank you.

You mentioned that this is a down payment, but the matter of getting northern and remote communities off diesel is a significant investment. What scale of investment are we talking about here? You mentioned there were 200 communities. Can you give us a number, even if it's rough?

Mr. Marco Presutti: I don't have a number to offer. I could tell you that it would be in the billions, if not tens of billions of dollars, to try to get every single community off diesel. I think the bigger challenge is not so much cost, but the fact that there isn't the technical ability to do it right now with current technology. What we're trying to do is fund renewable energy projects in remote communities. Renewable energy is a variable source of energy. It depends on the wind blowing and the sun shining, so without the types of new technologies like storage capacity, it's still in its infancy. It is technically difficult and challenging to get every community off diesel. It's a longer-term objective.

What I can say is that there are a number of communities and we've surfaced some very promising projects that will start to reduce that diesel dependency. Of the 200 communities, we think our program will be able to fund projects in about 60 to 70 communities.

Mr. William Amos: Thank you.

The Chair: You have only about 15 seconds.

Mr. William Amos: I'll leave it, then. Thank you.

The Chair: MP Cathy McLeod, go ahead.

Mrs. Cathy McLeod (Kamloops—Thompson—Cariboo, CPC): Thank you.

Thank you for coming. It's certainly a really important topic that we're focusing on today.

I'm going to start with infrastructure. In your budget 2018, we're hearing about these vast needs.

There was a note that the $450 million that was expected between 2018 and 2023 is now being delayed until after 2022. How do you align this vast need with the commitment by the government? Now you're just going to delay it. It sounds like there's no shortage of projects, so can you tell me why that money is getting delayed until 2022?

Mr. Sean Keenan (Director General, Economic Analysis and Results, Infrastructure Canada): I'm assuming you're talking about the re-profiling of funds from—

Mrs. Cathy McLeod: In Budget 2018, there is a footnote deferring a lot of expected infrastructure dollars for building roads and broadband and reducing dependance on diesel fuel.

Mr. Sean Keenan: That money is not lost—

Mrs. Cathy McLeod: No, but it's delayed until.... I guess I'm just hearing about this urgency. I'm hearing about a lot of projects that are ready to go, programs that are oversubscribed, and then all of a sudden a promise is not being followed through in terms of the time frame.

Mr. Sean Keenan: With respect to the way the infrastructure funding flows, Infrastructure Canada has developed this plan. One of its centrepieces, from our point of view, is our investing in Canada infrastructure plan. It's $33.1 billion over 10 years, and we've negotiated integrated bilateral agreements with each of the provinces and territories to spell out the terms of that plan. Essentially, that provides to them some predictable funding they can then use to develop their plans. The projects originate in the local communities, and at the provincial level.

● (1600)

Mrs. Cathy McLeod: Really, it's about the $450 million that was originally promised and that the government has since determined will come after 2022. It certainly should be a concern to northerners, because they were promised a certain amount of money.

The next question I have is a bit unusual. The issue with the border crossings.... There was a TV news report that there were heated tents being put up at the border to deal with the people crossing illegally from the U.S. I had a number of calls from people in Iqaluit saying that if they can do something for housing, even if it's temporary.... Their need is so desperate. How should I respond to these people who are saying that the government is responding to a crisis, an emergency, at the border, but it's not looking at what's happening up in the north as being the same? I didn't have a good answer for them. They were saying that even temporary heated tents, those army tents, would do something for them.

Is there anything I can say back to these people who were phoning my office with that? Do you have any suggestions?

Mr. Sean Keenan: I'm not sure I'm best placed to comment on that.

Mrs. Cathy McLeod: Mr. Walsh...?

Mr. Wayne Walsh: The only thing I would say at this point is that housing in the territories, as in the provinces, is under provincial and territorial jurisdiction. We do enter into formula financing arrangements with the territorial governments that provide for housing.

Certainly what we've heard in our engagement with northerners is that there is a need for innovative approaches to housing and housing construction. In all the round tables we've held in each of the jurisdictions, we haven't come across any expressions of concern about heated tents as a possible solution.

The key, moving forward—and that's one of the messages we hear time and time again in our process—is that whether it's housing, food security or infrastructure, the notion of acting alone is gone, and we need to partner with federal, territorial and indigenous governments to go forward.

Mrs. Cathy McLeod: Thank you.

I guess they were seeing an urgent need being responded to in the south, and they were not feeling that same sort of response to what they perceive as an urgent need.

Mr. Walsh, when the government was introducing its plan for a carbon tax, it said that the northerners would be extremely impacted in a way that people in the south—whether they live in Vancouver or in Ottawa—would not. There was a commitment by the government at that time to the territorial governments to make accommodation. Is that plan in place yet?

Mr. Wayne Walsh: I'll have to get back to the committee on that. The details around the carbon tax and its implementation lie in other departments. I'll certainly endeavour to provide feedback once I reach out to my colleagues.

Mrs. Cathy McLeod: Thank you.

Mr. Presutti, are there any communities out of the 200 that are off diesel yet?

Mr. Marco Presutti: No. We haven't funded any projects yet. It's still early days in the program. We've received applications, and we're reviewing the applications. We've shortlisted about 40 of them, and we'll be moving ahead with the projects. None of the—

Mrs. Cathy McLeod: When do you think our first community might cut the ribbon and say, “Diesel's gone”?

Mr. Marco Presutti: Well, getting communities completely off diesel is a particular challenge. A lot of the projects that we'll be moving forward on will be about reducing diesel dependency, just because, as I mentioned earlier, bringing wind and solar into communities is a variable form of energy. In a lot of instances, we're looking at projects that are hybrid systems, where there is still some dependency on diesel for backup generation combined with technologies such as wind and solar.

● (1605)

Mrs. Cathy McLeod: Perhaps this is going to be more about infrastructure. We have all recognized the importance of good broadband coverage in the north. Where would you say we're at? Are we at 60% or 70% of the population? What percentage of the population has appropriate broadband coverage? How much would it cost to get that in place?

Ms. Nathalie Lechasseur: We don't have that data at this point. On the $33 billion that we just launched for the IBAs, the integrated bilateral agreements.... They have just been signed. Now we're expecting provinces and territories to prioritize the projects and provide us the projects themselves. In terms of statistics on how many people are or are not connected, this is not something we have.

Mrs. Cathy McLeod: I thought there was a significant mapping job done around broadband. Was that not done throughout the country?

Ms. Nathalie Lechasseur: We have a map of what projects we're funding at this point. I'm not sure we have statistics on the....

Mrs. Cathy McLeod: So we have no idea of the percentage of the population in the north that doesn't have adequate service or any service.

Ms. Nathalie Lechasseur: We can consult with our colleagues. They are in the department that would have that information. We can maybe get back to you.

Mrs. Cathy McLeod: Thank you.

Mr. Kevin Waugh (Saskatoon—Grasswood, CPC): Will they provide to the committee the map they referred to?

The Chair: Could you provide that to the committee, please?

Ms. Nathalie Lechasseur: Yes, absolutely. It's on our website, actually, but yes.

Mr. Kevin Waugh: Good.

The Chair: We'll move on to MP Rachel Blaney.

Ms. Rachel Blaney (North Island—Powell River, NDP): Thank you, Madam Chair.

Thanks to all of you for being here with us today.

I'm going to start with Crown-Indigenous Relations and Northern Affairs Canada. One of the things that you got out of your consultation was that the north was really saying, "Enough of the remedial approach; we need transformative infrastructure investment." Could you let us know what next steps you see yourself taking and how you are planning to work with other departments to make sure that voice is heard very clearly?

Mr. Wayne Walsh: For next steps, we've now shifted from the engagement and hearing phase of the process to the actual development of the policy framework phase. That's where we're at now. As I mentioned in my remarks, we're now co-developing that framework process with provincial, territorial and indigenous partners. Thirty federal departments are involved.

We're hoping to land the framework in the near future for the government's consideration and approval. We are looking at a number of themes that we'll be bringing forward, including comprehensive Arctic infrastructure. The idea is that the framework will provide the goals and objectives that we collectively want to achieve between now and 2030. The next steps will then be the fulfillment of different investment opportunities as we move forward.

The one thing that was a realization of something we heard quite clearly in our engagement is that planning is key to anything in the north, given the complexities of the climate and environment and what it takes to build things. That's why that 2030 horizon is key.

One thing that is also very important—and I'm happy to hear my colleague from NRCan mention it—is that this is a whole-of-government approach. This is not going to be just a Northern Affairs type of approach. Fellow departments are engaged. They're in for the long haul. That will truly be the approach to delivering on the framework once we land.

Ms. Rachel Blaney: I think it's important that the communication between departments is really a priority. In a recent report, the Office of the Parliamentary Budget Officer stated that "Indigenous Services Canada...and Crown-Indigenous Relations and Northern Affairs [Canada] were unable to provide details of their planned spending" for phase 1 of the investing in Canada plan, the federal government's infrastructure plan.

I'm curious about that. Why are the two departments not sharing the data and figures? Also, how are you making sure that departments and different branches are working together more cohesively to make sure we get the work done on the ground?

Mr. Wayne Walsh: Thank you for that question. I appreciate it.

Ms. Rachel Blaney: You're welcome.

Mr. Wayne Walsh: As for the reasons behind what you've raised, I don't know the specifics between Indigenous Services Canada and my other colleagues within the department of CIRNAC. Again, I will endeavour to bring that back to the committee.

I will say, however, that one of the things we are looking to do in the framework moving forward is to have a more coordinated approach to how we're delivering services in the north, looking more at a whole-of-government perspective. I think the north is in a different place now than it's ever been. We're living in a post-devolution environment in Yukon and the Northwest Territories. We're hoping to get there soon in Nunavut.

So, really, it's about what the Government of Canada's interest in the north is and how we coordinate ourselves moving forward. I think it's important that it's a whole-of-government approach; it's not just one department or one minister, as it was in the past.

You're right. I think building that culture of ongoing communication and collaboration, that way forward, is going to be a key to success if the framework is to deliver on its ambition.

● (1610)

Ms. Rachel Blaney: Thank you.

To Infrastructure Canada, how does your department work with this department? I'm not going to say the whole name because it takes a lot of time.

One of the things we hear really clearly is that people just need the most basic of services. In your statement, you talked about providing funding for the improvement of health and education facilities that support the Truth and Reconciliation Commission's call to action. These are basic services that really need to be given, and we need that infrastructure. I'm just curious about how you feel you're working with that department to get that information and move forward.

Ms. Nathalie Lechasseur: Actually, as I mentioned just previously, the project priorities are identified by the provinces and territories.

[*Translation*]

While the provinces and territories are responsible for setting priorities, the governments must involve Indigenous communities and the other stakeholders that may be interested in this challenge. Since we cover up to 75% of the cost of these activities, we can obtain the remaining funding by working with our colleagues in other departments to ensure that the maximum amount of funding is available.

[*English*]

Ms. Rachel Blaney: Natural Resources Canada, you've short-listed 43 projects. I'm just curious as to what percentage of these are actually in the region we're talking about today. I also want to know, briefly, about the 5% for community capacity. Can you tell us how many people are applying to that program to actually build the capacity to write the proposal?

So I have two questions. The first one is about the 43 that you're looking at right now. How many are actually from the region that we're talking about today? I know one of them is from one of my communities, but I'm definitely not in the Arctic. I'm just curious if you could give us that.

You said that 5% of your budget is for community capacity. I'm just wondering what the uptake is on that project.

Mr. Marco Presutti: In terms of the first question, I'm looking at a map right here, and about 14 of those projects are located in that region.

In terms of the capacity-building stream, we're in a position similar to the one we're in with the 43 projects. For about 10 projects, we're at the point of doing due diligence. We've run through a process whereby we've shortlisted the projects.

Our process, by the way, involved some indigenous community leaders and indigenous stakeholders and some outside stakeholders, who were involved in the review and selection of those particular capacity-building projects. We wanted to make sure that we were bringing outside expertise in for the review of these proposals. We also brought in experts from other government departments.

So it's in the same zone; we have projects that are in the due diligence phase and we're expecting to fund them in the next few months.

Ms. Rachel Blaney: Thank you.

The Chair: Good.

I have a question for NRCan, or any of you. How many isolated Canadian communities do we have with no road access or coastal facility?

Please provide a map or the number. How many people are isolated?

Mr. Wayne Walsh: If I were to use the eligibility criteria for nutrition north Canada, which defines “isolated” as being without full access, I believe there are about 156 communities.

The Chair: What is the population of these 156 communities? I think I have over 20 communities in my province alone.

Mr. Wayne Walsh: If I were to ballpark it.... I hate to do this, so I will get back to the committee.

● (1615)

The Chair: Okay.

Mr. Wayne Walsh: There are about 200,000 residents across what we call the Arctic, but not all of them are isolated, so that gives you a bit of a ballpark.

The Chair: If you can pull those figures together, you can provide them to the committee.

Mr. Wayne Walsh: Sure.

The Chair: Thank you.

We have MP Don Rusnak next, for seven minutes.

Mr. Don Rusnak (Thunder Bay—Rainy River, Lib.): Thank you for presenting today.

I, like Ms. Blaney, am very curious. One of my curiosities is in terms of transmission projects. Marco was talking about the long-term, generational connection projects. Are there many of those projects contemplated or included in the framework that's being developed, either through the Department of Northern Affairs or NRCan, or any of the other departments that are here today? You're saying there's an all-of-government approach.

Mr. Marco Presutti: I'm not sure if I'm the best person to speak to the Arctic policy framework. Is that what you're referring to?

Mr. Don Rusnak: Yes.

Mr. Marco Presutti: I don't think that's the case.

I don't know if one of my colleagues would want to mention that.

Mr. Wayne Walsh: I'm not sure I understand your question.

Mr. Don Rusnak: There are a couple of different options for getting electricity into the communities. Most of the communities in the Arctic region operate on diesel generators. Some communities, in and around my riding, operate on diesel generators.

I know that recently—not in my riding, but just outside of my riding—there was an announcement of a GRIDLINK project, in the range of about $1.6 billion. I wonder if it's economically responsible to connect communities to transmission grids that are so far away, rather than investing in.... I get what Marco is saying, that there needs to be a mix of renewables—either wind turbine energy or solar energy—and perhaps natural gas, LNG, or diesel.

In the Arctic policy framework, are there grid connections that are contemplated?

Mr. Wayne Walsh: The short answer is yes. The long answer is that what our partners have been telling us is “Local solutions to local challenges and problems”—where grid connections make sense, but not necessarily grid connections. Some of the projects we've heard.... Some of the potential for a grid connection into Nunavut, for example, is through Churchill, so this is an opportunity where it might make sense to extend the transmission line from Churchill into Nunavut.

The Government of the Northwest Territories, right now, is very keen on its Taltson electric project. It's looking to expand that. That's a locally produced source of energy that it's looking to transmit to the larger population centres, and even into the diamond mines, up into Nunavut in the central Arctic.

I guess the answer is, where it makes sense, in terms of whether there is potential for local production, potential for building hydro facilities in the north. You're right that the sentiment, generally, is that it's very expensive, if not prohibitive, to try to link the south to the north. There will be some cases where we're looking at reducing reliance on diesel.

One thing we noted, and we've heard this consistently, is that Alaska is one of the largest producers of renewable energy in the United States. If they can do it in their Arctic, what are some of the lessons learned that we can do? My colleague pointed out, quite rightly, that we'll probably never get away from diesel. We'll probably need diesel as a backup, but if there are ways of reducing it, that's something to look at.

The other thing that wasn't mentioned but we heard it a lot in our engagement was looking at the potential of waste management. Again, it's more cutting-edge technology. Some of the Nordic countries are burning waste to produce energy. We have landfill issues across the Arctic. Is that an untapped resource, for example? There are lots of different innovative ways to look at things.

● (1620)

Mr. Don Rusnak: That's what I'm getting at. I think we need to be innovative.

One of the questions rolling through my head had to do with the Arctic policy framework and looking at providing energy and all the other things these communities need in terms of transportation, food supply and housing. The cost is absolutely enormous. I'm from northern Ontario, and I know our costs are huge on their own, but I spent a bit of time in the Northwest Territories, and in the Arctic it's hugely expensive to do anything.

It's almost a cart-before-the-horse situation. You want NRCan to help communities develop their resources in a responsible way, with the full participation of the indigenous communities, in order to help pay for the services that are needed in the north. In my riding, especially in the western part of my riding, a lot of the indigenous communities want to participate fully in the economy, but they want to do it in their own way. They want to do it with some say in how the project is managed and developed through its whole life cycle.

I know the departments are respecting the communities in the development of the framework, but what has NRCan been doing with the indigenous communities in terms of developing capacity? What programs are available and what support is there for communities that want to get involved in resource development?

Mr. Marco Presutti: As I mentioned earlier, what we did with the design of this particular program was to carve out a certain amount of money to try to target communities where there is a capacity issue. We recognize that not all communities are at the same level, and we want to have projects across the country. We want to hit communities where there are socio-economic benefits, so we are working with those particular communities. We have also designed the program so that we don't have just one intake process for proposals at the beginning. There's a continuum.

The Chair: Thank you.

We'll move on to MP Arnold Viersen.

Mr. Arnold Viersen (Peace River—Westlock, CPC): Thank you, Madam Chair.

Thank you to our guests for being here today.

Coming from Alberta, I know that infrastructure kind of follows resource development. People discover resources, and they want to get there. This brings the roads. Once the roads are there, they need Internet access, so they get Internet, and then similarly the power lines come down.

Do you have any breakdown on the potential resources that are out there? The oil sands in Alberta, for instance, contain $3 trillion worth of assets. Do you have any idea what kinds of assets we have sitting in the north, and where they're located at this point? I know that in Alberta, from the 1970s to the middle of the 1990s, they were doing seismic, so they have a picture of what's under the ground for the entire province. Do we have anything like that for the north, for oil and gas, minerals, copper, and diamonds?

Mr. Daniel Lebel: I guess your question has two aspects to it: what's the ultimate resource that lies underground, and what's the potential of that resource overall. In the last decade, through the Geological Survey of Canada, we've been mapping the north to a level of knowledge where we can see the areas of greatest potential, but we haven't reached the point where we can actually evaluate that resource, with some exceptions.

We have good assessments offshore that we have conducted for the purpose of marine conservation targets, so we have a good sense of the potential in the offshore basins, less onshore. The same goes for minerals. Through geomapping, we have a good sense of the areas with the greatest potential for minerals. As we wrap up this program in the next two years, we will provide syntheses of the various areas we have been covering across the north, and from these syntheses you will be able to see what we call “haystacks”—the areas of highest potential, wherein you might find some “needles”. That's generally the shape of things we have in terms of potential.

Separate from that, we have an excellent map of the various mines that are producing in the north and the various stages of the projects that exist. This has been produced as part of our minerals and metals plan. We have the various stages of development of these projects, including environmental assessment stages, and we could share that with you as well.

● (1625)

Mr. Arnold Viersen: Forgive me for my ignorance, but with the Arctic zone that we're talking about, is there any logging that can happen in that region? When you get past the tree line, is that the cut-off of the region, of what we consider the Arctic zone, or is there logging that's happening out there as well?

Mr. Daniel Lebel: We have some forested area in the north, including the Yukon, but it's not exactly matching the Arctic circle. As for the definition of the north, there are some forested areas out there. We could produce a map that shows that distinction.

Mr. Arnold Viersen: Is it being developed at all?

Mr. Daniel Lebel: I'd have to ask my colleagues from the forestry sector about that. I cannot answer this.

Mr. Arnold Viersen: Okay. I'll leave that alone.

Do you have any idea what the resource value is up there, in terms of minerals and oil and gas?

Mr. Daniel Lebel: We have a map that shows how much has been developed in the south, relative to the north, and the value of the resource. There are hundreds of billions of dollars in the south, while in the north it's in the tens of billions.

When you look at the geology of Canada, the potential for the north looks just as promising as it is in the south. A large part of the Canadian Shield lies in the north. We see very good projects that are under development. For instance, Agnico Eagle has two mines on the west side of Hudson Bay, and they're investing upwards of $5 billion in infrastructure to build roads. They have some plans for making a microgrid up there, as well as supporting the communities with thousands of jobs. There's quite a bit that can be developed from these one or two mines, in this case, but there's other potential in the area.

The challenge is to find the right substance for development. There's some potential for other substances, but they are not economical, in the sense that if you don't have infrastructure to get to them, they are likely to stay in the ground. Our stakeholders have been saying that they need some support from the federal government to build some of this infrastructure.

The Chair: Thank you.

That's a good place to end. That ends this round.

We'll take a short recess to change the panel.

Thank you very much for coming out. We really appreciate your participation. You're going to be providing us with some information, so we look forward to that.

● (Pause)

● (1630)

The Chair: Let's get started.

The first panel was fascinating. We ran out of time, so I'm sure that's going to happen again. We want to get all the information you have and include it, so our recommendation that goes to Parliament will be fulsome and creative and provide some solutions to the people who are searching for this type of infrastructure.

Welcome to our committee.

Do we have a five-minute deal with these panellists, too? Yes, okay.

We will get started. First is the Department of Transport. I should have asked you the question about how many isolated communities there are, but you can help NRCan with that.

Thank you for coming. Craig, please go ahead.

Mr. Craig Hutton (Director General, Strategic Policy, Department of Transport): Thank you, Madam Chair, for this opportunity to address the committee about transportation infrastructure in Canada's north. I am pleased to be here today along with my colleague Marie-Claude Petit, Director General, Transportation Infrastructure Programs.

It's no surprise that transportation is a lifeline for northern communities and an essential enabler for economic development, including resource development projects. At the same time, transportation infrastructure is expensive to build and maintain due to the challenging Arctic environment. As a result, basic infrastructure is limited in the region, making it difficult, time-consuming and expensive to move passengers and goods in and out of northern communities.

The north is unique, compared to the rest of Canada. However, we must also recognize that each territory is significantly different from the others. For instance, Yukon relies most on its highways and roads network connecting the region to the Northwest Territories, southern Canada and Alaska. The Northwest Territories in turn depends on a variety of modes, including air transport and a system of ice roads and barging operations, whereas Nunavut is reliant mainly on sealift operations and air transport.

● (1635)

[*Translation*]

In 2016, Transport Canada introduced Transportation 2030, a strategic plan for the future of transportation in Canada. The plan is aimed at improving the performance of the transportation system, including in the North. One of the commitments made in the plan is to work with territorial governments, Indigenous peoples and communities in the North to address transportation infrastructure needs and help the local system adapt to climate change.

[*English*]

To this end, in July 2017, the government launched the national trade corridors fund as a merit-based funding program with $2 billion to invest in projects that strengthen the efficiency and resilience of trade and transportation corridors, including in the north.

Within the fund, up to $400 million is being committed to supporting trade and transportation infrastructure investments in Canada's three territories. This dedicated allotment recognizes that transportation infrastructure needs in Canada's north are varied and distinct, and that critical transportation investments have the potential to create new social and economic opportunities for residents.

For example, in June of this year we announced an investment of $102.5 million in the Government of Northwest Territories' Mackenzie Valley Highway project. This represents 73% of the estimated costs associated with this project. In fact, this investment is one of the biggest ones we have made to date through the national trade corridors fund. This funding will support several key phases of the Mackenzie Valley Highway project. The ultimate goal of this project is to build an all-weather road that will connect communities and development sites along this corridor.

Transport Canada is developing a multimodal Arctic transportation policy framework to better position the department to address the needs of northerners. This framework will support greater coherence in departmental actions related to policy, investment and regulatory measures that support a strengthened transportation system and improved social and economic opportunities in the region. This framework will be aligned with the new federal Arctic policy framework being led by Crown-Indigenous Relations and Northern Affairs.

[*Translation*]

In fact, Transport Canada has been closely involved in the development of the Arctic and northern policy framework. One of its main themes is comprehensive Arctic infrastructure. This theme prioritizes new foundational initiatives such as transportation infrastructure, which affects the daily lives of Northerners both socially and economically.

[*English*]

I would like to take a moment to highlight a couple of other initiatives under way at Transport Canada that will have a positive impact on transportation infrastructure and operations in Canada's north.

Announced in 2016, the oceans protection plan is the largest investment made to protect Canada's marine environment, with a $1.5-billion investment over five years. The oceans protection plan is being carried out in partnership with first nations, Inuit and Métis, and in close collaboration with the scientific community, the marine industry, provincial and territorial governments, and other stakeholders.

Some investments to date include search and rescue boats, marine training facilities, and investments in basic marine infrastructure to improve safety. While the latter initiative is primarily intended to support basic infrastructure such as fencing, lighting and mooring bollards in northern communities, I should highlight that approval in principle for funding a project for four double-hulled barges in the Northwest Territories was recently announced, on October 13.

Lastly, I would like to tell you about a relevant study that Transport Canada has recently undertaken.

● (1640)

[*Translation*]

The 2019 northern transportation systems assessment will provide data to help deepen our understanding of the multimodal transportation infrastructure that will be required to support growing demand in the territorial North over the next 20 years. Findings from the study are expected in winter 2020.

Thank you.

I welcome your questions.

[*English*]

The Chair: Thank you.

We're going to move on to the Department of Fisheries of Oceans, with Gregory Lick.

Please go ahead.

Mr. Gregory Lick (Director General, Canadian Coast Guard, Department of Fisheries and Oceans): Good afternoon, Madam Chair and committee members.

It is my honour to be here today and have the opportunity to provide you with an appreciation of the Canadian Coast Guard's important activities in the Arctic, and particularly those that impact the peoples of the north.

[*Translation*]

I'm proud to say that the Canadian Coast Guard is a nationally and internationally recognized symbol of security and protection for people who navigate our waters.

[*English*]

Our work has a direct and visible impact on the economic, environmental and physical health of northerners. Our expert crews aboard the icebreaking fleet ensure safe navigation through ice, which ensures that critical supplies and goods get to communities and that ships transiting the Arctic get through safely.

[*Translation*]

Our system of aids to navigation ensures that mariners have a safe waterway to follow.

[*English*]

In Iqaluit during the navigation season, our professional marine communications and traffic services officers identify, monitor and control vessel traffic and assure mariners of a communication link in times of distress.

Our ever-evolving system of environmental protection equipment, located in strategic locations across the Arctic, defends the Arctic's sensitive ecosystems.

[*Translation*]

However, we can't do this alone. Our marine safety, security and environmental protection systems involve:

[*English*]

strong partnerships with indigenous peoples and communities;

[*Translation*]

effective regulations from our federal partners to prevent damaging events;

[*English*]

a robust, layered approach to search and rescue, particularly with our partners, the Canadian Armed Forces and the Canadian Coast Guard Auxiliary; a strong operational partnership with the Royal Canadian Navy, as it brings new capabilities to the Arctic with the Arctic and offshore patrol ships or the Harry DeWolf class;

[*Translation*]

a recognition that Arctic countries must all come together when significant events strain a single country's resources.

[*English*]

As the Coast Guard has learned through decades of collaboration with our northern partners, the people who live in Canada's Arctic have a deep understanding of the sea. Their survival—and surely Canada's future success in the Arctic—depends on that understanding. We are fully committed to engaging with indigenous partners and stakeholders to ensure safe and secure marine shipping in the Arctic that respects the cultural and environmental significance of the north.

The demand for our presence continues to increase as the shipping season extends due to climate change. To that end, we are investing in the Arctic, including vessel identification and monitoring systems, on-water capabilities, new search and rescue assets, and environmental protection equipment.

[*Translation*]

Thanks to the oceans protection plan, we're extending the Arctic season for our icebreakers. Most southern Canadians aren't aware that the hulls of the commercial vessels plying our northern waters aren't ice-strengthened and that these vessels can't deliver their cargo without the aid of Coast Guard icebreakers.

In these seas, our icebreakers are the snowplows of the North.

[*English*]

The following are some examples of our improvements to marine safety in the region.

Sixteen community-based Canadian Coast Guard Auxiliary units are active at this time, with over 350 auxiliary members and 25 vessels. Those numbers will increase in 2019 and in future years.

To improve data and voice communication capacity within the Coast Guard's Arctic footprint, 22 satellite modems have been purchased to replace antiquated and inefficient models.

Network equipment at the Iqaluit marine communications and traffic services centre will also be replaced in December to further modernize the network and ensure improved reliability and resiliency.

On June 28, we opened a seasonal inshore rescue boat station in Rankin Inlet, crewed by Inuit youth. I had the privilege to meet some of these incredibly competent youth during their work to support the G7 summit in June of this year and saw how valuable their contribution is.

● (1645)

[*Translation*]

Interest in the Arctic continues to rise as changing climate conditions are making the Canadian Arctic more accessible for marine traffic and economic development.

[*English*]

This access due to changing ice conditions does not always mean less risk, as harder, more dangerous multi-year ice travels down into the southern Arctic waters. Our various layers of marine safety and environmental protection systems are meeting this challenge through new investments.

Our commitment to supporting the Arctic is part of our heritage, and we remain steadfast in that commitment for the future.

Thank you, Madam Chair, for this opportunity. I'd be happy to provide you with any further details on our Arctic programs you require.

The Chair: Thank you.

Our final presenters are from the Department of the Environment: Chris Derksen and Dilhari Fernando.

Please go ahead.

Ms. Dilhari Fernando (Director General, Policy, Planning and Partnerships Directorate, Meteorological Service of Canada, Department of the Environment): Thank you, Madam Chair.

Thank you for the opportunity to present before you today to inform the committee's study of critical northern infrastructure projects and regional strategies from the perspective of environmental observations and monitoring.

My name is Dilhari Fernando, and I'm a Director General with the Meteorological Service of Canada and Environment and Climate Change Canada. My colleague Chris Derksen is a research scientist with the science and technology branch of the department.

Environment and Climate Change Canada informs Canadians about protecting and conserving our natural heritage and ensuring a clean, safe and sustainable environment for present and future generations. Our programs focus on minimizing threats to Canadians and their environment from pollution; equipping Canadians to make informed decisions on weather, water and climate conditions; and conserving and restoring Canada's natural environment.

Environment and Climate Change Canada is a science-based department. The department operates a vast and diverse array of infrastructure in the north and in the Arctic to gather environmental data and undertake research to support the delivery of departmental services and to provide important data and information to support the work of many others, including other federal departments and agencies, other levels of government, academia, the private sector and the global community.

In addition to buildings used for research, storage and staff accommodation, the department is the steward of a vast range of specialized observing infrastructure that we use to collect environmental data such as precipitation, air pressure, air quality, etc. This data is used for the production of weather forecasts and warnings, climate information and services, ice services, and long-term records of climate conditions.

In the case of the Eureka installation at Ellesmere Island in Nunavut, Environment and Climate Change Canada is also the principal steward of the runway, which is essential for aircraft landings and is a critical access point for federal and other visiting scientists.

Let me provide some details. The Meteorological Service of Canada is the authoritative source for weather, water quantity, air quality and ice information and services. We provide a broad range of services, including issuing public weather forecasts and alerts for approximately 90 communities in the north; monitoring sea ice floes and issuing marine forecasts, advisories and warnings; maintaining long-term records of ice and climate conditions; and collecting information on water levels and flows in Canada's major water basins, including those that flow into the Arctic Ocean.

To provide these services, we operate national monitoring networks to provide information about past and present conditions of the atmosphere, climate, water and ice. Specific to the north and the Arctic, we operate approximately 137 automated weather stations, 21 volunteer-run weather stations, 93 aviation monitoring stations, 16 upper-air operations, 11 lightning detection stations, 13 climate monitoring stations, 34 drifting buoys, one satellite receiving station and 233 hydrometric stations.

Environment and Climate Change Canada also conducts a range of research and monitoring in Canada's north and Arctic to generate important information to help us understand the unique and changing nature of northern ecosystems. As part of this work, we conduct science that leads to improved understanding of how and why Canada's climate is changing and what future climate conditions are projected. Surface observations, satellite data and climate models are fundamental to this sort of research.

The department operates a variety of science and technology facilities and programs in Canada's Arctic, including four permanent High Arctic multi-purpose research stations located at Eureka, Resolute, Alert and Iqaluit. Environment and Climate Change Canada is the primary steward at Eureka, located in Nunavut. Data gathered at Eureka is important for weather modelling and weather forecasting and is shared globally. Eureka is also a key location for acquiring High Arctic observations to support other important science and research programs.

As the steward of this infrastructure, we are responsible for overseeing and maintaining all the associated infrastructure on the site, including the runway, the buildings and the energy generation facility, and for ensuring safe living conditions, such as potable water and sanitation for departmental staff, DND staff and visiting scientists.

I would also like to bring your attention to Alert, at the northern tip of Ellesmere Island. Located about 700 kilometres from the North Pole, this is the northernmost inhabited place in the world. Alert is also an important location for upper-air observations, which are critical for weather forecasting, both in the north and in the south, and it is the sentinel site for climate and greenhouse gas observations.

● (1650)

Given the important and unique features of sites such as Eureka and Alert, it is important to note that infrastructure in the Arctic and in the north faces unique operational challenges and is subject to significantly higher operational costs and risks. Remote location, long periods of darkness, and severe weather require that these facilities be fully self-contained for power, water and sanitation. Air is the principal means to bring in supplies and people, which underscores the importance of year-round, safe runways. We also need specialized equipment in remote areas, with design features that allow this equipment to operate in the unique northern and Arctic climate, such as in extreme cold, and have resilience to things such as wildlife. Solutions that are viable in the south, such as solar power, are not always easily transferrable to the north.

In terms of the effects of climate change on infrastructure in the north, the special report recently released by the Intergovernmental Panel on Climate Change, or the IPCC, entitled “Global Warming of 1.5°C”, indicated that human activities are estimated to have caused approximately 1°C of global warming so far. The report also noted that vulnerable regions, including the Arctic, experience warming two to three times higher than the global average.

Over the past 40 years, changes over the north and the Arctic include loss of snow cover and sea ice, and changes to permafrost. These changes are consistent with those observed in other northern regions, including Alaska, northern Europe and Russia. There is evidence from climate model simulations that these observed changes in the Arctic and in northern Canada will continue in the coming decades.

There are important factors when considering the possible effects of climate change on infrastructure in the Arctic. Key points to consider include the following: Virtually all of the Canadian north is underlain by permafrost, and the integrity of many northern ecosystems and built infrastructure is dependent on the stability of the permafrost; permafrost is undergoing rapid change, which could threaten the structural stability and functional capability of existing infrastructure; changing coastlines and the loss of sea ice further increase the risk of flooding from rising sea levels and storm surges in some areas.

In conclusion, Environment and Climate Change Canada relies on a wide range of infrastructure across the north to gather important environmental observations for use in the delivery of key services such as weather forecasting and for research on issues such as climate change impacts in the north. Ensuring adequate density, distribution and life-cycle management of infrastructure in the north to enable observations and research is particularly challenging given Canada's vast and remote landscape. This underscores the importance of project management, adaptation to innovative technologies, and the identification and mitigation of risks as we move forward.

Thank you very much.

The Chair: Thank you.

We're now going to move on to MP questions, starting with MP Mike Bossio.

Mr. Mike Bossio (Hastings—Lennox and Addington, Lib.): Actually, I'd like to start right where you finished off. As a result of climate change, we see huge, significant changes happening in the north, with melting ice and permafrost and the impact of that. You're saying that we need to look at innovation as far as infrastructure in the north is concerned. Can you give us some examples of the innovation that's happening?

Is it happening? If it is, what are some examples?

Dr. Chris Derksen (Research Scientist, Climate Processes Section, Climate Research Division, Department of the Environment): I'll give a few examples. One of the key things with permafrost is that, as it changes, the road surfaces change and ice road shipping seasons are shorter.

There are two issues—

● (1655)

Mr. Mike Bossio: Buildings shift.

Dr. Chris Derksen: Yes, exactly. You get frost heave and slumping on the land surface.

Changes in permafrost also impact what happens to the water on the land surface. When permafrost melts, that water can now drain into the soil, and that changes a lot of things on the land surface.

How we mitigate that is difficult. One example is through the use of ice roads. We know that we need a certain thickness of ice before we can drive a truck safely on an ice road. To improve the speed at which that ice forms, when the ice is sufficiently thick in the fall you can remove snow from the ice surface and the ice grows faster. There are management techniques that we can employ to mitigate the effects of climate change on things such as the use of ice roads for shipping.

I would say they are in their infancy in many places, but there are many ideas. There was also a Transport Canada report on shipping in the north, on transportation in the north, that my colleagues here might speak to more.

Mr. Mike Bossio: Actually, I was going to ask about that. As far as ports and things like that are concerned, it must cause significant difficulties in building a port when you have a constantly shifting landscape.

Mr. Craig Hutton: It does. Given that there aren't really any port facilities in the territories per se, you really see the impacts around runways. You see the impacts as well on roads and ice roads. The sustainability of those ice roads is called into question. As my colleague indicated, it can come down to operational practices, maybe needing to change how you plow or clear snow.

It might also change the building material you use for those facilities. You might deploy different kinds of supporting infrastructure to help keep the permafrost cold. There can be piping that draws cold air down into and underneath infrastructure to make sure that the permafrost stays cold underneath and that water is channelled away from major infrastructure assets so that you're not getting further degradation from—

Mr. Mike Bossio: Now that we're moving toward open waters in the Arctic, is there a consideration of building ports in the north?

Mr. Craig Hutton: There's a significant investment going into Iqaluit right now in terms of a deepwater port, which will greatly help our resupply efforts. Taking these kinds of building techniques into consideration is important for those kinds of facilities.

Mr. Mike Bossio: In looking at that, as we start to move to these open waters and those difficulties, what kind of environmental regulatory practices are we going to put in place to ensure that we're doing this in an environmentally sustainable way? How does that fit into the oceans protection plan, for example?

Ms. Dilhari Fernando: Unfortunately, I'm not prepared to speak to the oceans protection plan, but I can tell you about one of the things we are doing in meteorological services. Because we are responsible for monitoring the environment and the atmosphere, it is very important that we continue to use the most up-do-date equipment to monitor atmospheric conditions, ice conditions and other conditions like that so we can provide the data that is needed to engineers and others so that some of this construction can be done in a way that is more sustainable and future-looking.

Mr. Mike Bossio: What about from an environmental protection standpoint? You're measuring and monitoring the impacts on the environment and the changes that are happening around climate change. As these changes happen and we start to open up the north to development, what are we doing to mitigate any potential environmental impacts of that development, increased shipping, etc.? Do we have a plan around that? Is that part of the oceans protection plan, by any chance?

Mr. Gregory Lick: I'll touch on that. Across the table here, we all have a part in the oceans protection plan.

From the Canadian Coast Guard's perspective, we are investing in areas such as communication. On the communications side, we're making sure that we understand where shipping is, so that when they get into trouble, they can contact us easily, contact the SAR system, and we can respond effectively to that.

On the regulatory side, which Transport can speak to, we can make sure it doesn't happen in the end. The idea is that there are regulations in place that regulate how ships are built to withstand ice so that environmental issues don't occur. We are also investing in new, modern environmental protection equipment, so that when something does happen in the Arctic, we are able to respond to it effectively.

The other part about the investment I talked about was that we can't do it alone. When something significant happens in the Arctic, all Arctic countries come together to respond to that, and that's why you have forums like the Arctic Council, the Arctic Coast Guard Forum, and the Arctic agreements that allow us not only to respond effectively to issues that happen in Canada's Arctic, but also to help each other when it happens on somebody else's Arctic territories.

● (1700)

Mr. Mike Bossio: My concern is that the Arctic is such a fragile ecosystem that if we're only monitoring weather conditions and that aspect of it.... If we're looking at development and everything else, what are we doing to protect this fragile ecosystem? I think it's an important factor that needs to be....

Ms. Dilhari Fernando: Certainly, as my colleague said, the three departments and others all play a role in this. In terms of some of the things that Environment and Climate Change Canada is doing, we spoke about weather forecasts, and that is indeed very critical. One of the things we have done under the oceans protection plan is bolster our ability to provide marine weather forecasts to ensure that mariners have the most up-to-date information possible so they can avoid situations of extreme weather, which could lead to accidents and mishaps. Also, with the ice service, that's an area in which we're looking to continually improve the ice products that are provided, again, to enable safe navigation.

The whole concept of collecting environmental data and the infrastructure that I spoke about is critical to providing some of these services that the department then provides.

The Chair: Thank you.

That wraps up your questioning time.

We move to MP Kevin Waugh.

Mr. Kevin Waugh: I want to thank the three departments for coming here.

The Arctic is certainly different from most parts of Canada, as you know.

The last group talked about diesel. I'm glad the Department of the Environment talked about the shift to solar power not always being easily transferrable to the north. Thank you for that. Southerners often think that their plan fits elsewhere, and it doesn't.

When we talk about diesel, I want to know what part of diesel power contributes to climate change in northern Canada. It's been there for decades. What part of the use of diesel power contributes to climate change up north, and what would natural resources extraction contribute to that?

Dr. Chris Derksen: I'll start to answer that question.

I think the major thing to keep in mind here is that the process driving the enhanced warming that we're seeing in the Arctic is not because of activities that are occurring in the Arctic.

We're seeing amplified warming in the north. The process of why this is happening.... There are a number of positive climate feedbacks. The scientific consensus and understanding of those is strong. It's not based on greenhouse gas emissions that are occurring in the Arctic, but it is a function of a global increase. In that sense, the Arctic is located in a place where the physical processes combine to amplify the warming in that region.

Mr. Kevin Waugh: I think you know where I'm going.

Southerners have a different opinion on the north. You talked about diesel, so I just want to know. Do we know what diesel is doing up there?

When you study greenhouse gases, do you have anything that we can go on?

Hon. Hunter Tootoo (Nunavut, Ind.): It's 0.01%.

Mr. Kevin Waugh: He says it's 0.01%.

Dr. Chris Derksen: We'd have to go back to provide actual, hard numbers.

Mr. Kevin Waugh: Science is about numbers.

Dr. Chris Derksen: Again, the important thing to remember here is that the process of enhanced warming occurring in the north is a function of global processes. It's not because of what's happening in the north.

Mr. Kevin Waugh: So we can't blame diesel, then.

Dr. Chris Derksen: You can blame any greenhouse gas-emitting processes, of which diesel is one.

It's not the diesel that's burning in the north that's driving climate change in the north. It's diesel and other carbon-emitting processes that are occurring globally.

Mr. Kevin Waugh: Thank you for that.

You talked about icebreakers. How many do we have in this country?

Mr. Gregory Lick: In the Canadian Coast Guard—which I'll speak to specifically—we have 15 vessels across the country that are able to deploy to the Arctic.

Typically, though, we deploy our heavy and medium icebreakers to the north, plus one light icebreaker from the western region. Typically, we deploy seven to eight icebreakers to the north for the summer season.

Mr. Kevin Waugh: Yes, that's their highway up north.

Seaspan, I believe, is building the super icebreaker, the *John G. Diefenbaker*. Are they?

Mr. Gregory Lick: That's correct. Seaspan has our polar icebreaker, the *John G. Diefenbaker*, as part of their planning in the future, yes.

Mr. Kevin Waugh: I have the story in front of me.

Have we settled on a price for Davie shipyard yet? They were to build three. They got a contract for three. There's no information here about.... Public Services and Procurement Canada has no price tag. Do we have a price tag? I think what's happened here is that a Quebec company that builds ships—they were in deep trouble financially—got the contract for three medium icebreakers.

Do you have a price? No one's put a price on this. We're just trying to put two and two together.

● (1705)

Mr. Gregory Lick: Those vessels are being converted and modified for our use in Davie shipyard currently. The first one will be ready probably around the end of December.

I do not have the number in front of me, and I would not want to speculate. I think we can probably come back to you later with that number, if it's available.

Mr. Kevin Waugh: I would sure like that.

It's $1.7 billion to rebuild or repurpose a fleet of icebreakers. It's a lot of money, isn't it?

Mr. Gregory Lick: Icebreakers are very expensive vessels to build, yes.

Mr. Kevin Waugh: But it's their highway, so it should be a priority, wouldn't you think?

Mr. Gregory Lick: Yes. I do agree with you, sir. That is exactly why we have put the investment into the fleet renewal plan.

In this case, because icebreakers take so long to build—it doesn't matter which shipyard you go to; they take a long time to design and build—we've made interim investments, including the three icebreakers that are currently at Davie shipyard and investments to modernize our current icebreakers so they are able to last their operational life until we get new icebreakers.

Absolutely, we agree it's a priority. That's why we're investing in it right now.

Mr. Kevin Waugh: Do we need any heavy icebreakers?

Mr. Gregory Lick: Yes, we do.

Mr. Kevin Waugh: How many do we have now?

Mr. Gregory Lick: Right now, the two vessels that we would consider heavy icebreakers are the CCGS *Louis S. St-Laurent* and the CCGS *Terry Fox*.

Mr. Kevin Waugh: When will the *Diefenbaker* come on board?

Mr. Gregory Lick: I don't believe Seaspan has put forward a firm date yet. It would come after our current build of science vessels and the joint support ships.

Mr. Kevin Waugh: Okay.

About transportation 2030, I just want to say to Mr. Hutton and Ms. Marie-Claude Petit that it's good to have a future plan, and I'm glad we're talking about indigenous people up there in their communities. They want to have the majority of say on their lives and how they're going to move forward up in the northern part of this country.

Where are we on the national trade corridors fund? It's merit-based, so there's an issue, but go for that.

Ms. Marie-Claude Petit (Director General, Transportation Infrastructure Programs, Department of Transport): Yes, it is a national, merit-based program across the country. It's important to note that we have allocated $400 million for the north, specifically for the three territories, out of the $2-billion budget for NTCF. It's a rather important application, because we understand that when we talk about trade and transportation, if we compare areas like Vancouver and the territory, it does not have the same impact for trade across the country, especially on the international scene, to reach out to other markets.

We understand the specific needs of the territory. That's why we identified some specific funding to respond to those needs in the three territories.

The Chair: That ends Kevin's opportunity to ask questions this time.

We move to MP Rachel Blaney.

Ms. Rachel Blaney: Thank you, Madam Chair.

I thank all of you for being here with us today.

Earlier we heard from Crown-Indigenous Relations and Northern Affairs. This question is going to Transport. They talked about all the consultation they were doing. They heard loud and clear from the northern communities that the remedial approach, which seems to be a long-time history in their region, cannot happen anymore. They really need to see long-term investment in infrastructure.

This is a very clear report. One of my questions is, how are they communicating with your department to make sure that there's overlap in how all of the departments are working collaboratively?

Mr. Craig Hutton: Thanks for your question.

The work going on through CIRNAC is quite horizontal across all departments that have interests or operations in the north. That's no different with Transport Canada. We've been very active and aligned with them in the consultations that have been taking place around the policy framework they're developing.

In addition to that, we've undertaken some of our own consultations as well, to get a better sense of what the needs are in the territories and how to respond to those needs. Between the consultations we've joined on with CIRNAC and our own consultations, we're developing a pretty good picture in terms of the need.

● (1710)

Ms. Rachel Blaney: In the context of transportation, I'm sure the changing realities of the environment with climate change are having fairly significant impacts on the work you do. I think the permafrost.... I've talked to some of the leaders in the Arctic communities, who talk about houses, highways, and runways for airports just shifting, and suddenly they're not usable anymore.

I'm just wondering if you could talk a bit about what you're doing to work with those communities to address those issues as they arise.

Mr. Craig Hutton: One of the programs that were just renewed was the NTAI program, which is an adaptation initiative for transportation infrastructure that partners with local communities, territorial governments and the academic community to try to figure out what technologies may assist in terms of slowing down the degradation of permafrost and building up the resiliency of transportation infrastructure.

It takes a look at new building methods around roads and runways. We do everything from the research end and working with the academic community to understanding, as I mentioned earlier, what operational practices could change that would help preserve the infrastructure and make it last longer. It's been quite a successful program. It was renewed recently for $6.4 million for the next three years.

Ms. Rachel Blaney: To the Coast Guard, one of the things you said in your report was that you recognize the value of local knowledge. I'm just wondering how you actually implement that in the work you do.

Mr. Gregory Lick: One of the things we should recognize is that it's not new to us. It's something we've been doing as we have navigated the Arctic and supplied services to the Arctic over the decades. We've been consulting and engaging with the people of the north for that long period of time.

In terms of examples, as we made a decision, through analysis, on where to put the first inshore rescue boat, we went across the Arctic into about 20 different communities and engaged those communities, including the indigenous communities. We asked what would be the best place in the Arctic that could support search and rescue, but support it with the people who were there as well. That's just one example of what we've been doing. In terms of that analysis, we went across the Arctic and used a methodology that looked at what capacities are there, what new shipping is coming along, and where the search and rescue risk is, but that's something we've been doing for decades.

As another example, we are now in the Iqaluit marine communications and traffic services centre. We now have a desk there that's dedicated to Inuit people, to help us deal with hunting and trapping, communications, search and rescue cases, and so on. We're not only consulting, but also integrating the indigenous people of the north into our centre, to be able to deal with search and rescue much more effectively.

Ms. Rachel Blaney: With the impacts of climate change, and acknowledging that the Arctic has a fairly robust young population, what is the biggest impact and how does that affect your human resource needs for the Coast Guard?

Mr. Gregory Lick: Climate change has a direct impact on the safety of navigation through the Arctic. That is its most direct impact in our domain, and that's something I talked about in my opening remarks, in terms of what we're doing to mitigate some of that risk as climate change affects the Arctic.

In terms of our human resources, as we are placing more assets in the Arctic—whether those are search and rescue assets dedicated to the Arctic or environmental protection caches, locations where equipment is being placed—we are attempting to integrate the indigenous communities and other communities into manning that equipment. More importantly, if they cannot be manned on a permanent basis, we're training the local communities how to use that equipment to respond, because when an environmental incident occurs, the Coast Guard may not be the first there, since the Arctic is so vast. The local communities will be the first there, and it's important for us to train those communities and make sure they're able to respond.

Regarding human resources, we're working with the different colleges, particularly the Arctic College, to attract people into the Coast Guard, to help with those environmental caches, or to help with the search and rescue assets, so it's a vital element of our human resource strategy. It's definitely a challenge, but we want to make sure that our response and our services in the Arctic are a success. That's vital to us.

● (1715)

Ms. Rachel Blaney: I don't have enough time to ask a question of Environment Canada, but could you share with the committee any innovative work that's being done on how to address climate change in that region? You were talking about the tubes underneath that let in the cold air and get rid of water. If you could give us anything that talks about innovative ways to move forward with infrastructure and support infrastructure, that would be really helpful.

Thank you.

The Chair: But in a two-page document, please.... That could be hundreds of pages, Rachel. I'm just saying, science is a marvellous thing.

Okay, we're moving on to the next MP on our list, who is T.J. Harvey.

Mr. T.J. Harvey (Tobique—Mactaquac, Lib.): Thank you, Madam Chair.

I'm going to share my time with Hunter. Whatever he doesn't use, I'll take.

The Chair: MP Hunter Tootoo, welcome to our committee.

Hon. Hunter Tootoo: Thank you, Madam Chair. Thank you, Mr. Harvey, for sharing your time.

My first question is for Mr. Hutton. You talked about how you're developing this multimodal Arctic transportation policy framework to put yourself in a better position to address our needs.

When do you expect this to be done?

Mr. Craig Hutton: We've been in some consultations across each of the three territories, engaging in discussions as to how the department could better reflect Arctic needs in its policies, investments and program design. We're actively working on the development of that framework and looking to align that with the work that's taking place at CIRNAC, so we're hoping for later this year.

Hon. Hunter Tootoo: Thank you.

As you mentioned, and everyone knows, air and marine transportation are our only two modes of transportation. Are you consulting with the folks who work up there in those industries and provide those services to us in the north? They're the ones with first-hand knowledge of the challenges and issues that they face on a daily basis. Will you be consulting with them as well?

Mr. Craig Hutton: Over the course of the summer, we have had conversations with operators who are operating up there, which we plan to continue. We had one consultation session specifically dedicated to that in Montreal, because a number of operators who have operations in the north are based either in Montreal or close to Montreal. We're getting a good sense from them of the conditions they've operated in—in some cases, for decades. Getting their knowledge incorporated into our framework, and how our programs can impact them, is a really important aspect of the work we're doing.

Hon. Hunter Tootoo: Are you looking at talking to the airline industry folks as well? I know there are some changes being made right now in some of the regulations on flight duty time that are impacting their operations. Will you be talking with them about any challenges they face, which can help you deal with it?

Mr. Craig Hutton: Yes, and there have been specific discussions around the issue of flight duty times with operators in the north. As well, in the broader construct of the framework, we are talking to air representatives.

Hon. Hunter Tootoo: Thank you very much.

I'll move on to Mr. Lick. It's good to see you, sir.

I'll just start by saying that I appreciate all the investments that have been made by the Coast Guard in the north. The rescue boat that was there for the trade show in Rankin Inlet was a big hit. It was great.

You talked about these caches that you have, and I know they are in a number of different communities around the north. One, are you looking at expanding to more communities as the ice seems to be opening up more? Two, how often do you go around to these communities and work with either the local hunters and trappers organization or the municipality on looking at the equipment and what's there, and some instruction on how to use it as well?

Mr. Gregory Lick: In terms of the environmental caches, we currently have 24 across the Arctic, including one rapid air transportable pack—we call it a RAT pack—in Hay River.

The caches, in and of themselves, are pretty well useless unless you have people who are trained to use them. One of our priorities is to make sure that those local communities are trained. The equipment is modernized as well. Like most equipment, if you don't use it, it becomes useless after a while; it just degrades.

There are two sides to it. One is that we're modernizing the equipment, reinvesting in those caches, and looking at training, making sure that the people are trained to use it, absolutely. The other side of it is that we look across the country, not just the Arctic, and we look at regional response planning or geographic response planning. We look at areas of risk. As that risk changes, not only in the Arctic but across the country, we look at what we have to invest in to be able to address that risk. It's highly likely that as shipping lanes change, as shipping changes in the Arctic over time, we will invest in different caches as we move forward. So, yes, absolutely.

● (1720)

Hon. Hunter Tootoo: Thank you, Madam Chair.

I'll turn it back over to Mr. Harvey.

The Chair: You have two minutes.

Mr. T.J. Harvey: My first question is for the Department of the Environment. We've spent a lot of time talking about the increased opportunity for transit in the Arctic, given the changes to the climate that we've already experienced. What work has been done to measure the potential negative consequences of continuing on the same trajectory, if you will? As shipping lanes become more readily available, of course, we'll have increased traffic. What research has been done to try to measure what the possible effects could be?

Dr. Chris Derksen: Thanks, I'll answer that question.

There's a WMO report that we will have to make available to the committee on the impacts of changing sea ice on Arctic shipping; that's very important.

In the context of Canada, one thing I want to raise, which is very important, is that the central Arctic is where we're seeing most of the loss of sea ice. In the Canadian Arctic, just the way it's located, the way Arctic sea ice tends to move, we still get a lot of multi-year ice—thicker, older ice that flows down into Canadian waters. While the perception, which is in many ways true, is that the Arctic is opening up and there is less sea ice—the Northwest Passage has opened for ship traffic much more in recent years than it ever did before—the risks are still very real, in the sense that Canadian waterways, with their narrow channels, can be dangerous places to operate in, because sea ice does still drift through those channels during the summer.

While we're seeing the loss of sea ice across the Arctic, there are distinct Canadian challenges that result from that sea ice moving into Canadian territory that we have to be aware of. That's really important from a shipping point of view.

Mr. T.J. Harvey: Thank you.

In terms of road construction in the north, which I know is similar to new methodology around runway construction, what environmental considerations are taken into account when that new style transportation infrastructure is built? If you build a vented highway or a vented runway, is there a zero barrier created that you build on? Or is permafrost manipulated to find a base to start from?

The Chair: That's a yes-or-no answer, so answer quickly.

Mr. T.J. Harvey: There you go.

Mr. Craig Hutton: It depends.

Mr. T.J. Harvey: That's perfect. Fair enough.

The Chair: MP Arnold Viersen is next.

Mr. Arnold Viersen: Thank you, Madam Chair.

I can continue in that vein.

I'm interested in air travel. Alaska seems to thrive on air travel. I don't necessarily see the same enthusiasm for air travel in Canada. Would that assessment be right? You're more likely to be on an airplane than in a pickup truck in Alaska, it seems. And in northern Canada, there are definitely more pickup trucks than airplanes. Is that a correct assessment?

Mr. Craig Hutton: In Nunavut, for example, it's exclusively air travel between communities and for connections to the south. Of course, there's the marine supply.

I gather your question is more about the private use of aircraft instead of a vehicle.

I can't comment on what the numbers might be. Obviously, the population of Alaska is a little different from that of any one of the collectivity of territories, but there's no doubt that air is absolutely critical for getting around. It's the same in the Yukon. You see the air mode being used around exploration and mining, and so on. It's the same thing in the NWT. Air is fairly similar across the territories, from the point of view of how it's used. It's complemented by other modes, depending on the territory you're looking at. It's very much a critical mode for all three territories, and more critical as you go farther east.

● (1725)

Mr. Arnold Viersen: Is your department working on any initiatives to lower some of the thresholds for air travel?

Mr. Craig Hutton: To lower thresholds in what context?

Mr. Arnold Viersen: It's costly to fly an airplane. I know that from my own experience. Is the department looking at how we can lower some of the costs of flying?

Mr. Craig Hutton: I certainly think cost is one of the things we're very sensitive to, given how it impacts travellers in the north and the cost of goods. A lot of variables go into the cost. It's a marketplace for air.

When you're looking at infrastructure and investments in infrastructure out of the national trade corridors fund, for example, one of the announcements made in recent months was around air terminals in Nunavut and five of them being refurbished. These kinds of investments help to contain or lower costs.

On the side of goods, for example, making sure there's adequate storage for food reduces spoilage. First Air is investing in a big storage facility in Iqaluit, which will help with costs.

Mr. Arnold Viersen: One of the other things I'm getting to is how the carbon tax has affected the cost of building a new road or a new airstrip, or just getting anything into the north.

Mr. Craig Hutton: The territorial governments are responsible for the operation and maintenance of transportation facilities.

Mr. Arnold Viersen: Are those governments exempt from carbon tax?

Mr. Craig Hutton: You'd have to ask—

Mr. Arnold Viersen: Have you noticed that the costs have been going up significantly since the carbon tax has come in?

Ms. Marie-Claude Petit: I could comment on this point.

We have the national trade corridors fund. It's a merit-based program, as I mentioned before. Projects are submitted to us by proponents. Those can be territories, municipalities or indigenous groups. We provide funding to them based on all the information we have on the projects. We choose projects based on their merits. For some of those questions, we will need to look at the different projects we have that we'll be funding in the coming years.

Mr. Arnold Viersen: Okay. Have you seen a spike in that since...?

The Chair: You know that it's 5:30.

Mr. Arnold Viersen: Can I push it a little further?

The Chair: No.

He is like that a little bit.

Mr. Arnold Viersen: She gives me short minutes.

Thank you.

The Chair: On that note, I want to thank all of you on behalf of the MPs here for coming out and answering our questions to the best of your ability. I look forward to any information that you're going to send us, and I look forward to constructing a meaningful report.

[*Translation*]

Thank you.

[*English*]

We're adjourned.