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Chair

Mr. Tom Lukiwski

Standing Committee on Government Operations and Estimates

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• (1530)

[English]

The Chair (Mr. Tom Lukiwski (Moose Jaw—Lake Centre—Lanigan, CPC)): Colleagues, I call this meeting to order.

We are continuing our study on the greening of government, but before we begin and before I introduce the witnesses who are with us in the room today or joining us by video conference, I just want to say publicly and for the record, as the Committee on Government Operations and Estimates, that we have lost a valued member of the public service in Canada with the passing this weekend of Mr. Michael Ferguson. I think everyone on this committee certainly knows that Mr. Ferguson was a frequent visitor and guest of our committee. He provided invaluable information and support to this committee, to parliamentarians in general, and to Canadians.

We are all saddened by his passing, and if I can speak on behalf of the entire committee, we wish to send all our condolences, our prayers and our thoughts to his immediate family and his extended family. Colleagues, thank you for your attention on that matter.

Second, colleagues, we just have a couple of very brief housekeeping notes to make. A revised calendar will be sent out to all offices, I believe, probably tomorrow. This Wednesday we will continue with our study on the greening of government. We've had to make some adjustments. When we contacted all our witnesses or proposed witnesses for some of our future meetings, we had to do some give-and-take on the calendar. So this Wednesday will be the greening government strategy continued.

I also want to inform members that both ministers Qualtrough and Philpott have agreed to meet with us. These meetings are coming up. I believe Minister Qualtrough is on the 20th, and Minister Philpott is on the 25th.

The Clerk of the Committee (Mr. Paul Cardegna): No, it's the other way around: Minister Philpott is on the 20th, and Minister Qualtrough is on the 25th.

The Chair: Okay, so we'll have Minister Philpott on the 20th and Minister Qualtrough on the 25th. We'll certainly advise you of that in writing via the calendar that will be sent out tomorrow.

Today, colleagues, we have before us some witnesses in house. I'd like to welcome, from the International Brotherhood of Electrical Workers, Mr. Matt Wayland. Thank you for being here with us. From the Public Service Alliance of Canada, we have two witnesses, Mr. Alex Silas and Mr. Paul Paquette.

We also have, via video conference, the Building Owners and Managers Association of Canada, with Hazel Sutton and Victoria Papp, who will be with us from Ontario. Thank you for being with us.

Also, from Innergex Renewable Energy Inc., we have Colleen Giroux-Schmidt, who is with us by video conference from British Columbia.

To all our witnesses, the order of speaking will be as follows. I will ask the International Brotherhood of Electrical Workers for their opening statement first, followed by the Public Service Alliance of Canada. Third, we will ask the Building Owners and Managers Association for their opening statement, and last but certainly not least, we will hear a statement from Innergex Renewable Energy Inc.

All of our witnesses have been briefed. We're asking you to make brief opening statements no longer than 10 minutes in duration.

After those opening comments, Mr. Wayland, the floor is yours.

Mr. Matt Wayland (Executive Assistant to the International Vice-President and Canadian Director of Government Relations, International Brotherhood of Electrical Workers): Thank you very much.

Good afternoon, committee members, fellow witnesses and guests.

I'd like to thank you today for allowing us to present here to members of the Standing Committee on Government Operations and Estimates, and for your study on the Government of Canada's greening government strategy, as the chair mentioned.

I'm here today presenting on behalf of the International Brotherhood of Electrical Workers, or IBEW.

The IBEW represents 775,000 highly skilled workers in North America, and over 70,000 here in Canada. We represent workers of many different industries, such as manufacturing, telecommunications, utilities, construction, maintenance, motor and sign shops, radio and television, sound and alarm, railroads, shipyards, pulp and paper mills, mining, health care and government. Our members are in every province and territory of this country.

We're also an affiliate of Canada's Building Trades Unions, which represents about 500,000 men and women in the unionized construction sector. We build and maintain everything from roads to schools, from hospitals to wind turbines, from power plants to pipelines. The majority of our IBEW members, though, work in utilities and the construction sector, and they'll be the main focus of my presentation here today. I myself am a licensed construction and maintenance electrician, and I've worked in many facilities in my time as an electrician.

As I mentioned, we have members working in every province and territory, and whether you realize it or not, many of us in this room rely on the work of those workers here today. Some local examples that you will be familiar with include the updated electrical systems in West Block, which you just moved into last week. Those were done by the highly skilled electricians and apprentices of IBEW 586 here in Ottawa, and they're doing some of the upcoming work in Centre Block, which has just begun its renovations. Our members at Hydro Ottawa keep the lights on in the homes, businesses, and these buildings right here. They worked around the clock in the fall, just after the tornadoes, to make sure everybody had safe, reliable power quickly.

For the purpose of today's presentation, I'm going to focus on three areas that we believe will be an important part of your strategy: renovating the current building fleet, the economic impact and leading by example.

The World Green Building Council has called for all buildings to be net-zero by 2050 through construction and deep renovation. If you think of the buildings we have in Canada, that's an enormous number. Homes and buildings in this country account for 25% or one quarter of all emissions.

According to data obtained from the Treasury Board Secretariat's directory of federal real property, which looks after the federal government's property, there are 19,961 owned and leased properties, 36,361 buildings and 27,298,207 square metres of floor space. That is a significant number of buildings and a huge amount of floor space to be discussing. These buildings, much like the homes, condos and apartments you may live in, vary in size, age, building materials, geographical locations and so on.

There are a variety of ways the federal government can begin the strategy of greening government buildings. One of the major components in the building is its electrical system, or the nerve centre, as we like to call it. We should be considering the source of power feeding these individual buildings. That's the beginning of the source of our footprint. The majority of buildings in Canada are powered by an energy source from the utility provider, such as Hydro Ottawa here.

There are other areas, such as hydroelectric, nuclear, natural gas, or coal-fired, at least for the short term. These represent the four main sources of electricity in this country, and they themselves vary in GHG emissions and in their carbon footprint. IBEW builds and works on all of these types of generations, as well as many others, such as solar, wind, geothermal and so on.

However, buildings, especially the quantity the federal government owns and leases, have a significant number of rooftops that

may be suitable for solar panel installation to help offset some of the energy used from the local grid and meet the goals of the strategy going forward, and maybe the goals of this committee.

Of course, we would need to ensure that each building can capture enough sunlight to make the investment and installation worthwhile, and have engineering drawings to make sure the building structure can properly handle the installation of a solar panel system. This is not going to be a one-size-fits-all approach or solution, but it should be considered as one of the green options in the building fleet.

We recommend the installation of solar panel systems on federal buildings that will receive a suitable level of sunshine without obstruction to produce enough energy and that will structurally allow such an installation.

● (1535)

Now, moving inside the building, in the building envelope, there are a number of upgrades that can be made to the electrical system alone to help reduce the energy consumed by the buildings, thus reducing the footprint and helping, again, to meet the needs and the strategy of the government.

Let's start with lighting. I'm sure we've all experienced poor lighting in older office buildings—most of us remember some of the incandescent light bulbs or flickering fluorescent tubes driving you nuts in the corner of your office, or outside, where you have commercial and industrial types of lighting such as high-pressure sodium, high-intensity discharge or HID, metal halide or even halogen bulbs. These are all examples of high-energy consumption lighting, but the lighting industry has seen significant improvements over the last decade, specifically in terms of light-emitting diodes, commonly referred to as LED lighting, which uses much less energy than the ones I mentioned above.

Surprisingly, a significant energy reduction can be achieved simply by replacing old lighting, even the fluorescent fixtures with which you might have replaced incandescent lighting a number of years ago. New LEDs have a bigger impact on reducing your footprint, provide brighter spaces in offices and will help meet improved performance needs within the individual buildings themselves for their individual purposes.

Not only can you change the lighting and the efficiency in the buildings, but the outside of the buildings should be considered as well. In many cases, we've seen our contractors install LED lighting outside, not to reduce energy costs but more as a safety factor, preventing the production of graffiti on the outside of some buildings in the commercial-industrial sector. Additionally, they are providing more lighting in parking lots, making employees feel safer in early morning hours and late in the evening, as well as helping to prevent slips and trips with their brightness.

We recommend that, as part of the renovation of any federal buildings considered that are leased or owned, energy-efficient LED lighting replace older, less efficient lighting inside and outside of the building envelopes.

Further improvements and efficiency of lighting can be made simply by installing lighting control systems and, ideally on a larger scale, a building automation system, which I'll highlight a little later on. A lighting control system is an intelligent network-based lighting control solution, sometimes called smart lighting, that incorporates communication between various devices in a building and its main computer running that system. Lighting control systems are widely used both indoors and outdoors, in commercial, industrial, institutional and—as many of you who have walked down the rows at Home Hardware or Home Depot might now know—the residential market as well. Lighting control systems serve to provide the right amount of light where and when needed, while meeting your energy saving needs.

How many times have you walked down the street or stayed in a hotel room, and you look across at an office building and you know the building is empty but it's lit up like a Christmas tree? These types of devices, occupancy sensors, can control when the lighting is on or off, regardless of the lighting system. Controlling what time of day the lights are turned on or off, along with other smart devices I mentioned, such as occupancy sensors, will help significantly reduce your energy consumption, increase the lifespan of those lights, and help meet your energy needs.

I'm going to venture back outside the building envelope for a minute. I talked about the parking lot area. Another addition that we suggest would be the inclusion of electrical vehicle charging stations, which are becoming more frequently spotted at your local shopping malls, schools and municipal, provincial and federal buildings. While this may not contribute to energy cost savings for the federal government or for the buildings they're placed in, it has an important place in the strategy for the government in its greening approach.

In the motion adopted by this committee, part of the study includes green procurement in areas such as vehicle fleet and electricity. Electrical vehicle charging stations installed at federal buildings should be included in your overall strategy to meet the upcoming needs before the fleet is purchased and you're asking, "Where am I going to plug this in?" This makes sure that you're not tapping into an existing electrical system that can't handle that overburdened load of adding three, four, 10 or 15 vehicles outside. You're also doing it at the front end, being proactive about your approach. This would ensure that the necessary charging infrastructure will be in place for your vehicle fleets, if and when you decide to convert from combustion to electric motors.

Our recommendation is to prepare a plan to equip federal buildings and the parking lot areas of federal buildings with a minimum number of charging stations and allow for the expansion of additional charging stations in the future based on your vehicle fleet plans.

● (1540)

I talked about building automation a little earlier in terms of the lighting control systems. That's one of the most significant ways you can green your government buildings, utilizing technology—

The Chair: Mr. Wayland, if I may interrupt, and my sincere apologies for doing so, but just looking at your speaking notes, sir, it

looks like you have about five or six minutes' worth of speaking notes left, which would put us seriously over time.

What we will do, colleagues, is that we will have copies of Mr. Wayland's remarks translated and distributed to all of you so that you will be able to take a look at all of his comments, even though we can't get to the end of his verbal presentation. My apologies, but we're running into a bit of a time crunch here.

Mr. Matt Wayland: I must have gone a little more slowly in my presentation.

The Chair: Thank you very much.

We will now go to the Public Service Alliance of Canada, and Mr. Silas.

The floor is yours, sir.

Mr. Alex Silas (Alternate Regional Executive Vice-President, National Capital Region, Public Service Alliance of Canada): Good afternoon, everyone.

My name is Alex Silas, and I'm the alternate regional executive vice-president for PSAC, national capital region. I'm here representing roughly 50,000 members in the NCR, most of whom are public servants. I'm also the vice-president of Local 71250, and I work in the downtown core as a security officer in one of our top-level security buildings.

Thank you very much for the opportunity to speak to you today.

With me is Paul Paquette, vice-president of PSAC—Government Services Union Local 70023 and a stationary engineer at the Cliff Heating Plant, located next to the Supreme Court.

Paul and I both possess secret-level security clearance. Due to the confidential and sensitive nature of our work, we cannot discuss with you certain specific details, but we will cover generalities as best we can. We are here today to share with you our concerns about the proposed plan to privatize five of the centralized heating and cooling plants in the national capital region, along with their pipe and tunnel infrastructure.

The energy services acquisition program modernization plan proposes to accomplish four goals: to improve the government's environmental performance, to reduce costs, to improve the safety and reliability of heating and cooling, and to leverage the private sector's innovation capacity and expertise.

We are interested in working with the government towards achieving the first three of these goals. We would suggest that cutting costs and cutting corners, all too common in the private sector, will have a detrimental effect on improving performance and increasing safety. We contest the fourth goal of seeking out the private sector, as the evidence shows quite clearly that privatizing essential infrastructure, such as these heating plants, does not save money, does not result in better service, and is not in the best interest of the public.

The employer has, on several occasions, promised to provide for review the business case for this project, only to have the delivery date pushed back time after time, unfortunately.

We have three areas of concern with this project.

First, it's a public-private partnership, a P3. There's a significant body of empirical evidence to show that P3s don't save money and don't meet the level of service delivery necessary for quality public services. Governments around the world are bringing similar infrastructure back into the public sector for those reasons.

For example, in Hamilton, Ontario, a water and waste water P3 was brought back into the public sector after homes were flooded, raw sewage was dumped, and cost overruns were out of control. In Paris, France and Stuttgart, Germany, large infrastructure P3 projects for water and other necessary utilities are being brought back into the public sector because they haven't saved money and have failed to provide adequate services. Right here at home, in Ottawa, there have been long delays, cost overruns, and flooding problems with the city's light rail transit, or LRT, another P3 project.

Recently, a report by research and policy analyst Keith Reynolds, written for the Columbia Institute, reviewed 17 P3s in British Columbia. Overwhelming evidence was found that service goals were not met and costs were higher than they would have been in publicly delivered projects, costing the province's taxpayers an additional \$3.7 billion.

It is well known that the risk assignment in P3 proposals is often erroneously weighted in favour of the private option, when in fact the public sector can borrow capital funds for less than private companies can, and public sector workers provide better service. Ultimately, governments always remain the sole owners and always underwrite the risk in these situations, regardless of attempts at risk avoidance or risk saving by transferring the responsibility to these private corporations. The public sector always ultimately carries the final risk, and the public will be responsible for picking up the pieces if and when these projects fail, while the private corporation steps away, shuts down, and changes its name. Everything in this country, from sea to sea to sea, is ultimately the responsibility of the Canadian government and the Canadian people.

Our second concern is about ethics in procurement. There are two consortia that have qualified for this project—Innovate Energy and Rideau Energy Partners—and both of these consortia include companies, including SNC-Lavalin, with documented reputations for gross financial mismanagement, substandard service delivery, and accusations of corruption internationally and right here at home in Canada.

The buildings heated by these plants are among Canada's most iconic and most secure, institutions that represent our national well-being. Do we really want to trust the heating and cooling of these historic buildings to greed-driven private operators? Do we really want international corporations that may change hands and change names to have access to our most secure spaces? As a security professional, I can tell you from my experience with privatization in the workplace that we've had repeated problems with private maintenance contractors under-delivering on service calls, providing slow and unreliable responses to emergency maintenance issues, not following protocols, and weakening overall security posture by creating gaps in our systems.

Our third concern, and the reason for these hearings, is that the assumed environmental impacts of these plants are misguided and will not be what they claim to be. We anticipate that there will be

potentially devastating impacts on the environment that are not being considered. We are concerned about what will happen if there is a breach of the water pipes. Will this chemically treated water flood the city's sewer system? Will it flow into the Ottawa River? We're concerned about how much additional downtime for emergency repairs will be created to go along with these more time-consuming, low-temp hot-water systems.

● (1545)

We are concerned about the increased load this will put on municipal infrastructure. Considering we already have to switch from natural gas to oil on extremely cold days, would this increased load be feasible for the city? We are concerned about failures of these cooling systems and our top-level secure server rooms. Will that protected data be at risk? We are concerned that this will create a need for additional capacity elsewhere, including stand-alone boilers in individual buildings.

We are deeply concerned about safety, because we've been there. We'll never forget the 2009 explosion that killed one of our members, brother Peter Kennedy, when an uncertified private contractor was servicing a boiler at the Cliff Plant.

We are concerned about the health, safety and security of the workers in these buildings, and buildings like the one we're sitting in right now. Imagine if the heat cuts out on our -30° days. We are concerned about the health, safety and security of the general public, Ottawans who live in the downtown core, local businesses and visitors to our capital.

Instead of rushing into this project, we ask the following. We ask that this be conducted with transparency for the Canadian public. Make public the business case and the environmental case for this project. We ask that the request for proposals be cancelled as it currently exists. We ask that the government meet with the workers, the on-the-ground experts in these plants, our members, so that we may work together on a better plan of upgrades that meet environmental and safety goals. We ask that the RFP then be reissued as design-build only, with public sector workers involved in all aspects of the project, and that the operation and maintenance stay in the hands of trusted public servants. We ask that these plants stay in the public service. Finally, we ask that we as Canadians come together to recognize that, from coast to coast to coast, P3s don't work. Public servants work.

Thank you.

● (1550)

The Chair: Thank you very much.

We'll now go to the Building Owners and Managers Association of Canada, by video conference. Ms. Sutton and Victoria Papp are with us. I'm not sure who wishes to start, but, ladies, the floor is yours.

Ms. Hazel Sutton (Manager, Environmental Standards, Building Owners and Managers Association of Canada): Thank you very much for having us. My name is Hazel Sutton. I am the manager of environmental standards. With me is Victoria Papp, program coordinator for environmental standards for BOMA.

We are with BOMA Canada, the Building Owners and Managers Association of Canada. It is a not-for-profit organization representing the Canadian commercial real estate industry on matters of national concern. We have over 3,100 members, representing 2.1 billion square feet of commercial real estate across the country.

Our members are building owners, managers, building operators, facility managers, leasing agents, brokers, investors and service providers. We have 11 local associations throughout the country, including one in Ottawa, BOMA Ottawa. You might be familiar with it. So we are very well represented across the country.

Part of what I wanted to speak about today is our program BOMA BEST, which some of you might already be familiar with. We've had a lot of participation from the federal government in this program. It is Canada's leading certification program for green buildings, for existing buildings. We have over 7,200 certifications or recertifications that have been obtained since the beginning of the program, back in 2005. We currently have over 28 certified buildings in Canada. We have also just recently certified a building in Mexico. We're very proud of that. We also have some certifications in the U. S., as well as some interest in China. We're very excited that this made-in-Canada program is being slowly adopted across the world.

It is a unique and voluntary program, designed by industry for industry, specifically recognizing the excellence in energy and environmental management and performance in commercial real estate. It is managed by us here at BOMA Canada, and it is delivered and administered by our 11 local associations across the country. The program consists of a framework that provides a holistic environmental assessment of the building's operations and management programs across 10 key areas. You'll recognize some of these areas as the areas of focus for us today. We look at energy, water, air, comfort, health and wellness, custodial, procurement, waste, site and stakeholder engagement. It is a questionnaire consisting of about 180 questions. Five levels of certification can be achieved, and it is literally open to every building type that exists.

Every certification is verified by a third party verifier to make sure that the integrity of the program is maintained. We pride ourselves on this program, that it is providing our buildings with a building management program. We understand that energy and maintenance represent 50% or more of operating expenses, and this is a huge opportunity for people to understand exactly where improvements can be made within their building operating systems at low to no cost, or with some costs should they wish to have some larger retrofits. The program is specifically tied to increasing building performance, as well as increasing the capacity of building operators and managers to further understand where opportunities lie within their buildings and to become more familiar with the operations.

The program specifically asks our users to understand how their building operates. First, we ask them to identify their intent specifically and, for each of the categories, the objective they're trying to reach in a particular category. For example, in the energy

category, it might be energy conservation, energy reduction. Then we ask them to perform an assessment, to benchmark their performance at that moment, to understand exactly how they're performing. That would be an energy audit, for example, and then we recommend, through our subsequent sections, which management programs, policies and plans they might want to put in place to further improve their operations, as well as the kinds of technologies they might want to put in place. Mr. Wayland described quite a few of them, and we wholeheartedly support the technologies he described.

The program also provides a platform for monitoring carbon intensity, which is obviously a very important component in understanding how we can further reduce the impact of our buildings.

Ultimately, the program does assist our building managers to save money. We're really happy to see that, because as they reduce their energy consumption, they will be saving on operating costs, as well as reducing their GHG emissions, and we do know that recertification is associated with improved performance. We have a few different studies of certified and non-certified buildings that have been performed, and they are finding quite a lot of improvement at recertification: for example, a 25% reduction in energy consumption, a 30% reduction in water consumption and an 8% increase in diverted waste, waste which does not end up in a landfill. There are also some studies on occupancy rates. We know that there's higher occupancy satisfaction and higher tenant satisfaction. Higher rental rates can be commended for those spaces.

• (1555)

We are eager to work with the federal government to reduce the impact of buildings on our environment and on the climate. To that effect, 150 federal buildings have been put through the program just recently. They've just registered thanks to BGIS, the building management company that is working with the federal government on this particular portfolio. We're very happy to have those buildings with us in the program. This will help provide the government with real data to understand exactly how the buildings are performing and where opportunities lie to increase and improve that performance.

What I'd like to also speak about is the topic of resilience. This is one area of focus that was mentioned, and this is an area that we have just recently added to our assessment. We are asking our building owners and managers to let us know to what extent they're performing short-term and long-term risk assessments, and then acting on the results of those risk assessments and planning for what may occur. We understand that buildings are vulnerable to the impacts of short-term and long-term extreme climate change—risks such as flooding—and so part of what we're looking for through resilience is the ability to prepare and plan for adverse extreme weather events, absorb and recover from them successfully, and then evolve to an improved state. Ultimately, we want these buildings to maintain their function in the face of shocks and stressors imposed by climate change, while also creating lasting value.

What we've done, specifically what my colleague Victoria Papp has done, is work directly on this resilience brief, which I'm happy to share with you. It's free for anyone to download from our website. We can send you the link. It is a 10-page document that summarizes what resilience means, what we are looking for, where the risks might lie—for example, flooding or wildfires—and what buildings may want to do and consider to start preparing themselves against these risks and make sure that they can continue to function in the face of adverse climate change.

I'll give you a few examples that we're looking at specifically: stormwater capture systems and whether those are installed on buildings to funnel the stormwater that may be coming; the installation of green roofs and walls to further absorb water; crisis management programs; flood mapping, whether you know where your buildings are located and what they will be susceptible to in the future; and increasing tree planting and/or the creation of green spaces.

Finally, what I'd like to share with you is that BOMA Canada is working with a very wide group of stakeholders on a resilience assessment protocol. It is in draft format right now. We've been working on it for a few years. It provides building managers with a list of the areas of concern to business continuity and resilience that they'll want to focus on to make sure they're able to continue functioning. We are looking at the construction features, at the heating, ventilation and air conditioning equipment, and at the electrical transformers and switch gear, specifically where those are located. Are they going to be able to withstand flooding, for example? If they're on the ground floor, they might not.

Is there a good communication system in place to be able to communicate to the building tenants and to any other stakeholders what is happening? Where is the backup power? How does that work? For example, are the elevators programmed not to go all the way to the bottom floor if it is flooded? Do you know where your building documentation is? Is it susceptible to being lost? In terms of your waste disposal and collection locations—for example, if you have some hazardous waste—do we know that the waste won't get caught up in some flood water? To continue with the example of flooding, in terms of the building condition and envelope—again, this is obviously very important—are you susceptible to leaks and some water damage that way?

Really, it's just an overall flooding and stormwater management program. It's a checklist. It's an assessment. It provides guidance and a framework for building managers to start understanding where the risks lie for them and to start being able to act on this. Again, this is in draft format. We're very excited to be working on it. We're always looking for additional feedback.

That concludes my statement today. Thank you.

•(1600)

The Chair: Thank you very much.

Finally, we will go to beautiful Burnaby, British Columbia. We have with us Colleen Giroux-Schmidt, representing Innergex Renewable Energy Inc.

Ms. Giroux-Schmidt, the floor is yours.

Ms. Colleen Giroux-Schmidt (Vice-President, Corporate Relations, Innergex Renewable Energy Inc.): Good afternoon.

My name is Colleen Giroux-Schmidt, and I am the vice-president of corporate relations here at Innergex Renewable Energy. In addition to my role at Innergex, I was part of the Generation Energy Council, which submitted its report to the federal government in June 2018.

Thank you for the opportunity to speak with you today and share our thoughts on the opportunities the greening government initiative holds for Canada.

For those on the committee not familiar with Innergex Renewable Energy, we are a leading Canadian renewable energy producer. We've been active since 1990. We develop, own and operate wind, solar, and small hydro and geothermal facilities, and we carry out our operations with more than 300 employees across Canada—in Quebec, Ontario and British Columbia—as well as in the United States, France, Chile and Iceland. We are a publicly traded company, and our shares are listed on the TSX under the symbol INE.

Innergex is 100% committed to renewable energy. While our company began with small-scale hydro in Quebec, we have expanded beyond that to now have a broadly diversified portfolio of projects, both geographically and by technology. In addition to our 68 operating assets, we are actively building the largest solar farm in Texas. We also just signed two contracts with the utility in Hawaii for solar plus storage projects.

Partnerships form the basis of our operations here and abroad, whether they be with indigenous and non-indigenous communities as equity partners in our projects, with our local contractors and suppliers, or with our customers. We have collaborated and built partnership-based relationships with multiple communities across our operating facilities and development projects. Innergex was the partner on the first municipal-partnered wind farm in Quebec, and we have multiple equity-partnered projects with indigenous communities across the country. We understand that our business is more sustainable when we are working together to build a safer, cleaner and more resilient electricity system for today and for future generations.

We know that greenhouse gas emission reduction is a critical global imperative, and we also know that switching to renewable electricity is a key way to achieve emission reductions. Innergex is proud of our Canadian roots, and we see opportunities for the kinds of projects that we develop to help Canada both to meet its goals within the greening government program and broader regional economic development, and to create indigenous economic opportunities.

We applaud the greening government initiative and the acknowledgement that one of the best tools an organization has for driving change is its procurement policy.

Increasingly, customers are the driver of change in the energy space. Just last week, Bloomberg New Energy Finance released its 2019 corporate energy market outlook. I mention it because in 2018, corporations bought a record amount of clean energy through power purchase agreements, or PPAs. Some 13.4 gigawatts of clean energy contracts were signed by 121 corporations in 21 different countries. This is up from 6.1 gigawatts in 2017.

This is a significant shift and reinforces the overall trend to shift toward renewable energy. While utilizing procurement policy to enable the reduction of greenhouse gas emissions is a critical piece of this, we also see significant opportunity for the Government of Canada to do more.

The procurement of renewable energy can be used as a driving force to revitalize indigenous and non-indigenous rural communities across Canada. There is an untapped opportunity to leverage the build-out of the renewable energy sector to bring new jobs and economic development, and to allow communities to take an active role in the transition to the 21st century low-carbon economy.

Innergex has experienced first-hand the impact that renewable energy projects can have when the local community plays a partnership role in the project. We believe that these partnerships are an indispensable part of the future of renewable energy development. We know that there is significant interest in communities to develop these projects.

As you're aware, one third of Canada's indigenous communities are here in British Columbia. A survey of indigenous clean energy published by the BC First Nations Clean Energy Working Group, in partnership with the University of Victoria's school of environmental studies and Clean Energy BC, demonstrated a widespread involvement and interest in renewable energy among indigenous communities in B.C., with half of the 105 respondents already involved in the clean energy industry in some way, from ownership to receiving royalties, and 98% of respondents indicating that they are or would like to be more involved.

However, communities have also identified significant barriers to participation in the industry. The majority of indigenous community survey respondents, 75%, indicated that they have projects in mind that they have not yet pursued or been able to pursue. They identified three primary barriers to developing these projects: lack of project opportunity, lack of community readiness, and difficulty securing financing.

●(1605)

Innergex notes from our experience working in multiple provinces across this country that this level of interest exists throughout Canada. We believe that strategic federal government procurement of renewable electricity can help address the first hurdle.

I'd like to take a moment to share with you the story of Kwoiek Creek and the Kanaka Bar Indian Band.

In 1978, the community, located near Boston Bar in the Fraser Canyon of British Columbia, started to think about developing a small hydro project. This is a region that had not seen economic activity since the railway and the highway were built. They worked over the next two decades to build community support for the

project, and in the 1990s applied for the water licence. They worked with a couple of other companies before choosing Innergex to be their partner in the development of the project.

We became involved in the early 2000s, and with Kanaka Bar took the project through a comprehensive environmental assessment, were successful in a competitive procurement process and constructed the project. We began commercial operations five years ago, and the Kanaka Bar Indian Band owns 50% of this 50-megawatt project.

This, on its own, is a significant achievement, but the story doesn't stop there. Kanaka Bar has reinvested their portion of the revenue back into their community. They have done community solar, are working to become self-sufficient with food, have built community housing, and employ 20-plus youth on an annual basis. They have become one of the key economic drivers in the region.

This is a remarkable achievement, and one that we are proud to have witnessed and contributed to. More importantly, it is one that we believe is repeatable across the country. We believe that the Government of Canada could build on the foundation of greening government and deploy strategic government procurement policy to enable indigenous economic opportunities by procuring renewable electricity from projects with significant indigenous partnership and ownership. To achieve this, we strongly encourage you to aggregate the procurement opportunities so they can enable projects of significance.

We also believe that government process and organization must be streamlined to enable procurement. We are in an era where the challenges we are facing are multi-faceted and complex, and the solutions must also be multi-faceted. This requires an enhanced level of collaboration and leadership across agencies and ministries.

Canada has made the commitment to reduce its greenhouse gas emissions and has the opportunity to lead the world in the energy transition. The business case for it is abundant. The signals from multinational business leaders are clear, and our neighbours are poised for action.

By making a strong commitment to demonstrating leadership through strategic procurement of renewable electricity, with strong indigenous partnerships, Canada can both reduce our greenhouse gas emissions within our own borders, and also unlock unprecedented opportunities for economic benefits in indigenous and non-indigenous communities across the country.

Thank you very much for your time, and we look forward to your questions.

The Chair: Thank you very much.

Thanks to all our witnesses.

We will now go to questions from our committee members, starting with the government side.

Mr. Jowhari, you have seven minutes.

Mr. Majid Jowhari (Richmond Hill, Lib.): Thank you.

On behalf of the Liberal members on this side, thank you for your opening statement about the loss of one of our long-time public servants. We echo your sentiment. Our condolences go to the members of the family, the friends, and all the public servants.

My question is on the effectiveness of one of the mandates of the centre for greening government, and this question goes to all. I am hoping to hear back from you individually.

As you know, the centre for greening government is the leading agency that is going to implement the greening strategy. They recently released some data for 2017-18 indicating that the federal operations emissions were reduced by about 32% from the 2005 levels, and there is about 4% improvement from the previous year.

One of the four mandates that piqued my interest is the goal to “integrate knowledge from other leading organizations and share best practices broadly”. As I look at the vast stakeholder group here, my question to each one of you is, to what extent has that integration of knowledge and the sharing of best practices been facilitated by the centre?

Let's start with Mr. Wayland.

• (1610)

Mr. Matt Wayland: Certainly sharing advice and best practices in this, or any aspect, is a good thing.

The folks at BOMA mentioned the building review and management that they do. It wasn't included in our presentation, but I guess we make an assumption that this is something we would do in this process. Going through something like that, you'd be able to identify where you could find efficiencies, whether it's within government or, in this case, buildings or the greening of your strategy. Their best practices can be looked at. As well as the various stakeholders around this table, the public servants will have ideas. They work in those buildings. They'll have an opportunity to share their expertise on how operations work.

With our organization, we focus on electricity. That's what our speciality is. That's why it was the focus of my presentation. It was about building automation systems, which will make things more efficient.

If you combine all the speakers and witnesses today, I think we'll have a good portion of what that would look like.

Mr. Majid Jowhari: Has a session like that been facilitated yet by the centre?

Mr. Matt Wayland: It hasn't, not through our organization. I'm not sure if I can speak for the other witnesses, though.

Mr. Majid Jowhari: Okay.

Mr. Silas.

Mr. Alex Silas: Yes, thank you.

To the point of integrating knowledge from all corners of the industry, we're very much for that. One of the things we're asking for is for the RFP to be reissued, but as a design and build only. We're very open to taking all of the innovation we can find to make these projects as green as possible. Green initiatives are a big priority to our members. We just want to keep the operation and maintenance in the hands of public sectors.

To your question about the extent to which this has been facilitated, one of the things we're still waiting for is the business plan. It's been around six months now that we've been waiting for the business plan. The date of delivery has been pushed back over and over again. To my knowledge, we still haven't been sent the business plan.

We're also asking that the government meet with our members, the on-the-ground experts in the plants. The workers know these plants, these tunnels, like the back of their hands and are crucial to making sure that these green initiatives are planned and actioned in the best possible way.

Mr. Majid Jowhari: Madame Sutton, your organization seems to be in the forefront of not only an approach but a lot of best practices that can be brought in, too.

Have you been consulted? Has a session been facilitated by the centre for you to share your best practices with other stakeholders?

Ms. Hazel Sutton: Personally, no, I'm not aware of that meeting occurring, if it has. I do have two other colleagues—our CEO and president, Benjamin Shinewald, as well as our director for energy and environment, John Smiciklas—who may have been. Personally, I'm not aware.

We have been in touch with NRCan, for example, as well as a few other departments. We do speak quite frequently.

We would be absolutely thrilled to meet to talk about those best practices. We are sort of an aggregator of best practices, to a certain extent. Our assessment is based on the feedback from stakeholders from across the country, in all different disciplines. Certainly, the government has been a stakeholder as well.

Mr. Majid Jowhari: If I ask you to share one best practice with each other, in 30 seconds, what would that be?

Madame Giroux.

Ms. Colleen Giroux-Schmidt: I would suggest or encourage you to look for the opportunity for indigenous partnership, to do more than just green government, to be able to have some impactful economic development and transformation as well.

Mr. Majid Jowhari: Great.

Mr. Wayland.

Mr. Matt Wayland: I would suggest looking at the fleet itself, what the priorities are, the longevity of the building, where it makes sense to make those investments going forward, and the whole building itself.

Mr. Majid Jowhari: Mr. Silas.

Mr. Alex Silas: My colleague, Mr. Paquette, will answer this.

Mr. Paul Paquette (First Vice-president, Local 20023, National Capital Region, Public Service Alliance of Canada): For our plant in particular, one very small issue that could save a lot of money and greenhouse gas is that we work right beside the river. Our plant doesn't have any free cooling. It's something that could be fixed so easily. Instead of running a chiller at 4160 volts during the winter months, we could be just drawing the water from the river. It's such a simple thing. It's something that has to be done.

There are other little issues like that, which could be fixed and make our plant much more efficient than it was originally designed to be. There has to be interest to do it.

•(1615)

Mr. Majid Jowhari: Thank you.

Finally, I'm closing with Madam Sutton.

Ms. Hazel Sutton: I would say, conduct an energy audit of the building. Get an understanding of how it is performing to begin with, and then those low-cost and higher-cost opportunities will reveal themselves there.

Mr. Majid Jowhari: Thank you.

The Chair: Thank you very much.

Mr. McCauley, you have seven minutes.

Mr. Kelly McCauley (Edmonton West, CPC): Thanks, everyone, for your testimony and various views.

Mr. Wayland, I'd like to start with you, if you don't mind. Can you give us an idea of what you think would be the biggest bang for the buck? You talked about building renovation. Can you expand on that a bit? Where can we get the most bang for the buck?

Mr. Matt Wayland: Absolutely. I was about to get to this. Unfortunately, I was a little long in my remarks, so I'll keep this short.

As Ms. Sutton mentioned, you can look at a review of the building and where you can find efficiencies. A building automation system is like the brains; it's like a smart home. You can control and set the temperature—your HVAC. That's your heating, your cooling, your lighting and your blinds, even, allowing sunlight in and out.

Mr. Kelly McCauley: What's involved with the automation system, in terms of rewiring and so on? How much work goes into that?

Mr. Matt Wayland: Depending on the size of the building—

Mr. Kelly McCauley: It's not just a matter of picking up a thermostat and a piece.

Mr. Matt Wayland: Yes, it's changing out thermostats, making them smart so they connect back to basically the central computer, if you want to call it that. That can be done fairly easily, depending on the age of the system and the size of the building. Typically, there will be chaseways up in the attic or above the ceiling spaces.

Again, it will depend on the age of the building, the construction of the building, those types of things.

Mr. Kelly McCauley: I know that IBEW in Edmonton does phenomenal work. They work on pipelines, which, of course, as Albertans we love.

I understand, though, that it is a difficult time through much of Alberta. I have visited NAIT, which used to have incredible apprenticeship programs, but they're not getting the companies on board. If we focused this program that the government has on Alberta buildings, do you think we could get a lot of the apprentices—the electricians—to work? Could you ballpark how many you think we could get going?

I looked at your website, and you're looking for only one apprentice right now, for one week. That's it.

Mr. Matt Wayland: That's it.

There would be a huge impact on apprentices. You mentioned it there—hours of work. An apprentice needs to complete a certain number of hours of on-the-job training in order to advance to the next level of apprenticeship and become a licensed journeyman. In provinces like Alberta and Saskatchewan, where there's a lot of unemployment in the oil and gas industries, those areas would certainly help drive the economy and keep people in the skilled trades. We're talking about a skilled trades shortage outside of this. You want to keep people who are already in their apprenticeships in them, as well as bring new apprentices on. That would create a large amount of work.

There were probably close to 300 electricians at the peak at West Block. If you picture 300 electricians there, and apprentices, you can scale that up and down, depending, again, on the size of the building.

Mr. Kelly McCauley: Outside of electrical apprentices, what else is there?

Mr. Matt Wayland: You need plumbers and pipefitters to make sure your water systems are functional, clean and efficient. For insulating the pipes—the insulating trade—again, there are apprentices and skilled tradespeople there. With heating and cooling systems, HVAC, again, there are journeymen and apprentices in employment. There are also glaziers—the people who install windows and seal them properly. Those would be considered in a lot of the buildings, as well as carpenters and labourers.

There would be a lot of building trades construction, not just electrical. I put that hat on, but I was hoping to touch on different trades and occupations and apprentices later on in my remarks, which would be impacted by a project like that.

Mr. Kelly McCauley: Right. It sounds very worthwhile. Thanks for the information.

The BOMA ladies, if I could just switch over to you, what is the best way to measure a return on investment, in BOMA's view?

The reason I ask is that the government has done target buildings on a plan to test out the program. We've gone back a couple of years after a building has been upgraded, and we've looked at the cost and the energy usage. There's no direct correlation between past energy use and post-upgrade energy use for any of the buildings that have been upgraded.

Before the government rolls out this plan to upgrade all the buildings, what is the best way to measure the return?

Ms. Hazel Sutton: There's an energy audit before and after. We have a best practice that requires that an energy audit be performed every five years to assess this kind of difference that might occur over time. Typically, during those five years, improvements are made to a building. Renovations are made to the building that should lead to an improvement in energy consumption, which would then lead to a reduction in costs.

I could see a few reasons why that wouldn't be so obvious. One is that maybe money was reinvested in some other initiatives. For example, we often see—

• (1620)

Mr. Kelly McCauley: Sorry, I'll interrupt you quickly. There were five buildings that were upgraded, and there's no correlation at all between one year and the next. I even went back to check temperatures. There's no correlation between the actual usage before and after. Is that common, or is that perhaps because we did upgrades on five very old buildings?

Ms. Hazel Sutton: Did you say there were retrofits made on these five buildings?

Mr. Kelly McCauley: Yes.

Ms. Hazel Sutton: Typically, what happens with buildings is that you actually see.... The older the building, the more significant the improvement is going to be, because it's easier to improve a really poorly performing building.

That is a bit surprising. I'm wondering if maybe.... We have heard of situations where, in performing the energy audit, the building manager realized that they were actually paying for another.... They have a different feed that's been confused with them, but I'm wonder why that—

Mr. Kelly McCauley: Before we do any more, should we do a complete energy audit before and then after? I'm not sure we did that.

Ms. Hazel Sutton: The first step would be to benchmark it before doing the renovations to understand how it is performing and then be able to compare it with the follow-up energy audit once the renovations have been done, to see what the difference is. Typically, there should definitely be some improvements.

We would like to talk more about this, to explore that with you, because that is out of the ordinary.

Mr. Kelly McCauley: Perfect.

I'm going to interrupt, because I have only a minute left.

I think you mentioned that BOMA is doing some work with federal government buildings right now. Did I hear that right?

Ms. Hazel Sutton: Yes, it's the RP-1 portfolio, if that rings a bell.

Mr. Kelly McCauley: No. What is the work that you're doing with them? Are you just doing energy audits, or are these buildings that are—

Ms. Hazel Sutton: They're going through the BOMA BEST program. They're getting the building certified with BOMA BEST, and they're doing the entire assessment through the 10 different

categories—energy audit, water audit, waste audit, the whole thing—to see what level they can achieve.

Mr. Kelly McCauley: Are any provincial government buildings doing the same, or is it just the federal government that you're aware of?

Ms. Hazel Sutton: There are definitely some provincial government buildings. The Quebec provincial government and Saskatchewan definitely have buildings in, for sure.

Mr. Kelly McCauley: I'm out of time. Thank you.

The Chair: Thank you very much.

Mr. Blaikie, you have seven minutes.

Mr. Daniel Blaikie (Elmwood—Transcona, NDP): Thank you.

I want to start by following up on some of the comments we heard today about the energy services acquisition program. I was wondering if you guys have a sense of what the total project cost is, or how much government investment is at stake in that project.

Mr. Alex Silas: We haven't received the business plan yet, so we don't know. We're still waiting for it.

Mr. Daniel Blaikie: You're still waiting to hear what the money is. I thought I heard somewhere that it was in the neighbourhood of \$1 billion, but you haven't heard anything in terms of a ballpark even.

Mr. Paul Paquette: It was floating around in a meeting that it was going to be about \$1.6 billion.

Mr. Daniel Blaikie: Okay. I know you highlighted some of the potential risks. You talked about buildings freezing and stuff like that. I'm just wondering if you could explain how that happens in moving from steam to low-temperature hot water. Where is the potential for those risks?

Mr. Paul Paquette: Initially, when they were looking into this, they had visited Amsterdam and a plant in France, which run on low-temperature hot water. Low-temperature hot water has to be below the boiling point—so, below 212°F or 100°C. That works there, because their climate is relatively stable at an average temperature of over 8°C or so, but here it wouldn't really work that well.

I'll use one hot water system as an example. Confederation Heights is running at 375°F right now. It's a high-temperature installation. We know that global warming is happening. I don't know if anyone is a non-believer, but I'm a believer, with all the weather events we're experiencing, especially the tornado that just ripped through and took out our substation at Merivale.

When you produce steam, you need only a small electrical pump to pump water into the boiler. The natural gas does the work: It pressurizes the boiler, and the steam flows from a high pressure to a low pressure. There are no pumps required. When we lost that substation, we were able to keep the steam plant going with a relatively small diesel generator, and we could do it infinitely, as long as we had diesel.

If you go to a hot-water system to try to supply the whole downtown core—and they're even talking about supplying Tunney's Pasture, Portage, and Terrasses de la Chaudière—you're going to need a system that would be huge, electrically. You would need pumps.

Right now, our chill system has over one million gallons in it. If they were to implement this heating system, it would have at least two million gallons of treated molybdate hot water. There will be chemicals in this hot-water system.

Whenever you do a plant shutdown and you're actually physically going to shut down the system and work on it, weld on it or cut on it, you have to drain it. You could literally have hundreds of thousands of gallons that will have to be drained from that system, and there's nowhere to put it. It has to go in the river, and that molybdate is going in there.

Steam is self-draining, and you don't need pumps to pump it. It goes from one area to another. It is designed for our climate.

Initially, when they said low-temperature, we said it couldn't be done. I heard last week that they've increased the temperature to 150°C. We're getting closer to where it may happen and could work, but it still doesn't stop some of the major issues with hot water when you're right beside a river system. The fish are going to drink it; we're going to drink it, and that's just not a great idea.

•(1625)

Mr. Daniel Blaikie: One of the other things we heard in our brief for this meeting was, I think, that the projection for energy savings initially is about 63% in terms of emissions. I know you mentioned in your presentation some ideas about how to improve efficiency with the existing steam system. We've also heard that one of the things that this number may not include—which is why I guess it would be helpful to see the document that this is based on—is that some of the buildings use the steam system for humidity control, and that can be quite important in certain buildings. They would have to install local boilers, and those local boilers would offset some of the emissions savings. I'm wondering if you could speak to that issue.

Mr. Paul Paquette: Yes. The National Gallery of Canada uses our steam directly to humidify their areas, to keep their artwork in a controlled environment. They would be required to put new steam boilers in, smaller steam boilers, so you'd have more natural gas lines running in these buildings—there's no question about that.

Mr. Daniel Blaikie: If the system goes down and you need to effect a repair on the system, what's the difference? I know we talked about where the water might have to go, but what's the difference in terms of the amount of time that it would take to effect a repair if you had to drain a water system as opposed to a steam system?

Mr. Paul Paquette: With a steam line, when you shut that valve, you could have it down in maybe half an hour, and it would be cool

enough for welders to work on it within two to three hours. With a hot-water system that size, depending on where the valving is, it could take 24 hours to drain a small section of pipe, because you can only drain it so fast. We're talking about pipes that are almost as tall as this room—they're huge—and they're not in that tunnel yet. They have to build the tunnels for these pipes. These tunnels were never designed for a system with such a low enthalpy of temperature in there. If they're going to low-temperature hot water, they're going to have to rip a lot of concrete down to try to get them to fit in there—that's for sure.

Mr. Daniel Blaikie: In a month like the one we've been having here, would you need a backup heat system locally in buildings in order to avoid freezing while the repairs are effected? There's time on the other side in terms of entering the water back into the system and then re-pressurizing the system as well.

Mr. Paul Paquette: Exactly. We have shutdowns annually, sometimes semi-annually. We try to organize them in the off-peak period, not in February, of course.

Incidents happen, like the one in 2009. We were lucky it happened in November, and the lowest temperature we saw was -7°C. If that incident in 2009 had happened in February of this year, it would have been very serious. There would have been an extreme amount of damage to the infrastructure downtown, and to the buildings. There is no question about it.

There was no backup. The backup back then was Printing Bureau, and they had three little boilers. We were just lucky.

The Chair: Thank you very much.

Mr. Peterson, you have seven minutes, please.

Mr. Kyle Peterson (Newmarket—Aurora, Lib.): Thank you, Mr. Chair.

Thank you, everyone, for being with us today.

I'm just going to pick up with Mr. Wayland. You alluded in numerous remarks to the importance technology is going to have in all of this. I know you didn't necessarily get the opportunity to expand on those, so I'm going to give you the opportunity now.

I would just like you to elaborate on what aspects of technology we can harness, and how we can harness technology to achieve some of these goals.

•(1630)

Mr. Matt Wayland: I was getting into the building automation system, or BAS. The BAS controls are, essentially, your lighting, security, fire alarms, heating and cooling. That would be the brains of the operation, and it can control, as I said, even the blinds or thermostats in particular rooms.

That type of system is installed mostly in buildings that were built after 2000. Anything before that is hit-and-miss. Building automation systems vary in terms of how much you want them to look after. Mr. McCauley said earlier that they came in and did the work, but we don't know how good the improvements are. With the building automation system, you can go in afterwards and say, "With the time change..." or "This winter is really warm or really cold," and you can adjust those variables as you move along. If we're not saving as much energy as we thought, we'll try to tweak the system.

That gives you the spreadsheet of where you can find those efficiencies. It is a tell-all. That is the way to go, by essentially making it a smart building.

Mr. Kyle Peterson: Thank you, Mr. Wayland.

Following up on that point, to BOMA, PSPC has the smart buildings technology. You're probably familiar with that. Do you think all federal buildings should be using this technology? Is the cost-benefit there to make it worthwhile?

Ms. Hazel Sutton: Certainly, a building that can communicate with its different components and understand what's working when, and why it needs to be working at that particular time.... This is a really good thing for buildings to have.

That being said, if it's going from zero to a hundred, it might not be worthwhile for every single type of building. The largest culprits are the buildings that have been neglected over time. They're not the prestige buildings. They consume a lot of energy, and no one has really paid attention to them. Those are the ones where the biggest value could be had for even the lowest cost.

I might recommend a selective approach where you're choosing which ones are already high performers. Those ones will definitely see improvements with these BAS systems—these smart building technologies. Then, with the ones that have not had that kind of attention, maybe start off just by doing an audit and starting to put in place some basic retrofits for those buildings.

Mr. Kyle Peterson: You mentioned your program BOMA BEST. Is that for new builds or just for existing builds with the retrofit? Please elaborate on that program a bit for us.

Ms. Hazel Sutton: It's only for existing buildings. We don't have any new building components. It's really just for a building that has been in operation for more than 12 months. We want to see how it's actually performing. Is it doing what it's supposed to be doing? Are the people aware of the programs? Are the management programs there to support it? It's really just for operations and management.

Mr. Kyle Peterson: Does your organization have a similar program for new builds?

Ms. Hazel Sutton: No, but there are other organizations that have similar programs.

Mr. Kyle Peterson: Like the LEED.... We're all familiar with LEED.

Is it similar to that, but for existing buildings?

Ms. Hazel Sutton: Exactly.

Mr. Kyle Peterson: Thank you for clearing that up.

While I have you here, I'm just going to ask if you're familiar with the term "green lease clauses", and if so, whether you can elaborate on that. Is there any value to that, and what should we in government know about those clauses?

Ms. Hazel Sutton: Absolutely.

With green lease clauses, we have specific questions that encourage our users to put them in place as well. It's a very good way to encourage communication and sharing between the tenant and the landlord.

There are a lot of building types—light industrial, for example—where it's very hard for the landlord to get access to energy and water data, because the tenant may feel a little private about that and not want to share it. If you put in place a green lease that specifies that there will be sharing to help the building manager achieve the green building targets, then it facilitates that conversation. The building manager would want to identify what the priorities are, and then make sure they're in the green lease so the tenants have to comply. It increases that communication.

Mr. Kyle Peterson: Thank you for elaborating on that.

Ms. Giroux-Schmidt, the energy services acquisition program, which we're discussing today.... As the government shifts toward more carbon-neutral fuel sources, you must have many recommendations regarding that shift that you haven't discussed today.

Should renewable electricity be purchased on site or are there more appropriate ways to do that? Do you think that's an important priority for the Government of Canada?

•(1635)

Ms. Colleen Giroux-Schmidt: If it can be on site, that's great, but one of the things we would encourage you to look at is aggregating the demand. Perhaps you're going to procure from a project from an indigenous community that doesn't have access to any other economic development but might have a renewable energy program. Being a little more strategic with where you're procuring from allows you to also unlock some of that economic development opportunity. If it's just focused on the individual demands of each individual building, there's never going to be enough power to enable one of these projects to go ahead.

Mr. Kyle Peterson: Walk me through how that might work in a practical sense. Part of the cost of energy, of course, is getting energy to the user. What analysis would need to be done to see whether that would be appropriate?

Ms. Colleen Giroux-Schmidt: There are a couple of options.

As a customer of the utility in the jurisdiction that it's in, the government could be working with that utility to ensure that they're procuring from those indigenous partnered projects.

Another option or tool that's in the marketplace right now is something called a renewable energy credit, or REC. That's used in a lot of places to enable projects being built somewhere different from where the end user is. Corporate PPAs, or virtual PPAs, is another term that's increasingly coming up. That's what you see a Microsoft or an Ikea doing when they say they've procured 100% renewable electricity. Often, it's not right next to where their facilities are. They're procuring it somewhere else in the world but through that virtual PPA they are able to have it connect to them.

There are a lot of different tools out there now. We think there are opportunities to tweak those existing tools to favour indigenous-partner projects here in our country.

Mr. Kyle Peterson: I'm out of time. I'm sorry about that.

Thanks, Mr. Chair.

The Chair: We'll now go to our five-minute rounds.

We will start with Mr. Deltell.

Mr. Gérard Deltell (Louis-Saint-Laurent, CPC): Thank you so much, Mr. Chair.

It's a real pleasure for me to talk to you today.

[Translation]

First, I want to pay a serious and sincere tribute to Michael Ferguson. I was terribly moved by the news of his death. I didn't know that he was sick, which shows how he remained professional until the end of his life. He was a decent and honest man with integrity. He became bilingual past the normal age for becoming bilingual, which shows that we can always achieve this great Canadian goal. I want to express my condolences to Mr. Ferguson's family and loved ones.

I want to welcome everyone to your House of Commons.

[English]

My topic today is the wind turbine. As we know, if we want to look at new ways of producing energy, wind turbines are one of them. In Quebec, we've had a great experience with this and there has been movement during the last few years.

I remember quite well that when I was a member of the National Assembly in 2014, I was a strong advocate of making good use of public money. This is why I was very upset to realize that wind turbine energy costs three times as much as hydroelectricity in Quebec.

[Translation]

I used to say all the time that if it cost three times as much, it cost three times too much. That was in 2014. The situation has improved in Quebec, but not in a very convincing way.

Last August, Quebec's auditor general concluded that it wasn't cost-effective in Quebec to produce electricity using wind turbines.

There was also a major project proposed in Quebec by an indigenous community, with the support of a private company. Last August, the president of Hydro-Québec announced that, according to the Crown corporation's findings, wind energy, and specifically this project, could generate losses of \$2 billion. As a result, Mr. Legault,

the recently elected premier, stated on November 29, 2018, in Wendake, which happens to be in my constituency, that he wouldn't proceed as long as Hydro-Québec had surplus energy.

I have a question for Ms. Giroux-Schmidt, from Innergex. It should be mentioned that this company is heavily involved in wind energy in Quebec and is successful in that field. I want to acknowledge the company's recent major investment of \$630 million in August to purchase five wind farms.

My question is very simple. Are we able to produce electricity from wind energy without costing taxpayers any money?

● (1640)

[English]

Ms. Colleen Giroux-Schmidt: I have a couple of comments on that.

The costs of wind have continued to fall dramatically over the last decade, and we're still seeing costs fall today. Recent competitive procurement processes in Alberta and Saskatchewan have seen wind come in around \$3, so it is continuing to fall.

That being said, we need to look at each individual region of this country. There are going to be certain technologies that are stronger than others. Quebec, British Columbia and Manitoba are blessed with historic hydroelectric investments, so the existing power system there is a very low-cost electricity product.

I want to comment on your reference to taxpayers, because something that gets missed sometimes in the discussion about electricity and energy is ratepayers versus taxpayers. We tend to make our decisions and considerations of which energy source to use based on ratepayers, but the cost of inaction on climate and the consequence of what we're seeing with climate disruption is borne by taxpayers.

Another lens to this is the benefit that may accrue to an indigenous community through their involvement in a project. It's not necessarily something that's going to show up in the ratepayer context. I would encourage all of us to start to look a little more broadly when we look at the costs and benefits of these projects, and consider those broader taxpayer benefits in addition to ratepayer impacts.

[Translation]

Mr. Gérard Deltell: In your opinion, what should be the ratio between the losses incurred by taxpayers and the gains that you just mentioned?

[English]

Ms. Colleen Giroux-Schmidt: Unfortunately, I'm not in public office. It's a difficult one to start to grapple with, and it's not easy to say what that value is to taxpayers. It's a challenge, but collectively we need to start looking a little more broadly at some of these choices. In the Quebec example, there was tremendous regional economic development for the people of the Gaspésie through the build-out of wind over the last decade. In that example, there was a lot of value to those taxpayers as well.

[Translation]

Mr. Gérard Deltell: Thank you, Ms. Giroux-Schmidt, for highlighting the fact that it's not easy to calculate the effort required of taxpayers in relation to potential gains in terms of local job creation or climate action.

[English]

The Chair: Thank you very much.

Next is Madam Murray, for five minutes, please.

Ms. Joyce Murray (Vancouver Quadra, Lib.): Thank you very much, Mr. Chair.

Thank you to the witnesses.

I'm going to take this up a level in terms of the concept of greening government. One of the purposes of launching the centre for greening government was to have the federal government's activities towards meeting climate goals—through the federal buildings and fleets and other emissions—become a bit of a driver for the green economy, for innovation, and for a clean energy economy much more broadly.

I've had conversations with people in those sectors where, for example, the representative of a very major landlord of office buildings here in Ottawa said, "You know, it's great that government is doing this, because we're ready to be partners, but the market is really not demanding that we do the things we could be doing." I've had the same conversation with a huge construction firm and other national construction firms, who are saying, "We're ready, but our customers are not necessarily demanding that we do the much more efficient and green projects. Government driving this will help."

I am interested in what we need to understand as a government so that we can really leverage the work we're doing to stimulate these kinds of innovations, materials development and process improvements more broadly in the Canadian economy so we can become a real leader in that and export those goods and services.

Maybe BOMA could start with thoughts on that.

Ms. Hazel Sutton: It's interesting because there's always this understanding that perhaps to build a building well, to be efficient, is going to cost more up front, but eventually there will be operational savings and it will cost significantly less over the long run during the operations of that building. There is oftentimes a disconnect between whose incentives are deciding how the building will be built: It's not necessarily the same people who will be paying the operational costs and who will be paying for the building to be built. We need to make sure there is an ultimate alignment with the savings that are borne by whoever is actually having to pay for the operations of the building,

and that this person is involved as well during the discussion of building the building. That could help align the two.

The other aspect would be training and education. Certainly, we are constantly trying to make sure that individuals understand the benefits of a well-run building, because it's more comfortable and you save money ultimately, so education is definitely important in that respect.

Mr. Wayland also mentioned training the people who would actually be doing the work. Getting this new green workforce up and running and understanding that their contributions are valuable to us, so that they can become the experts on how to build and operate these buildings, will be valuable to the country in the long run.

• (1645)

Ms. Joyce Murray: Does anybody else want to weigh in on advice to government as to how we can leverage up into the broader economy by being a test bed for innovation or first users of new technologies, and creating economies of scale for inventors? Are there areas we should be aware of where we can maximize our impact?

The Chair: Mr. Silas.

Mr. Alex Silas: I'd say, listen to the public workers, the public servants and the on-the-ground experts. You heard earlier how my colleague, Paul, came up right away with a way to cool more efficiently: take the water from the Ottawa River; stop running coolers. We have these on-the-ground experts who not only are more knowledgeable than anyone else could possibly be about these plants, but who also care about these workplaces.

Ms. Joyce Murray: Okay, excuse me. My question was different. It wasn't about a specific project. It's about government doing what we're doing, and how we can use that to stimulate innovation in the broader economy. Given that we're now talking about people, it's very important to building automation systems that the operations and maintenance have qualified people, and perhaps certifications that are standardized across Canada, if not further.

Perhaps BOMA would have some thoughts about whether there's a gap there. Should we be paying attention to that as a federal government, or is the industry naturally providing the skills training and certifications?

The Chair: Unfortunately, that will have to be food for thought, since we're completely out of time.

We'll now go to Mr. McCauley for five minutes.

Mr. Kelly McCauley: I'll stick with the BOMA ladies. I just have a couple of quick questions for you. When we're looking at greening government, you mentioned there are certain provinces that are blessed with an abundance of hydroelectric power. In Alberta, where I am, it's mostly coal. Would we be best served focusing on those provinces that are heavily reliant on coal, to upgrade those first before we start playing around or moving to other jurisdictions within the country?

Ms. Hazel Sutton: That's a fantastic question. I want to refer you to a wonderful study that was done—I think Mr. Whalen referred to it earlier—by the Canada Green Building Council. They assessed specifically where the opportunities are for retrofits in the country to reduce our greenhouse gas emissions. They did a study where they analyzed the consumption per province—how much consumption there is in all the buildings in each of the provinces—but then also what the GHG impacts are for each of those.

Their recommendation was based on this very visual graph that shows right away that there are definitely provinces that have significantly higher GHG impacts. Maybe that could be a really good place to begin, starting to make these retrofits and to invest in renewable energy. In provinces where there's already a very low GHG emission—as with Quebec, Ontario, Alberta, Manitoba, and B. C., thanks to hydro—the government could focus on other aspects of retrofit that can also help buildings consume less.

Definitely, yes, you should focus on the largest emitters first.

Mr. Kelly McCauley: I'm just trying to get Mr. Whalen's electricians back to work.

I have two last quick questions. BOMA obviously represents a huge number of building owners and operators across the country, including many who have multiple buildings. Those with multiple buildings that they manage or own, where are they going with retrofits?

• (1650)

Ms. Hazel Sutton: They are fully investing. We have many companies that have their entire portfolio in. At this point, it's a race to see who's going to have the most buildings.

What they're benefiting from is having this overview of exactly how their buildings are performing, and then being able to specifically target which building needs the most help. They then distribute that money, budgeting over long periods of time for the capital retrofit, changing over which building is going to get the attention. Basically, every building will benefit from small adjustments, but if they figure out which ones are the biggest emitters, which ones consume the most, then those ones should have the priority of large capital retrofits, like a new boiler, for example.

Mr. Kelly McCauley: I know you may not know this, but is there a clear trend from the large owners and managers in terms of what they are focusing on?

Ms. Hazel Sutton: Do you mean in terms of specifically which initiatives they're targeting in their building?

Mr. Kelly McCauley: Yes. Is there something that is widespread, where everyone says, "We're doing this"?

Ms. Hazel Sutton: Energy is by far the most popular thing to do.

Mr. Kelly McCauley: Is that energy reduction?

Mr. Hazel Sutton: Yes, exactly. That's where the operating costs will be reduced right away. You don't see that as much with waste diversion. Everybody starts with energy, then water, and then waste.

Lighting retrofits are one of the biggest, most popular things that buildings will do to see a huge reduction in their consumption right away. Then they'll usually apply those savings to other areas, like diverting waste.

Mr. Kelly McCauley: I have one last question for you, and it doesn't necessarily have anything to do with greening government. I noticed a change in building codes, allowing higher office buildings to be wood-framed. Do you see that as an issue, instead of the traditional way, being able to do wood now above four storeys? Does that affect greenhouse gas emissions or the efficiency of the buildings?

Ms. Hazel Sutton: I'm not qualified to speak on that topic. We work with existing buildings, not new construction. Personally, I do think it's very exciting to see how wood-framed construction is being used right now for tall buildings, because it is that embedded carbon that you get as a benefit from the wood. Unfortunately, however, I can't quite speak to that.

Mr. Kelly McCauley: Okay.

Is there anyone else who might know? Oh, excellent. I wanted to play stump the host, and I won.

Voices: Oh, oh!

Mr. Kelly McCauley: Anyway, thanks. That's all I had. Thanks very much for the information.

The Chair: Thank you.

Madam Ratansi, you have five minutes, please.

Ms. Yasmin Ratansi (Don Valley East, Lib.): Thank you very much.

I'm just going to go to BOMA.

Within the whole greening government strategy, how can industry leverage it, or how can government leverage what you're doing? I think Madam Murray asked you that question. Can you give me both sides of the coin, please?

Ms. Hazel Sutton: How can industry leverage what we doing with—

Ms. Yasmin Ratansi: How can it leverage the three-pronged strategy of the greening government initiative, in terms of energy efficiency, waste management and water reduction, or how we can learn from what you're doing?

Ms. Hazel Sutton: Absolutely. Victoria, feel free to share some thoughts.

Our position is buildings, so we're looking specifically at how buildings are operating. The assessment allows you to understand as a baseline how the building is performing, to be able to zero in on where the biggest opportunities are. The program could absolutely help leverage the strategy in terms of starting to provide that framework, that benchmark, to provide the real data so that you understand how your portfolio buildings are operating.

If the question is also in the reverse—how we can leverage your strategy—the fact that you're leading the way with this great strategy means that we can also encourage other small to medium building managers to understand that this is a very important initiative and that they should be paying attention to this as well and learning from your best practices, so we could help communicate that.

Ms. Yasmin Ratansi: You stated that there are 150 federal buildings that have come for certification. Do you have a tool you use to certify? Is that something you can share with the government?

Ms. Hazel Sutton: Absolutely. BOMA BEST is the tool. It is a 180-question assessment that assesses those 10 areas I mentioned earlier. That is effective. That is the tool we are providing to give an overview of how the buildings are performing. Those 150 buildings were entered only two weeks ago, I think. We'll be working with them, not as a consultant, but just to help them through the process. The building manager will be assessing each of those buildings, one by one, to see how they're performing in all the different areas, and to be able to improve on that.

• (1655)

Ms. Yasmin Ratansi: How long does it take to do the assessment or the audit of those buildings?

Ms. Hazel Sutton: The assessment will usually take about six months. It's just a yes-or-no questionnaire, but you have to be able to provide documentation supporting your answers. We will ask questions like, "Do you have a hazardous building materials management program?" It's a yes or no, but then we say, "Show us your actual hazardous building materials management program."

That's the part that takes a bit more time. I would say that it takes about six months to really go through the whole process. Then we will send a third party verifier to the building to go through the assessment with the building manager and make sure the answers are corroborated with documentation. We would be happy to share a link to one of our sample questionnaires, absolutely.

Ms. Yasmin Ratansi: That's perfect.

One of the things we have been discussing... I want to ask you to maybe respond to what Paul Paquette said. As you know, electricity is the biggest cause of GHGs, and the government shows that its real property accounts for 89% of total emissions.

We're talking about a heating and cooling system. I was listening to all of your presentations. They're very interdisciplinary and interrelated. I was wondering about it, when you talked about PPP not being a good thing. There are businesses, technology and innovation available that could probably be capitalized or leveraged.

My question is for either Madam Giroux-Schmidt or the BOMA people. Mr. Paquette was talking about the conversion from steam to low-temperature hot water and some of the concerns he had, but I

was under the impression that it is a bridge to carbon-neutral energy. Is that true or false? What is your assessment?

Mr. Paul Paquette: Absolutely false.

The Chair: We have only about 30 seconds left.

Ms. Yasmin Ratansi: Okay. That's fine.

You'll answer the question next time.

The Chair: We will have another round of questioning, so we'll have an opportunity for all of you to get back to that question. Mr. Paquette, if you want to join in, you certainly can.

We will now go to Mr. Blaikie for three minutes. Then, colleagues, we will probably have enough time for one full round of seven-minute interventions after that.

Mr. Blaikie.

Mr. Daniel Blaikie: Thank you very much.

I did want to ask Mr. Wayland this, while he's here. I think there is some effort to get beyond this, and we've heard some promising things today, but often there is still a kind of a dichotomy presented—politically, anyway—between creating jobs and employment on the one hand, and greening the economy on the other hand.

I'm wondering if you could offer some insight into the available kinds of work and the prospects for creating employment. We talk a lot about new training, and there is definitely some new training to do, particularly for folks who've been working in the oil and gas sector, but for a lot of the people who have skills already and aren't working right now, how do they stand to benefit quickly from investment in greening buildings?

Mr. Matt Wayland: Absolutely. In the IBEW, we have training centres across the country. We have just over 23 training centres. We have a certified solar PV installation program; you must be an electrician to achieve that. It's certified by the CSA, the Canadian Standards Association. We have electrical vehicle infrastructure training programs. Two of our biggest union locals, in Toronto and Vancouver, have building automation and lighting control system programs, so they become experts not only in being electricians but in those fields as well.

In terms of looking at the availability and putting people to work specifically in areas where there may be high unemployment or a change from, say, an oil sands production job, where there's a lack of work right now, there are immense opportunities, such as jobs in retrofitting buildings, giving these individuals.... An electrician is an electrician, whether they're working in Newfoundland on an oil project, or at a hydroelectricity plant or an automobile facility, or installing solar panels. The amount of training involved makes them more rounded journey-person electricians or apprentices. Beyond the electricity side of things, earlier I mentioned the plumbing and pipefitting trades: hooking up new boilers, insulators, insulating all the pipes and HVAC systems.

There are a lot of opportunities to provide work and spur the economic action in those particular areas where the government buildings are. We can't move the buildings—

• (1700)

Mr. Daniel Blaikie: Are there things that you think government can do from a policy perspective to ensure that the investments they're making in the government building and fleets or whatever are easily transferable to the non-government sector? That could be on the training side, in terms of making sure there are apprentices on the job or....

Mr. Matt Wayland: That's certainly one of them. We're advocating—

The Chair: I'm sorry to interrupt again. We'll have to get you to park that answer for just a moment. Perhaps you'll be able to expand on that when we go to our seven-minute rounds, which we will start immediately with Madam Ratansi.

Ms. Yasmin Ratansi: Thank you. I'll continue my question.

I'm looking at the energy services acquisition program. I'm looking at what the government states, which is that when it greens itself, because of real property or real estate contributing 89%, it wants to cut the GHGs by 40%. Some of that will be done by basically introducing smart buildings, using low-temperature hot water and switching from steam to electric chillers. This is technology and innovation.

I'm sure there are conflicting.... We listen to every side. Whether it's the opposition, the government or whatever, we do listen to all sides.

I'm trying to get my head around what you stated. From what I can see, it states that when you move from steam to low-temperature hot water, that action will reduce greenhouse emissions by 63%. It could be a matter of debate. It could be a matter of scientific research. I have worked with just about everyone, and I'm trying to get their sense. I've heard you.

I'd like Mr. Wayland's input into this. It would be important because you talked about how the 80 buildings we have in the capital region could be made more energy-efficient through A, B, C, D and E. Your insight would be important—and the insight of you ladies would be very important as well—in order for me to understand what we are talking about.

Who would like to go first?

The Chair: Why don't you assign the question to one of the witnesses?

Ms. Yasmin Ratansi: Okay.

I'd like to assign the question to BOMA, whether converting steam to low-temperature hot water has impacts and what risks are involved. If you don't know about it, you can say that it's not your area of expertise.

Ms. Hazel Sutton: Unfortunately, it's not my area of expertise. I can hypothesize, but that wouldn't be useful.

Ms. Yasmin Ratansi: No, if you hypothesize, somebody might take it as the truth.

Madam Giroux-Schmidt, would you have any insight?

Ms. Colleen Giroux-Schmidt: Unfortunately, it's also outside my area of expertise.

Ms. Yasmin Ratansi: How about you, Mr. Wayland?

Mr. Matt Wayland: Unfortunately—

Voices: Oh, oh!

Mr. Matt Wayland: Electricity, yes; steam and water at low temperatures, unfortunately not....

Ms. Yasmin Ratansi: Okay.

Mr. Paquette, what is the scientific evidence you have? If you have any papers that you can present to us, it would be really appreciated.

Mr. Paul Paquette: Unfortunately, I haven't been able to read the study and see what parameters they were looking at. Were they looking at the condensate return coming back to the plant, or were they considering that a total heat loss? I'm not sure. I don't know what they were looking at. When you do something like that, a study of that type—that large—I don't know where they're calculating their heat losses or their energy losses in the system.

A hot-water system works great, but a low-temperature hot-water system.... If it's just for one particular building, it's fine. You can get away with it. When you're talking about a distribution system that could be up to 10 kilometres long, all the way from the Printing Bureau to here, to the Château Laurier and Sussex, it's too long a distance to travel. If you have 185°F water, less than 212°F.... Sorry, I'm using Fahrenheit. I'm old. We still work in Fahrenheit in the plant. You can get away with it in a small line, but in order to have that low amount of energy, water at 185°F, which is barely higher than what you get out of your hot-water tap, you would need huge pipes to supply the whole downtown core. There are just too many square feet. That's what it comes down to.

That is why, when it was initially proposed to us and they were telling us that they were going to run it at that temperature, we all shook our heads and said, “They’ve got to be kidding me.” Now we have them up to 150°C, which is about 302°F, so we’re getting closer to the target numbers necessary to have hot water travel long distances. Imagine the heat loss at -30°C outside with a pipe from Gatineau, Quebec, all the way to right here in this building. When it’s -30°C and your water is at 100°C, there’s a major heat loss. Nobody has calculated that. They want to put it underground. They want to put it on the bridge. There are all kinds of things they’re looking at. We didn’t get a clear business proposal.

Mr. Kelly McCauley: Who is “they”?

• (1705)

Ms. Yasmin Ratansi: I’m asking the questions.

Who is “they”?

Voices: Oh, oh!

Ms. Yasmin Ratansi: Number one, who is “they”? Number two, what did your discussions result in? Has there been any movement? Has anybody spoken to you? Have they said, “No, we’re not going forward with this plan”?

Mr. Paul Paquette: I can only say that it’s from higher powers. I’m in the union, so I get to go to LMCs all the time. It’s our direct managers who have told us this, and one who is directly responsible for the ESAP program.

Initially, the talk was about 100°C or 185°F, which is lower, about 90°C. They kept on singing the same tune for 10 years. Now they’re singing a different tune. We always told them that it probably wouldn’t work. Even at 150°C, I’m not sure. I haven’t calculated the numbers, but at 150°C we’re getting closer to the target numbers, so that you would be able to transfer that amount of heat over long distances to supply buildings and to keep the buildings from freezing. Unlike steam, if you have a freeze situation, water is relentless and you’ll just rip the pipes.

Let’s say your fresh air coils.... All buildings require a certain amount of fresh air entering the building to keep the carbon dioxide at a safe limit—ashtray standards, we’ll say. In order to achieve that, you need a certain amount of fresh air coming in. At -30°C, you need so many BTUs of heat so that coil doesn’t freeze. If it’s water, it could freeze. If it’s steam, it goes down into a trap. The steam condenses, goes down into a trap and is evacuated.

There are a lot of issues they have to look at, but I don’t know....

Ms. Yasmin Ratansi: I’ve run out of time, haven’t I?

The Chair: You certainly have.

Now we’ll go to Monsieur Deltell.

Mr. Gérard Deltell: Thank you so much, Mr. Chair.

I want to make a quick point about wind turbines.

[Translation]

My comments earlier may have implied that I was 100% against wind turbines. That’s not the case at all. However, as a manager of public funds, I’m obviously very aware of public spending and value for money.

I think that any energy is good as long as it’s cost-effective and useful and it serves the people that it’s meant to serve. For example, Quebec has many natural resources that must be exploited. I think that the resources aren’t being exploited enough, but I hope that they will be eventually. There are mines in northern Quebec, such as the Raglan Mine. This mine is powered in part by the energy produced by two wind turbines, which are supported by a diesel engine that compensates for any lack of wind. These two energies are combined.

My point is that, when the need exists, when it’s feasible and when there’s a way to make it cost-effective from every angle, wind energy does have its place. However, we must also think about the people who will pay. That’s why the Quebec government has set aside a project that could have resulted in losses of up to \$2 billion for taxpayers. That’s why Quebec’s auditor general said that wind energy currently isn’t cost-effective in the province.

We applaud companies such as Innergex that invest their money in wind farms, as Innergex did recently with its \$630 million investment.

Thank you, Mr. Chair.

[English]

The Chair: Thank you very much.

Mr. Blaikie.

Mr. Daniel Blaikie: Thank you.

I want to come back briefly to the ESAP program.

When we talk about the commitment to release the business case, I imagine it includes either the environmental assessment or the emissions reduction assessment, or those are two separate documents. When they talked about releasing the business case, did you have a sense that it included the emissions calculations for the whole system, or would that be something else in addition to the business case that would have to be shared in order to get a sense of whether the pros outweigh the cons on the project?

• (1710)

Mr. Alex Silas: We are requesting that the emissions assessment and the environmental impact be included in the business proposal.

Mr. Daniel Blaikie: Okay.

In your presentation, I think you used the word “employer”. You said that the employer had promised the business case for the project. Who is that specifically? Is that a particular government department? Are you referring at all to the private companies that have been engaged in a kind of pre-contract period?

Mr. Alex Silas: No, that would be the government.

Mr. Daniel Blaikie: Okay. Is it the Department of Public Works that's overseeing this project? Is it the Department of the Environment? Who is it?

Mr. Alex Silas: It's the public works department.

Mr. Daniel Blaikie: Okay. Do you have any sense at all as to why the release of that has been pushed back? I know that sometimes in public-private partnerships it can be harder to get information because there are concerns about commercial interests. Has that been cited to you at all as a reason why that's not being shared?

Mr. Alex Silas: To my knowledge, there have been no specific reasons cited, but that could very well be it.

Mr. Daniel Blaikie: Okay. How important do you think it is that the public be able to access that information in order to have some sense as to whether or not this project is on track? How important is it to you to have your members be able to weigh in publicly about the veracity of the study prior to government signing off on the contract to move ahead on a project that might cost well over a billion dollars?

Mr. Alex Silas: It's crucially important, considering the impact that this is going to have on the public, on workers, on Canadians who live here and on visitors to our city. Our whole goal is to include our members, public servants, to come up with the best plan possible, to include the on-the-ground experts in these discussions for that reason.

Mr. Daniel Blaikie: To come back to Ms. Ratansi's question, which I think was a technical question, in terms of the savings from moving from a steam system to a low-temperature hot-water system, is the idea there that because you need to heat to a lower temperature, you just don't have to burn as much natural gas? What would be the prima facie case for emissions reductions with a low temperature—

Mr. Paul Paquette: A hot-water system in the right conditions works really well. There are different ways. The thing about saving energy is that you'd have to attack it from all sides. If you went to heat pump chillers, let's say, we have some at Les Terrasses de la Chaudière that have operated for many years. They work great. They actually produce 60°C water, and they produce your refrigeration at the same time, so everybody wins.

We have electricity right at the gate. Hydro Ottawa just bought that dam. I mean, it's right by the plant. We can be supplied right there and have a combination of heat pump chillers and boilers. You'd still require boilers because of our extreme temperatures, to boost the temperature up in the winter months. I think it's that combination you'd have to look at, and it would give you a better, greener source of power.

Steam itself, if it's run right... We have to remember that when we had that accident in 2009, they essentially got boilers that were out in a field. They were sitting in a farmer's field in the States and they brought them up. Can they be more efficient? Absolutely. We have no economizers on them. There are so many different parameters on that equipment that could be upgraded, which would increase our efficiencies tenfold. The free cooling is another one. Why aren't we doing that?

Mr. Daniel Blaikie: To your knowledge, have there been any detailed studies of ways to try to improve the efficiency of the

existing steam system so it compares to what the new system would be?

Mr. Paul Paquette: Zero. I guess they were all waiting for this big saviour. The ESAP has been around for a while. They were hoping for this, and they're going to go all in. I think there's a better way to go about it, and there's definitely something that should be more researched.

Mr. Daniel Blaikie: In your opinion, or as far as you know, has this project gone so far that it can't be stopped, or is there still time to put the brakes on and look for alternative solutions if the evidence warrants?

Mr. Paul Paquette: I would think there would always be a chance to put the brakes on. I would hope that cooler heads would prevail. Just the fact that at least 16 government buildings in the downtown core cannot convert to hot water... They can't. There's just no way they can physically convert. They're already getting ready to start up their own boilers and go to a different system.

• (1715)

Mr. Daniel Blaikie: So those 16 buildings would be moving to a local heating—

Mr. Paul Paquette: Yes, those clients are gone. They'll be gone. When this plant goes in, you're going to lose 16 customers, and that's just off that line. That's 16 buildings.

Mr. Daniel Blaikie: I guess one of the questions then becomes whether or not taking the whole building offline is counted in those emissions reductions, in the emissions savings for the central system. Unless we see the study—

Mr. Paul Paquette: We're going to lose on it because whenever you go to a smaller system, it becomes less efficient. The larger the system, the more computer control we have on combustion, on NOx emissions, the whole bit. We have more control in a big, computerized central heating plant than we do over a small boiler from Carrier. That's just how it is.

Mr. Daniel Blaikie: Thank you very much for coming here today.

The Chair: Finally, our last intervenor will be Monsieur Drouin for seven minutes.

Go ahead, please.

[Translation]

Mr. Francis Drouin (Glengarry—Prescott—Russell, Lib.): Thank you, Mr. Chair. I doubt that I'll need seven minutes. I'll ask only a few questions in the interest of things.

I first want to respond to my colleague, Mr. Deltell. Unfortunately, neither Ontario nor the rest of Canada has a region such as the Laurentians. They're unable to access all the hydroelectricity used by Quebec. Instead, Ontario has nuclear plants that are very expensive to replace. That said, I understand Quebec's position. I can see the Laurentians from across the river.

[*English*]

My first question is for BOMA. We talk about efficiency, energy, and water conservation. I'm wondering if you're also having conversations with the insurance companies in terms of whether, if we move towards a particular system, we can save on our insurance premium. Are those conversations happening?

Ms. Hazel Sutton: They are happening, absolutely. We're speaking with insurance organizations. Intact, out of Waterloo, is one of our primary ones, with Blair Feltmate, whom you may know. We know that the insurance companies are very aware of the huge payouts they're having to give for the impacts of climate change on buildings. They're aware this is happening. The numbers are growing every year. More consistently there are these high numbers. We're having these conversations.

We've explored different ways. We've explored different topics, such as whether if a building is shown to be as resilient as it possibly can be, there could be some opportunity with insurance. Those conversations haven't resulted in anything yet, but there definitely is a conversation happening within the industry on that topic.

Mr. Francis Drouin: Are you seeing a trend within your business, with your building owners, that they are adapting? For example, let's say a certain building has water pipes that burst. I know there are sensors that exist out there to ensure that if one does break, you mitigate the disaster—as opposed to, oops, we've now flooded two, three, four, or five floors. Is that happening?

Ms. Hazel Sutton: Do you mean whether they are taking those steps already?

Mr. Francis Drouin: Yes.

Ms. Hazel Sutton: Yes. They're more proactive. I would say that the larger the company, the more heavily invested it's become in its corporate social responsibility targets. Those companies, those large users—the Bentall Kennedys, the GWLs—are looking at these questions.

It is new, so people aren't sure yet where to get their information or how to conduct these impact studies, but the conversation is absolutely happening. They were a critical stakeholder in the development of this resilience brief. They care. They want to have assets that continue to increase in value. They don't want to have disaster strike their building and be harmful to the tenants. They're at the front of this conversation.

Mr. Francis Drouin: That's great.

[*Translation*]

Thank you.

[*English*]

That's it, Mr. Chair.

The Chair: Thank you very much.

To all of our witnesses, I want to thank you very much for being here, either via video conference or in person. Thank you for your recommendations, your advice and your observations.

I note that all of you have provided us with copies of your presentations. We will use those to form part of our final report. However, should you have additional recommendations or suggestions for our committee as we continue with our study, I would ask that you submit them, at your earliest convenience, to our clerk. They will additionally be part of our final report. Hopefully, you have heard some things today that might spark further recommendations coming from each of your organizations.

Once again, thank you all for being here.

Colleagues, the meeting is adjourned.

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