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Chair

Mr. James Maloney

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● (1105)

[*English*]

The Chair (Mr. James Maloney (Etobicoke—Lakeshore, Lib.)): Good morning, everybody. Welcome.

We have three witnesses for an hour and a half this morning. We are joined, through video conference, by Terry Young and Nik Schruder from the Independent Electricity System Operator. In the room with us is Mr. Brad White from SES Consulting; and at noon we will be joined by Bruce Rebel from the Association of Home Appliance Manufacturers Canada, who was here before. He did his presentation and then we got interrupted, so he's coming back to answer questions only. At 12:30 we're going to deal with some committee business.

On that note, the format is that each of your groups, gentlemen, will be given up to 10 minutes to do your presentation, which you can do in French and/or English. I suspect you'll be asked questions in both official languages. If you need the translation devices, they are available to you. Once all of the presentations are complete, we'll open the floor to questions from around the table.

Mr. White, you're here. Why don't you start us off?

Mr. White, I understand, has a three-slide PowerPoint, which is in English only, but it will be translated after and circulated.

If everyone is okay with that, we'll proceed on that basis. Are there any objections?

No? Okay.

Mr. White, go ahead, please.

Mr. Brad White (President, SES Consulting): Thank you very much.

Hello. It is a great pleasure and a real honour to have the opportunity to address the committee on this topic today.

First, I would like to tell you a little about our company. SES Consulting is based in Vancouver, and we have about 30 employees. We provide services around energy efficiency. Most of our work is engineering-related. We've been active in this business for about 13 years, in which time we've grown from a one-man operation into the thriving business we are today, with plans for continued growth and expansion. Our revenue growth over this time has averaged something in the order of 15% to 20% per year.

We're a bit of a different company in that in addition to the usual business metrics, we also set targets and track our performance in achieving GHG reductions for our clients. To date, we have participated directly in the reduction of over 20,000 tonnes of annual GHG emissions for our clients, and over the next 30 years our goal is to achieve cumulative reductions of one million tonnes.

The opportunity to play a role in the solution to climate change is integral to our corporate identity, and it's a key part of the reason that our employees choose to work for us. The focus of our work is primarily on existing buildings in the commercial and institutional sector across western Canada, with a small amount of work elsewhere in Canada and internationally. Our clients include universities, municipalities, health care organizations and commercial property owners. We count the University of Calgary, UBC, the City of Vancouver, Vancouver Coastal Health, and Telus among our active clients.

To give you a sense of the impact of some of our projects in existing buildings, I want to briefly highlight a couple of projects that I believe demonstrate that a revolution in energy efficiency in existing buildings is achievable—hence the slides.

The first project I want to highlight is the Vancity Savings Credit Union headquarters. We managed to achieve an overall emissions reduction of 76% in this building by essentially using the heat from the data centre in the building to heat the remainder of the building. This project had a six-year payback.

The next project I want to highlight is at the Vancouver General Hospital, in the Jim Pattison south pavilion. Here, we achieved an overall emissions reduction of greater than 2,000 tonnes annually—again, with a six-year payback—through the use of a technology called a heat recovery chiller.

The final project I want to highlight is 888 Dunsmuir, an office tower in downtown Vancouver. This building is on track to achieve a 38% emissions reduction and a five-year payback through updating the building control system and revising the building control strategies.

I'd also like to briefly highlight for the committee our work with the University of Calgary. They were the recipient of strategic infrastructure funding, and they're on track to achieve emissions reductions of over 24,000 tonnes, with anticipated cost savings of over $3 million per year and a payback under 10 years.

In terms of the economic impact of these projects, the cost of our engineering services is typically a small part—20% or less of the overall project cost. A portion of the remainder is equipment, but the largest component is usually made up of local trade labour—electricians, plumbers, programmers and HVAC technologists—who are responsible for doing the work in the buildings that achieve these savings. Our clients, in turn, benefit from the energy-cost reductions as well as other benefits in improved maintenance, and enhanced occupant satisfaction and marketability of their property.

There's no doubt that our work benefits enormously from long-standing government support for the energy efficiency sector in B.C. This support includes government and utility incentive programs, B.C.'s carbon tax and funding grants to public sector organizations for carbon reductions.

As you look at how you can provide greater support for energy efficiency at the federal level, the first recommendation I would have for the committee is to have consistent and reliable support. This is almost more important than what that support looks like. In the past, government efficiency programs have often fallen victim to changing political whims. Companies like ours invest a lot in aligning our services to help our clients take advantage of these programs, and it is hugely disruptive when they are suddenly cancelled, often with no warning. This perception of unreliability also makes it more difficult to plan for expansion and to have the confidence to invest in growing our business when we are uncertain as to what kind of support there will be.

Incentive programs, which can be quite effective, seem especially vulnerable to this. It may be desirable to also consider other forms of support that may be more durable—through the tax code, for example.

Second, while much of the focus of government support is on directly supporting energy efficiency projects, I believe one of the most important factors for the success of energy efficiency in B.C. is the presence of programs to support energy managers.

● (1110)

In B.C., both BC Hydro and FortisBC, which are our utilities, provide funding to support energy managers and energy specialists embedded within public and private sector organizations.

The presence of these energy managers is crucial as it creates an internal champion within these organizations to push efficiency projects forward. As this program has matured, we have seen these energy managers move up into senior leadership positions within their organizations, creating broader organizational change and further cementing support for energy efficiency.

When we work outside of B.C., where energy managers are much less common, we immediately notice the difference this makes. We find it much more difficult to get projects completed, even when the business case is extremely attractive.

Both UBC and BCIT have developed programs to support the training of these energy management professionals. These programs have been developed with the input and participation of firms like ours, which help to ensure that the course content is relevant to the real world. We end up hiring many of these program graduates ourselves.

Finally, in terms of regulation, one of the challenges with existing buildings is that they are very difficult to regulate. Stronger building codes—including approaches like the new step code in B.C.—are great tools for new buildings but are limited in how they can apply to existing buildings. Some approaches, like regulating equipment standards, can certainly be effective, but they don't necessarily do a good job of addressing the whole building performance.

Here though, we can look at other jurisdictions for examples of what has worked. One example I would like to draw to the committee's attention is Australia's NABERS program. This is a voluntary national labelling program for buildings that has gained widespread acceptance. It is referenced in state and local legislation there by, for example, requiring mandatory disclosure of energy performance to prospective tenants. Simply the act of making building energy performance transparent and allowing owners and the leasing market to understand where a building stands compared to its peers can be enough to motivate action around addressing efficiency. Australia reports that this initiative is responsible for reductions of over 800,000 tonnes of GHG emissions in the more than 10 years it has been active.

As an important side benefit, Australia has developed a very strong ecosystem of businesses and services to support this work. We now see their expertise being exported globally, with a surprising number of Australian companies in this space present in the North American market.

However, it is by no means too late for Canada and Canadian companies to establish ourselves as international leaders in efficiency. The challenge of making buildings—and existing buildings, in particular—more efficient is one that any country serious about tackling climate change is going to have to address. That represents an enormous market that is largely underserved—with a few exceptions like Australia. We even hear from many Europeans—who are often admired for their progressiveness in this area—that they, too, have tremendous untapped opportunity in their existing buildings.

In conclusion, I firmly believe that there's a tremendous economic opportunity in further developing Canada's energy efficiency sector not only in terms of the local impact that energy efficiency projects can have in supporting local investment and jobs and in reducing energy costs and emissions but also in the opportunity to export this expertise around the world.

Simply put, being leaders in developing practical solutions to climate change is good for business.

Thank you.

The Chair: Thanks, Mr. White.

Mr. Young.

Mr. Terry Young (Vice-President, Policy, Engagement and Innovation, Independent Electricity System Operator): Good morning. My name is Terry Young, and I'm the vice-president of policy, engagement and innovation at the Independent Electricity System Operator, or IESO.

I'm joined here by my colleague, Nik Schruder. Nik is the director of energy efficiency with the IESO.

Thanks for inviting us here today to speak to you about the economic benefits of energy efficiency. I want to touch upon our experience here in Ontario, designing and delivering energy efficiency programs, but first I want to tell you a bit about the IESO and what we do.

We were created by Ontario's Electricity Act. We're governed by an independent board of directors, and we have a broad mandate that includes planning to meet Ontario's electricity reliability needs in the near and longer term, operating the provincial electricity grid in coordination with our neighbours both here in Canada and in the United States, administering the roughly $17-billion electricity market, engaging with stakeholders and communities across the province, and overseeing Ontario's energy efficiency efforts.

At its core, our mandate is about ensuring the reliability of Ontario's electricity system at the lowest cost to consumers, and energy efficiency plays an important role in meeting our electricity system needs.

Energy efficiency goes beyond lowering electricity bills. It's the most cost-effective resource in Ontario, and it can be used to help offset changes in the demand for electricity on the system, whether it's at a local, regional or bulk electricity system level. In fact, every dollar invested in energy efficiency avoids three dollars in investments in new transmission and distribution infrastructure. It also adds to the Ontario workforce and strengthens our local economy.

I'll draw your attention to a recent report prepared by Dunsky Consulting for Clean Energy Canada, which indicated that in Ontario the implementation of energy efficiency actions through the pan-Canadian framework will add an average of 52,000 jobs and $12.5 billion annually between 2017 and 2030. I believe Efficiency Canada presented to the committee several weeks ago and probably spoke about this report.

Looking more closely at our own progress, in 2017 we invested approximately $100 million in customer incentives to support Ontario businesses becoming more energy efficient. We also leveraged an additional $250 million in capital investments from customers.

Ontario is recognized as a leader for its achievement and commitment to energy efficiency. We've grown our success through a suite of programs available to residents, indigenous communities, small business and large industry. These “save on energy” programs ensure that all who are interested have an opportunity to participate.

These successes cannot be achieved, though, without partnership. Our partners help us promote, monitor, plan and invest in energy efficiency. We oversee and deliver programs alongside the various local distribution companies across the province, as well as our local service providers.

With the help of our partners, since 2015 the programs have saved 5.2 terawatt hours, which is equivalent to powering 570,000 homes for one year. These savings are a result of supporting over 90,000 energy efficiency projects in business and industrial facilities right across Ontario and influencing over 60 million energy efficiency products being purchased from Ontario retailers.

Our programs help achieve these results by offering rebates on equipment upgrades, providing opportunities for businesses to understand their energy use through audits, and supporting training and education initiatives that strengthen energy knowledge and management.

I want to echo Mr. White's comments on energy managers. I'm particularly proud of our energy manager program, which provides funding for Ontario businesses to hire qualified, full-time energy managers to help them identify strategic energy investments and secure financial incentives for projects and upgrades. Since 2015 we've funded over 110 energy managers, who have contributed to over 430 megawatt hours of energy savings for their facilities. The electricity savings that result from the programs produce cost savings, but have also been proven to strengthen operational efficiencies and improve corporate culture.

KI Canada, furniture manufacturers in Pembroke, Ontario, faced the challenge of keeping their full-time production technicians employed. In 2013 they set a goal to lower their energy use by 10%. By embracing efficiencies, they were able to surpass their goal and reduce their use by 30%, totalling $300,000 in savings. In the years following they achieved even greater reductions, equalling millions in savings.

● (1115)

Their success was realized by making improvements to their operations and equipment through save on energy programs and by creating a behavioural shift in the workforce. By embracing energy efficiency, they ignited a change in employee culture, which helped keep energy savings top of mind. More success stories like this can be found on our website, saveonenergy.ca. I would encourage you to explore some of those case studies.

Programs are also available for transmission-connected customers, to help them fast-track capital investment in major energy savings projects and receive funding for a full-time on-site energy manager.

Last week I had the opportunity to visit Lake Shore Gold mine in northern Ontario, just outside of Timmins. The mine receives funding through the IESO for a full-time energy manager at the facility. On-site energy managers help organizations better understand how they use energy in their day-to-day operations and how they can incorporate efficiencies to improve operations and save.

At Lake Shore Gold, the mine's energy manager uncovered efficiencies big and small, from making the switch to LEDs to helping reduce the energy consumption of their equipment, and through the efficiencies implemented by their energy manager, Lake Shore Gold was able to decrease the energy consumption of the mine's largest on-site motor.

I should note that all energy savings are independently verified by third party evaluation contractors, in accordance with the IESO's evaluation, measurement and verification protocols, and represent net verified savings. Put more simply, they are energy savings that occurred as a direct result of the program intervention.

When I look ahead to the future of energy efficiency, armed with the many lessons learned through our experience in recent years, I see a couple of areas of focus for us.

One relates to our program delivery model, moving away from prescriptive programs toward more flexible programs, with more options for customers to choose how they achieve energy savings, with a reduced administration. A successful example of this was the award-winning pay for performance program that we launched in 2016. It was one of the first pay for performance programs in North America.

The program sets a baseline of energy use against which future reductions were compared. It was up to the customer whether they achieved energy efficiency savings through more efficient HVAC systems, improved lighting or some other efficiency upgrades that made sense for their business. In turn, participants are compensated for their efforts by being paid four cents for each kilowatt hour of verified savings each year, for up to four years. A less prescriptive approach is simpler and more efficient, and it gives customers more choice and encourages innovation.

Another area of focus for us is seeing how energy efficiency can compete against other resources, like generators, in the future. Ontario, as you may know, is currently in the process of changing how we acquire electricity resources, developing what is known as a capacity auction. We want to explore how to allow energy efficiency to participate and compete against other resources in these future capacity auctions. It's been done successfully in other jurisdictions, so there is some precedence. We'll be looking for insights there as we try to implement this in Ontario.

As the body responsible for electricity planning in Ontario, we want to ensure that conservation continues to help reduce costs in the electricity system, by deferring the need for new investments in generation or other electricity infrastructure. This includes focusing future initiatives on reducing peak electricity demand. Electricity systems are built to make sure you have enough electricity to meet that peak demand. This is where energy efficiency can help reduce overall system costs by targeting programs for those peak periods.

We also want to continue exploring the ability of energy efficiency to meet local needs. For example, if we see electricity demand rising in a specific area of the province, whether due to new mines in the north or new greenhouses in the southwest, the local infrastructure may not be able to meet that new demand. It may require new transmission lines or distribution systems to bring in more power or new generation. Energy efficiency gives us another cost-effective option. We can work with those communities to see how energy efficiency can help offset that increased demand and reduce the need to build new infrastructure, or in some cases just buy us more time.

● (1120)

To wrap up my remarks, we've had a lot of success in Ontario with energy efficiency. I'm proud of the employees at the IESO for all the hard work we've done to help communities, businesses and the province at large benefit from energy efficiency. We'll continue to build on that success and evolve how we consider energy efficiency in managing the reliability of Ontario's electricity system at the lowest cost. That includes transforming the market, being less prescriptive, introducing more competition, and shifting to defining the need and letting the market determine how best to meet that need.

Nick and I are pleased to answer any questions you may have. Thanks again for this opportunity.

The Chair: Thank you, Mr. Young. This committee actually talked at some length about coming to visit you. We almost made it last spring but it didn't quite work out, so we're very glad you're here today.

Mr. Harvey, you're going to start us off.

● (1125)

Mr. T.J. Harvey (Tobique—Mactaquac, Lib.): I'm going to start off by thanking everybody for being here. I want to start with our presenters over video conference, and then I'll move to you, Mr. White.

You spent quite a bit of time talking about energy efficiency as it pertains to small and medium-sized businesses and industry, and how program delivery can affect the rate at which or the uptake at which businesses choose to invest in innovation in order to further their energy efficiency.

You talked about a more variable program delivery model as opposed to a more stringent model. I'm wondering how you feel. Traditionally, I come from business, and if it has a payback for business, business itself will uptake it. I'm more concerned with the ability for households to take advantage of opportunities that will allow them to become more energy efficient than small businesses, because as somebody who's been a small business owner, I would be more likely to take advantage of those opportunities if it were going to save my business money, regardless of whether or not you were going to pay me back four cents a megawatt hour, or whatever term you used. I'm just wondering if you think that further investment in helping businesses become more energy efficient is the best way to spend taxpayers' money, or if that money could be better allocated to households.

Mr. Terry Young: I would suggest to you that both have reached a level of maturity. I think what we've seen, particularly on the residential side, is a significant uptake on LED lighting, so improved lighting. We are getting that. In the businesses, I absolutely agree with you that, as a business owner, you're looking for ways to reduce your costs. Improvements in energy efficiency can do that, and so there are more business cases for that.

In both cases, the residential and the business side, the market has matured and the awareness of the benefits of these programs, or opportunities if you will, is such that we can start to look again at the level of investment that's required, and start to rely on the market more and the business opportunity more to drive some of this funding.

Through our efforts in Ontario over the last decade or so, we've certainly demonstrated the case, and we've certainly demonstrated the opportunity, and we've certainly demonstrated the savings that are there. That being the case, I think the market is in a position to respond more now.They don't need that level of incentive, or that level, as I mentioned, of those kinds of designed programs, that full suite. They see the opportunity.

Customers have become way more creative, way more innovative in terms of being able to take advantage of opportunities that are there. That's why we like so much the pay-for-performance program. We're not saying they have to do this, or they have to do that, or they have to do this, we're saying there's an opportunity here. At four cents a kilowatt hour, it very much competes with others. As I mentioned, it's the most cost-effective resource we have, so it can compete with other resources. But if we can also find a way to reduce our level of costs in this, that's what we're trying to do as well.

Mr. T.J. Harvey: That was my point, the four-cent payback on the energy efficiency. I'm just wondering; isn't the incentive to become more energy efficient saving energy? Have we not reached a point where businesses especially, but also maybe households as you indicated, are taking up this idea enough that we don't need to supplement them with taxpayers' money to achieve the outcome as we did when we originally started?

Mr. Terry Young: I suggest that we don't need to supplement to the extent that we have been. We have been continuing to reduce the level of incentives. We're continuing to look at this. When we look at the programs that we have in the field.... We look at free ridership all the time and determine whether or not incentives are needed. In some programs and some areas we think incentives are still needed to encourage people to do that. You see that particularly in large businesses where there is a relatively major investment needed. But in the programs we are providing, we insist that businesses and industry of all sizes are making their own investment as well.

Can we continue to pull back on this? I believe we can, and as we go forward, we want to see energy efficiency compete as a resource and actually be competitive with other types of resources.

I mentioned the capacity auction that we're introducing. I want to be able to be in a position where we're looking at energy efficiency as one of those resources that can compete. We believe that customers have the ability to do things provided there is that right level of help, if you will. But I would say that with the maturity we're seeing, both in the market and in those who are providing these products and services, and with the understanding that customers have, the level of support needed will continue to decline.

● (1130)

Mr. T.J. Harvey: Mr. White, what are your thoughts on this?

Mr. Brad White: I would disagree somewhat with the notion that businesses will do it anyway because it's a good opportunity. There are a bunch of restrictions in the system. Some businesses, especially small businesses, can make easy decisions like that. We notice, especially with some large organizations, a lot of barriers within the organization, the first one being not knowing what the opportunities are. They may very well have fantastic opportunities to save energy, but they're completely ignorant as to what those opportunities are. In order to find out where the opportunities are, you need to do an energy audit; you need to do a benchmarking study. You're talking $5,000, $10,000, or $20,000 for a study. That's the initial hump to get over.

I firmly believe that offering incentives and supports around that audit piece or that identification piece.... I think there can be a lot of research and development that actually brings the cost of that way down through data analytics and optimization. Those sorts of things are on the horizon for the next five years, but right now, the first barrier to get over is helping business owners and building owners identify what the opportunities are.

Even then, once you do that, there are some further barriers. Sometimes you're fighting for limited maintenance budgets. You may say, “Hey, you can spend $100,000 and get a five-year payback”, but they have that $100,000 earmarked for a new roof, and they don't have it to spend on a new building control system or new pumps. So maybe there's a financing piece that could help.

The Chair: I'm going to have to interrupt you and stop you there. We have to move on.

Mr. Schmale.

Mr. Jamie Schmale (Haliburton—Kawartha Lakes—Brock, CPC): Actually, if you want to finish your thought, that will segue to my question.

Mr. Brad White: Sure. Very quickly I'll say that for things like a two-year payback, if it's a really, really obvious opportunity, it's very easy without any incentive. Once you get into the eight- or nine-year range, we find that gives a lot of businesses pause, and if incentives can bring that down to five, six or seven years, in our experience that has made a big difference, in terms of making those products something they want to invest in.

Mr. Jamie Schmale: The question is about the incentives. Obviously someone has to pay for these incentives somehow. What are your thoughts on that?

Mr. Brad White: There are different ways. In B.C., most of the incentives we have are utility-based, so ultimately it's the ratepayers who pay for those incentives, the argument being similar to the one the gentlemen joining us made, that it's often cheaper to buy energy efficiency through incentives than it is to put up a new power plant, or, as in our case in B.C., a new dam.

It makes sense from that point of view. I think the economics overall can make a lot of sense.

In terms of government incentives, if, as a society, we've decided there is value in reducing carbon emissions, then there's a cost that comes with that. If there's an intrinsic value in reducing those emissions, then I think some level of government support is appropriate.

Certainly, other industries benefit from support, in terms of tax incentives, investment tax credits, and things like that. I don't see any reason that the energy efficiency industry should be any different, given the tremendous local benefits to the Canadian economy.

Mr. Jamie Schmale: You mentioned businesses sometimes not having the capacity to take those steps forward. I would counter by saying that if a business wants to continue to be competitive in this environment, and energy savings are one way to achieve that, would they not for the most part.... Whether it be the chamber of commerce circle or the board of trade conversations taking place about energy efficiency, would this be a wider conversation rather than ones in isolated silos?

● (1135)

Mr. Brad White: Certainly, I think that's the case. I think it's a matter of expediency. By incenting things like energy managers, I think you speed up that cycle greatly. To allow those conversations to take place naturally and to develop in the market with their own momentum.... Businesses, especially large businesses, do move and change quite slowly. You could be talking about five or 10 years before that level of awareness percolates up naturally. I think you can accelerate that process by providing direct support for champions within these organizations.

Some organizations may develop that naturally, but I think we can kind of grease the wheels and make things move along quite a bit faster by providing that sort of direct support.

Mr. Jamie Schmale: You probably heard the news about the Oshawa General Motors plant closing. I had a conversation with the president about that. He said that he pays about $60 million per year for hydro. That's 75% more than he pays for his power in Texas. For a business, that is a massive amount of savings.

Had they decided that this market was competitive, I would assume General Motors would be saying, “Let's move down this path quickly,” or the price to do that would be so disproportionate that they might say, “Ontario's not a competitive place to do business.”

Mr. Brad White: As I said, my experience is in mainly the commercial and institutional sectors. It tends to be with municipalities, universities and commercial office buildings, which are less easy to relocate than is a manufacturing facility. I could certainly see how that would play a role in business decisions though. There's no question.

Mr. Jamie Schmale: I do want to ask you about the Australian model, which I think is very interesting. I think some homeowners are doing it already, showing their hydro bills and gas bills, and saying what their energy efficiency is. I agree it's a good way of showing people, because if one office building is terrible and one is better, I think that might....

Mr. Brad White: In terms of market theory, making information transparent helps people make better decisions in a marketplace. I think that's one piece of information that's not always transparent right now. I think that bringing some of that energy performance data to the light of day and making it something that's easy to access provides a natural incentive to improve that performance.

If I'm a tenant looking to lease office space and there is one building with terrible energy performance and one with great performance, that may be enough to make the decision in terms of my lease, because often those costs are passed directly to the tenants anyway.

Mr. Jamie Schmale: In Australia—I believe they have states in Australia—would that be a state decision, or would that be a federal jurisdiction? How would that work?

Mr. Brad White: The labelling program is a federal initiative, I believe, but states and local governments reference it in their legislation. I'm not an Australian policy expert, so I don't know all the ins and outs of how they've used the program. I do know that they report that about 82% of the office buildings in Australia are part of the program now. It is voluntary, but I think there is some specific state and local legislation that does reference it, which makes providing energy information to tenants, for example, mandatory. Using their national labelling system is one way they can do that.

Mr. Jamie Schmale: Will there be time for another round?

The Chair: Yes.

Mr. Jamie Schmale: Okay.

Maybe I'll save my folks from Ontario for the next round and continue with Mr. White here.

In your company, obviously you have energy managers, as I believe you call them, and you say that has worked very well in British Columbia. You said that when you cross provincial borders, in some cases you notice the difference right away.

What recommendations or what advice do you have for other provinces that may be looking to incorporate that, or other businesses looking to include that kind of model?

● (1140)

Mr. Brad White: I was very happy to hear the gentlemen from Ontario, the Independent Electricity System Operator, say they are supporting a similar program here in Ontario.

I think the model we have in B.C., quite frankly, works quite well. The utilities basically pay part of the salary of these energy managers embedded within organizations, and in return, they ask for a certain performance in terms of energy reductions. They're expecting to see those energy managers generate incentives that are equivalent to their salary. For ineffectual energy managers, the funding is cut off after a year or two, and they don't continue in their position; and ones who are very successful in finding energy reductions for their organizations get to keep their jobs and keep doing that. As I've said, we've seen some of those folks then move into more senior positions, whether in operations or different parts of those organizations. And having people with that kind of training in those positions, I think, is a really great way to catalyze organizational change on a broader level, and it gets the whole organization thinking about that rather than just one energy manager soldiering alone.

The Chair: Great. I'll have to stop you there.

Mr. Cannings.

Mr. Richard Cannings (South Okanagan—West Kootenay, NDP): Thank you all for being here before us. I'm going to start with Mr. White and pick up on that energy manager theme.

You mentioned that UBC and BCIT train energy managers. In your company, I assume you hire people with that kind of expertise. I imagine you hire other sorts of engineers and technicians.

We've been hearing from other witnesses that this sort of training is very much needed in Canada. I just wonder if you can comment on that, the need for training for all sorts of levels of energy efficiency, for experts, be they just tradespeople or engineers or managers.

Mr. Brad White: Certainly. Yes, we don't hire exclusively from programs like that out of UBC and BCIT, but I actually would say the majority of our staff do come through those programs. We tend to hire new graduates for the simple reason that there are not a lot of people with experience in the job market who have the right kind of experience that we're looking for.

I would say, though, that the greatest need is at the trades level, and that is where we often find there's a skills gap. I would say the other aspect is the building operators, the staff who are in the buildings responsible for day-to-day operations. Very often, they will have a trades background, sometimes even a janitorial background. They're expected to come into a modern building with a computerized control system with maybe embedded data analytics, and they simply don't have the skills needed to manage those systems effectively.

Again I'll point to BCIT. It has launched some programs around these sophisticated systems. The British Columbia Institute of Technology does a lot of trades training. They have programs around building control systems. Some of our staff instruct in the course and help teach the next generation of technicians how to use these systems. But that's one program, and we probably need a dozen or more programs like that across the country.

Mr. Richard Cannings: Have you ever run into anybody from the sustainable building management program from Okanagan College?

Mr. Brad White: Yes.

Mr. Richard Cannings: You also mentioned the step code in British Columbia. I just wonder if you could expand on that. If other provinces had such a program, how might that change things in energy efficiency?

Mr. Brad White: I've done some committee work with the Standards Association to support some of the codes and standards that back up the step codes. I think it will do great things for energy efficiency. Unfortunately, I see it as a tool mainly for new buildings and new construction. It's less applicable to existing buildings, simply because existing buildings don't trigger code reviews very often unless they're doing a major renovation. I think it's an important tool in the tool kit, and I would certainly think that other provinces could adopt B.C.'s model.

I like that it provides an incentive. It's not saying you have to adopt this higher level of energy performance, but if you do so, municipalities will provide certain incentives that make it worth your while.

Existing buildings, which, as you know, make up the majority of our building stock, are much more challenging, which is why I said I tend to look at data transparency. It is actually a better regulatory tool than are energy codes.

● (1145)

Mr. Richard Cannings: I'll turn to the folks from IESO in Ontario.

Talking about incentives again, I think we've all been mentioning those, and I'm just wondering if you could expand on those incentives. What do you have for homeowners versus companies and commercial operations, and where does that money come from? I've heard that one of the incentives for retrofits for one of those programs in Ontario has been cancelled. Mr. White mentioned how difficult that is for companies like his or for companies that are actually doing the retrofits.

I hear from the building association about the difficulties they face when those are cancelled. I just wonder if you could comment on that and on how we could best incentivize both homeowners and commercial operations to do this.

Mr. Terry Young: I would maybe expand a bit on Mr. White's comments with respect to energy managers.

We do see this as really one of the keys to driving energy efficiency in businesses and industries. As I mentioned, we're funding over 110 energy managers. In doing so, I like to think of these energy managers as earning their job every day. They are working with senior managers. They're working with the line in the industry. I talked about going up to Lake Shore Gold last week and sitting down with the energy managers.

What we're trying to do through this—again, maybe expanding on a theme I heard earlier this morning too—is around awareness and making people and businesses aware of some of the successes they have. Each year, we recognize the successes we've had in energy managers, and we're going to continue to do that this year.

With respect to incentives, you also see a portion of their targets that are both incented and non-incented. Again, these are results that they're not being incented to achieve. While I agree that we do need some level of incentive, we should always be looking at what the appropriate level of incentive is.

With respect to the programs we have in place—I'll ask my colleague Mr. Schruder to speak to some of these—we have about a dozen province-wide programs plus the 65 or so local distribution companies that they have. Some of those have also put in programs of their own to drive savings that may be particular to their area of the province.

Mr. Nik Schruder (Director, Energy Efficiency, Independent Electricity System Operator): On the residential file, our main program is our heating and cooling program, our HVAC program. We've also been having an online retailer program, through which people come in and have an instant discount on some of their energy efficiency products. For small businesses, we actually have a direct install program. We'll go directly into the small businesses and install some of the efficient lighting and efficient refrigeration. A lot of these are mom-and-pop stores. They just don't have the time to be the energy manager and be the HR representative and finish the payroll.

In terms of businesses, our flagship program is our retrofit program. We pay a portion of the project cost, whether that be on prescriptive measures or large custom projects. We also have audit funding programs, as I mentioned. We fund audits so they can understand where they should better utilize their dollars and on which projects.

Finally, we have a large industrial program focused on large industrial process and system improvements. It can also get into lighting, but a lot of these are larger projects, such as combined heat and power projects that take multiple years to complete.

We have a suite of these programs. These programs are all funded through the electricity ratepayer. Right now, they're all funded through our global adjustment fund.

Mr. Terry Young: As I mentioned, as we look at funding this, what we've seen is that—

The Chair: I'm going to have to interrupt you there. I'm sorry. We've run out of time. We're going to have to move on to the next question.

I think Mr. Serré will go next and then we'll suspend for a couple of minutes while the next witness comes in. We can carry on with the questions after that and do a complete second round.

● (1150)

Mr. Marc Serré (Nickel Belt, Lib.): Thank you, Mr. Chair.

Thank you, witnesses.

I have a question for Mr. White, but I'm just a bit surprised, Mr. Young, by your comment that it's reached maturity on the business and residential. That's not what we're hearing from Loblaw, which came to testify, or from Mr. White.

I want to understand a bit more, but before I get to that question, I want to understand from both of you how we can expand the issue with the energy manager program. What we're hearing about audits is that companies don't have the dollars to do the audits. Either companies don't have the necessary capital itself or the education and awareness are not out there.

I want to know what the recommendations would be in order to expand that energy manager program so that companies could more often have someone to work with on the audit side, on access to capital and on the education side.

Mr. White.

Mr. Brad White: I think there are a few ways that could be approached.

The traditional energy audits tend to be fairly intense undertakings, especially the ones that are usually funded by utility programs. These will often be $5,000, $10,000 or $20,000 studies. They require a significant amount of effort and there are only so many trained auditors in the country. Our firm is probably one of the largest, certainly in western Canada, that is dedicated to that, and we're just 30 people. There's a limit to how many buildings even we can audit.

I actually think there's a technology solution to that portion of the problem, where greater investment in data analytics.... For the utilities, we look at ways that we can do lighter-touch audits, where we come in and do walk-through audits or something with much less effort. In our experience, if you have someone who really knows buildings well, you actually can get 75% of the value with 20% of the effort, for example. I think that's a way to scale the amount of work that can be done.

The first barrier is just identifying what the opportunities are. Doing that effectively, quickly and inexpensively is going to be one way to scale the impact.

In terms of the energy manager program, it's really just incentives—whether through utility programs or other programs, or maybe some tax credits that are possible—for organizations to hire these energy managers and for them to understand what the value is. I'm not sure what the mechanism is, but just get those people into medium to large organizations. Not every mom-and-pop shop needs an energy manager, but once you're of a certain size, it absolutely makes sense.

Mr. Marc Serré: Mr. Young.

Mr. Terry Young: I want to clarify my comments on the maturity level.

I was intending to say that we're reaching that level of maturity where we don't need the prescriptive programs that we've had in the past. You're seeing a customer awareness of some of the opportunities that are there, and they want more choice in terms of getting those results. As we reach that, I think we can continue to look at both the number of programs and the level of investment that are required.

I'm not suggesting that we should exit this business at this point in time. I'm suggesting that we can continue to look at this business and try to drive down costs. In particular, try to drive down some of those costs associated with administering this program.

You mentioned Loblaw. Mark Schembri is one of the brightest minds in this. Their organization has done a heck of a lot to become more energy efficient. Mark doesn't need that level of support. He knows what they can do and he has been able to do that. That's what I mean with respect to that level of maturity.

I also think that on the energy manager program...is that driving that awareness? While there are some businesses that may be too small to have an energy manager on their own, as they work with others in that business, they may be able to take advantage of an energy manager who would actually be applied to that sector and who could look for opportunities to improve their efficiency.

● (1155)

Mr. Marc Serré: Thank you.

Mr. White, you talked about stronger building codes. We heard from the Construction Association, a month or so ago that that was a no-no; the sky's going to fall. It's going to cost a lot of money. It was very negative from an economic perspective. I just want to better understand why you say that changing the building codes will have a better business outcome for many of the businesses that are thinking of upgrading or changing to be more efficient. I want to get your thoughts on that.

Mr. Brad White: Maybe I should clarify my comments. Really what I was intending to say is that building codes do get thrown around a lot, in some respects, as a good regulatory mechanism. Obviously, that opinion is not shared. The point I really wanted to make is that, actually, for existing buildings, building codes do very little, because you don't trigger code reviews in an existing building very often, unless you're doing a major renovation.

Given that 75% plus of what will be the building stock over the next 30 years exists today, building codes, while they're a tool to address new construction, are not necessarily going to do very much in terms of the vast majority of buildings that are out there. I would recommend other policy tools. Building codes get a lot of attention and I think they're an important forward-looking mechanism, but in terms of tackling the problem we have today, I don't think we should put too much emphasis on how much difference they're going to make.

I do think it's important for building codes.... They set a floor on the market. The way I always look at incentives is that they are really great for enticing the leaders in the market, but you need some regulatory sticks to compel some of the laggards to do the right thing. I think that's where building codes can come in, but as I said, certainly for existing buildings—which is where I spend the vast majority of my time—building codes aren't going to make much of a difference at all.

The Chair: We're going to have to stop there.

Mr. White, you'll stay with us, and if Mr. Young and Mr. Schruder will indulge us for a couple of minutes, we're going to resume in about three to four minutes, probably, when the next witness gets here.

We'll suspend for a couple of minutes and then start.

● (1155)

(Pause)

● (1200)

The Chair: We're going to resume.

Mr. Rebel, thank you very much for coming back. I appreciate you taking the time to come back and answer a few questions.

We had suspended for a few minutes pending your arrival, and we're going to turn the floor over to Mr. Schmale right now for five minutes.

Mr. Jamie Schmale: Does he not get 10 minutes?

The Chair: No, he's already done a presentation once before.

Mr. Jamie Schmale: Okay. Perfect.

Thank you, everyone. I'll start with my friends from Ontario.

Gentlemen, picking up from what Marc Serré was talking about, I'm just going through a bunch of articles here. One says, “Ottawa's SunTech Greenhouse shuts off million-dollar lighting system...”. Gone.

One says that the Kingsville greenhouse is expanding outside of Ontario, and that was on November 28, 2016.

On March 23, 2017, the government announced $19 million to help keep Ontario greenhouses in Ontario.

I'm assuming that was paid from the global adjustment fund, or was it through another fund?

Mr. Terry Young: I have no awareness of that arrangement; I apologize for that. I'm not up to speed on that one.

● (1205)

Mr. Jamie Schmale: That's okay.

On your energy manager issues, according to the article I am reading now, Ontario, between 2003 and 2014, eliminated about 7,500 kilowatt hours of energy, but it added almost 14,000 of capacity, and during that time, bills rose by 80%. We know that.

Is that correct so far?

Mr. Terry Young: I don't have the article, but yes, it's true that their demand did drop. The increase in demand that was projected did not emerge. If you look at the statistics, you'll see both a lower peak demand as well as a lower overall energy use, if you will, than we had in 2006.

Mr. Jamie Schmale: During that time, Ontario lost about 300,000 manufacturing jobs. Given the news we heard in Oshawa regarding the General Motors plant, given that they pay about $15 million in energy and taxes—they pay $16 million in Ontario for energy, so they would be a company that would be big enough to hire an energy auditor—and given that companies are choosing to leave before they even get an energy auditor, should we not be looking at ways to reduce the price of hydro before many more decide Ontario is just not a competitive place to do business?

Mr. Terry Young: As you may be aware, since June the government in Ontario has taken a number of steps to reduce the cost of electricity. A number of wind and solar contracts were cancelled. There have been a number of steps.

I had the opportunity to listen to the Minister of Energy, Northern Development and Mines speak yesterday about some of this. Yes, I think we're seeing Ontario take steps to reduce the cost of electricity now.

With respect to some of the things we're doing in energy efficiency, there is the opportunity to continue to look at ways of reducing costs of electricity, not just for customers who are participating today but also for tomorrow. As I mentioned, for every dollar we invest in energy efficiency, we're avoiding $3 of future infrastructure cost. We are reducing that demand for electricity not just today but for tomorrow as well. We are, in the most cost-effective way possible, looking for ways of meeting future demands.

Mr. Jamie Schmale: I understand that it's not your fault that Ontario has some of the highest energy rates in North America. You're just sitting in front of me and you happen to be the lucky people I get to ask these questions to. I do apologize.

Just for those who may be listening at home, can you tell me, as you are lowering these prices—which, I agree, is a good thing to do—how the global adjustment fund is paid? Who funds that?

The Chair: You'll have to answer very quickly.

Mr. Terry Young: The global adjustment is a component of the electricity cost. The people who pay electricity bills in Ontario are also paying that global adjustment. The global adjustment was set up a number of years ago. It covers certain fixed costs. If you're paying a fixed cost for a particular source of generation that may be over and above what the market price is or the hourly price is, the cost of that contract is recovered through the global adjustment.

The Chair: Thank you. We'll have to move on.

Mr. Hehr.

Hon. Kent Hehr (Calgary Centre, Lib.): Thanks, Mr. Chair.

Thank you very much for the opportunity to ask questions to these very esteemed guests who have come to chat with us today.

I would like to start with Mr. White.

Mr. White, in your introduction you were noting the many things that in your view have made your business a success, including not only the creative people who are working with you, but also the timing of the thoughts and ideas around energy reduction in B.C. You also said one of those things was that B.C. was putting a price on pollution.

I would like you to expand on that and tell me how a price on pollution could make your business more successful and make other businesses more energy-efficient and reliable.

● (1210)

Mr. Brad White: Thank you.

I assume you're referring to the B.C. carbon tax in your question.

Really, the impact the carbon tax has had is.... Our electricity is largely carbon-free in B.C. It's a very small footprint. With natural gas, obviously, it's much more significant. For the last almost 10 years now, the natural gas prices have been extremely low.

What we've seen, effectively, is that the carbon tax has added a couple of bucks per gigajoule to the price of natural gas. That comes back into the business cases for the energy efficiency projects. Projects that otherwise would have had a 10-year payback might have a six- or seven-year payback now because of the carbon tax. That makes it something that businesses want to invest in bringing down. Really, it's all about the business case and improving the business case for investing in efficiency. That way, it's a market signal that, I would say, incents investment in energy efficiency. Then more efficiency projects happen. Of course, that creates more business for us, indirectly.

Hon. Kent Hehr: Has that also brought more awareness to your average customer, the fact that there is a price on carbon? Has that signalled to them that, “Hey, we're serious about climate change and we have to do something about it in that regard”?

Mr. Brad White: I certainly think it does.

It's interesting. One thing I've noticed just in the last year or two with our customers is that, previously there was very much a focus on energy costs, but more recently.... We have two or three major clients, both public sector and private sector, who report that the main driver for them investing in efficiency is carbon reduction. They are doing it for the carbon....

Part of that is the City of Vancouver setting up a zero-emission building strategy. There are a bunch of different ways that government has taken some leadership in the sector. I think some of that is now filtering down to public sector organizations and private sector organizations.

We hear from our clients, “We want to reduce carbon. That is our primary goal.” Obviously, the energy savings are a benefit, and the projects have to make sense from an investment point of view, but they're really looking for those carbon savings.

Hon. Kent Hehr: At the end of the day, they're saying that climate change is real and that they, as a business, have an obligation to be part of the reduction in carbon and to try to lead to a better way, not only of doing business but also of leading the planet.

Mr. Brad White: That's certainly fair for some of our clients. Not all, but some definitely have that view.

Hon. Kent Hehr: I'd like to ask this of my friends from the Independent Electricity System Operator: Is that the same sort of sentiment you're finding with people who use your organization? Are they coming in from both an economic perspective and also, for lack of a better term, a moral imperative to reduce carbon, given global warming?

Mr. Terry Young: I would suggest a couple of things. Generally speaking, it's very much focused on electricity and energy efficiency. We run the province's electricity grid.

I would note that the grid we operate was essentially 96% carbon-free in 2017. Of the electricity sources we relied on in 2017, 96% were not emitting carbon. So we have a clean system here.

The programs we are operating are focused on electricity measures.

Hon. Kent Hehr: Are all businesses in Ontario allowed to take part in your program? Or are there certain distinctions and certain levels that you have to achieve to become eligible to take part in what you—

Mr. Terry Young: No. All businesses are eligible to participate. In the programs we offer, we look for an investment from the business itself. I mentioned the level of investment we provide, but there's a greater level of investment, cumulatively, that businesses would make to be part of this program, as well.

We're well aware of the need for businesses, industries and even residents to, themselves, commit some level of investment, to participate in our programs.

● (1215)

The Chair: I'm going to have to stop you there.

Mr. Schmale, we'll go back to you for five minutes.

Mr. Jamie Schmale: Thank you very much, Chair. I appreciate the opportunity.

Bruce, I'll have a question for you in a moment. I just want to get back to Mr. White.

We were talking about British Columbia and the carbon tax that Mr. Hehr brought up. Now, there was an article out today saying that B.C. has dropped to 58th in the global investment rankings. Alberta has dropped from 14th to 43rd place. The article cites numerous factors—taxes, regulatory burdens, etc.—but one that was in both was high energy costs.

Now again, you are in a unique position, such that companies that have the ability to pay for your services are paying for your services. Given the fact that energy costs are, as I pointed out in my previous line of questioning, destroying the manufacturing sector in Ontario—despite the carbon tax in B.C., emissions still went up—how are we continuing to keep investment here in this country if energy, according to this article and according to the article I talked about before, is pushing people out, and they're not even bothering to do energy audits?

Mr. Brad White: I'm not sure, as a small business owner, that I'm necessarily in a great position to answer that question.

Certainly within the context of energy efficiency, that is an incentive for energy efficiency. There's a larger question obviously. Your point is more about total energy costs. It remains that because the B.C. grid—and it sounds as if the one in Ontario as well—is largely carbon-free. One thing I would mention is that the cost of energy is rising for a lot of reasons that are not related to carbon tax.

I would say the majority is not carbon tax-related, because as I said, despite the carbon tax, gas costs much less today in B.C. than it did in 2008, for example, prior to the last recession. It was up to $15 or $16 a gigajoule. The price of gas today for most commercial customers is, even with the carbon tax, $7 or $8 a gigajoule, much less than before. That's simply an issue of supply and demand.

There are a lot of fluctuations that are, as I said, not related. The price of electricity has gone up quite significantly, and it's largely carbon-free. I think it would be a mistake to kind of pin a lot of this on the carbon tax.

Mr. Jamie Schmale: Never pin it all on the carbon tax. I'm just saying it's bad government policy, especially when LNG in British Columbia is exempt from the carbon tax.

Mr. Brad White: The rise in emissions, I think, is largely industrial and from the production of natural gas. There are things that are outside of the context of the conversation around energy efficiency, I would say. There are a lot of other issues that need to be looked at under a broader lens that are not related to energy efficiency, and obviously they play a role.

Mr. Jamie Schmale: I guess one of my points, through all of this, is that government is driving up the cost of energy through whatever policies; and to kind of fix the problem, it is coming up with another program to help incentivize to save energy, but businesses could be doing that anyway. However, those that can't, or those that believe the gap is too big, are just leaving altogether—as in the greenhouse example.

I'll leave that with you.

● (1220)

The Chair: You have 30 seconds if you want to ask Mr. Rebel a question.

Mr. Jamie Schmale: Mr. Rebel, since you came all this way, I'll go to you.

You were talking last time you were here about the tariffs on aluminum and steel still hurting your industry. Obviously, you're paying more for material, or your industry is paying more, and that's being passed on to your consumers as a direct cost or it's hurting the volume of business you're doing entirely.

Mr. Bruce Rebel (Vice-President and General Manager, Association of Home Appliance Manufacturers Canada): Certainly, in terms of the manufacturing of appliances, we do use a lot of steel and aluminum in those appliances still, particularly the major appliances such as refrigerators and ranges. The cost of those materials has gone up, but it's a double whammy in the sense that a lot of that manufacturing is occurring offshore, in the United States in some cases, which means that the aluminum and the steel are more expensive to purchase.

On the flip side, in terms of bringing those appliances or the components thereof into Canada, there are now Canadian tariffs, retaliatory tariffs. So it's bit of a double whammy in terms of making the appliances, home appliances in particular, more expensive.

The Chair: I'm going to have to stop you there. You can't say you didn't have enough time today, Jamie.

Mr. Whalen, you have five minutes.

Mr. Nick Whalen (St. John's East, Lib.): Thank you very much.

Thanks for coming.

Mr. White, in terms of the energy efficiency that you showed us on your charts and how you measured it, are those year-over-year savings in energy use projected or are they audited and measured by your company? How does that work? How much rigour goes into that?

Mr. Brad White: That really varies from project to project. I think that, in two of those cases, those were completed projects, with which we will often stay involved post-project. We always try to verify savings at the completion of the project.

Occasionally, clients will want to know what the ongoing performance—in the case of the Vancouver General Hospital project, that was over a million-dollar investment. When you get to numbers that big, there's incentive for customers to make sure they continue to see the benefit.

We have a lot of customers who will pay for one year or more of monitoring and verification after completion. If it's a project that has had incentives, often the utility will mandate that the monitoring and verification take place, after the fact, to validate the savings. In some cases, it's just the customer looking at their energy bills and then concluding that yes, they have saved energy.

It varies a lot from project to project.

Mr. Nick Whalen: Does SES have a lot of competitors in the British Columbia market?

Mr. Brad White: Certainly. We are rare, in that we're one of the only firms that focus exclusively on energy efficiency. There's at least one other large firm that does similar work, and there are a large number of small firms and sole proprietorships that do similar work, so we are one of probably 20 different companies in B.C.—one of the largest—but certainly we face lots of competition on every project.

Mr. Nick Whalen: For the energy management services, do you face competition from the utility itself?

Mr. Brad White: No. The energy managers are employed by our clients. Sometimes we do contract energy management and sometimes we are hired to support energy managers in developing their strategic energy management plans or documents like that. It's a partnership.

Mr. Nick Whalen: Are you ever paid by controlling flows of funds? Rather than paying the utility for the pricing, the client would then pay you for five or six years. Is there any factoring that goes into how you guys collect your fees?

Mr. Brad White: We are fee-for-service consultants. There are larger organizations—what you're referring to is what we call an ESCO model or energy services company model. That tends to be for very large projects in which you might retrofit an entire municipality—for tens of millions of dollars. You have very large companies, like Johnson Controls, that take on work like that. It's not something that we would do.

Mr. Nick Whalen: On the Ontario side, Mr. Young, do you guys employ and pay the energy managers?

Mr. Terry Young: The energy managers are employed in the industrial programs. They are employed by a company itself. It's an incremental position that's been set up, and they are a member of that company.

Mr. Nick Whalen: Okay. Fair enough.

Do you guys find that, in Ontario, you're competing with private sector companies, like SES, in terms of the services you provide?

● (1225)

Mr. Terry Young: No. What you'll see are these energy managers, who are getting familiar with supply chains that are there as well, who use them to help drive efficiencies in their own organizations.

This is a program that we're funding that companies are able to access.

Mr. Nick Whalen: Great.

In terms of the way in which each of your organizations measures success, earlier in the presentations you were referring to reduced capital costs associated with grid expansion. I'm just wondering whether or not—

At our meeting earlier in the week, one thing we talked about was the need for grid expansion, not just to serve traditional demand but also to allow for the adoption and the expansion of transportation sector access to electricity sources, rather than oil and gas petroleum products.

I'm just wondering how much of what you're doing, in terms of your financial modelling, runs counter to the desire just to grow the grid?

Mr. Terry Young: In growing the grid, I think you're doing so at a cost. I think what we want to see is that it's an efficient growing, if you will, of the grid.

I've been in this business long enough to remember when demand for electricity was increasing at 7% per year, so every 10 years you were essentially doubling your needs, if you will. We certainly want to get away from that. We want to make sure that any growth that occurs is as necessary and as efficient as possible.

Mr. Nick Whalen: This is my last question for you guys.

I'm not sure if you have this data handy, but in order for us to be able to compare apples to apples, it would be great to see what your average kilowatt hour savings per dollar would be. I wouldn't want the utility to take into account anything associated with the fact that they didn't have to spend money on grid hardening. I just want to know how much the savings are and how well each of your organizations is doing in your clients' kilowatt hour savings, or metric tonnes of oil equivalent savings, per dollar invested in the projects. I would just like to get a sense of whether the private sector or the public sector is doing this better.

Thanks.

The Chair: Can somebody answer that very quickly?

Mr. Nick Whalen: No, I think that's to table.

The Chair: All right, that's perfect. I think I see a look of relief too.

Mr. Cannings, you have three minutes to finish this.

Mr. Richard Cannings: Thank you.

Mr. Rebel, for curiosity's sake on my part, what is the proportion of home appliances sold in Canada that are made in Canada versus made elsewhere, in the United States or Mexico?

Mr. Bruce Rebel: Currently there are very few manufacturers of home appliances in Canada. I don't want to speak to some of the other HVAC industries, but particularly in the home appliance industry, the vast majority, like 95% plus, is probably being manufactured offshore.

Mr. Richard Cannings: That was just for my own curiosity. In terms of energy efficiency and using energy-efficient appliances to meet our targets, what's the turnover timeline for home appliances? It might be five or ten years for cars, but what is it for refrigerators? If we have really efficient refrigerators now, how long will it take us to see those effects as people buy new appliances?

Mr. Bruce Rebel: One of the things we would love to see in a paradigm shift is in terms of your question of how long do appliances last. It varies, depending on the typical appliances. You gave the refrigerator as an example but you can expect your refrigerator to last somewhere between 10 and 15 years before it is likely to reach the end of its life.

In doing that changeover of waiting for 10 to 15 years, in some cases that's just the average range, but you can get a refrigerator that can last 20 years. The question then becomes why do you want to have a 20-year-old refrigerator? It's a gas guzzler. It's the same sort of issue you would have with a vehicle. A 20-year-old vehicle is not going to be as energy efficient as a new one. We still see that now; households wait until their appliances fail before they do a replacement. You will see replacements when people are moving into a new home, and then, yes, they will tend to gravitate toward new appliances, but if they stay in the same home for the long term, people wait until their appliance dies and then they replace it as opposed to thinking that now maybe is the time to replace a 12-year-old refrigerator with a more efficient refrigerator.

● (1230)

The Chair: We're going to have to stop there sadly. Sorry.

Mr. Richard Cannings: I was just building up to my pivotal question, but that's okay.

Voices: Oh, oh!

The Chair: Gentlemen, thank you all very much for taking the time to be here. The evidence is very valuable, particularly for the study. As you can see, we never have enough time. People wanted to ask more questions, but so be it. That's the way the system works. You can all go now. We're going to suspend for a couple of minutes, and then we're going to go in camera. I'll remind you that everybody is allowed to keep one staff person with them while we're in camera, and everybody else is invited to return next Tuesday.

[*Proceedings continue in camera*]