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Chair

Mr. Leon Benoit

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● (1530)

[*English*]

The Chair (Mr. Leon Benoit (Vegreville—Wainwright, CPC)): Good afternoon, everyone. Welcome.

We're here to continue our study on the contribution of integrated approaches for providing energy services in Canadian communities.

We have four groups of witnesses today. Each group is welcome to take between five and ten minutes for its presentation.

We have a number of witnesses today. From Benny Farm, we have Alex Hill, general manager for green energy, and Daniel Pearl, partner. From the Canadian Urban Institute, we have Glen Murray, president and chief executive officer, and Brent Gilmour, director of urban solutions. From the Minto Group, we have Andrew Pride, vice-president, Minto green team, and Greg Rogers, executive vice-president. From the Town of Two Hills, we have Trevor Nickel, representative and assistant general manager, Highmark Renewables Research LP and Growing Power Hairy Hill LP, and Shane Chrapko, representative and chief executive officer, Growing Power Hairy Hill LP. That's so everyone knows who is here.

Let's go in the order the groups are shown on the agenda. We'll start with Benny Farm. Alex Hill will be making the presentation. Is that correct?

Mr. Daniel Pearl (Partner, L'Office de l'éclectisme urbain et fonctionnel (L'OEUF), Benny Farm): Actually, I'm going to start. I'm the architect from *L'Office de l'éclectisme urbain et fonctionnel*. I'll present in English, but I certainly welcome questions in French.

It's a real honour to be invited here today.

Benny Farm was a project built in Montreal in 1946-47, just after the Second World War, with over 300 original units. Over the last 15 years, our firm, along with many social activists in Montreal, fought to recycle the buildings at Benny Farm. Today we're here representing Green Energy Benny Farm, which came out of that fight and is a partial success in recycling the project.

One hundred and forty units were renovated for affordable housing. A special strategy was put together as a pilot project, funded by the Green Municipal Fund, a very generous donation from many levels of government. This project was to be a pilot project to look at community energy services.

The lessons learned are quite vast and wide-ranging. Alex Hill, the project manager, who's been looking after the construction over the last few years, will talk about the details. I'm going to try to talk about the larger-scale issues.

The first issue is the lack of our projects across the country understanding the notion of resilience. Thomas Homer-Dixon, a well-known writer here in Canada, talks about the importance of dealing with the disastrous situations of the extremities of weather. Right now, the notion of having a central energy loop possibly allows a project, on its own, to be resilient against large disasters. So it's not simply a question of energy savings; it's a question of understanding not to count on grids and on transferring energy thousands and thousands of kilometres away.

This central energy loop has also a capacity to make sure projects always stay up to date. Right now, we don't have proper sources of energy such as hydrogen energy, let's say, and because of this, they cannot be added later on to projects that don't have a central loop. The majority of our projects have no resilience in order to be able to change as the technologies change.

One of the key components that we're learning lessons from, in Europe especially, in the concept of co-housing, a component very specifically related to housing, is that at some point, if a project's profits are taken out by an ESCO, an energy services company, then really long-term people, appropriators in the project, lose their connection to a project.

The perfect example is Benny Farm in Montreal versus Regent Park in Toronto. In Toronto, none or almost none of the units are being renovated in a project two and half times the size of Benny Farm, because no one could renovate the image of the project. At Benny Farm, because the veterans always stayed present, there was always a strong idea of the image of the project. Therefore, we can go in with technologies and modify it technically, but you have to understand the socio-cultural component as well.

Another important lesson learned is that affordable housing projects in Canada need more help on central district energy systems in the private market. As taxpayers, we pay for them when we put in short-term goals of energy systems that can't be retrofitted over time and when we don't understand the cost increases. When affordable housing is no longer affordable because energy costs are higher than inflation, then the people living in the project no longer can live in the project. By going to geothermal, to solar hot water, we're giving a notion of economic resilience to the people we're actually housing.

The other issue is that you can't simply look at energy. You must look at the air quality in the envelope. They go together. I think that right now there's an interest in moving energy, not understanding that our base budgets in affordable housing don't properly cover the envelope.

Finally, I think one of the key lessons is that everybody to date who I've seen present in front of this committee has talked about new construction and district energy systems in new construction. Benny Farm is an example of how to do it in renovated and new housing combined. If we're to count only on the new construction going forward, we will come nowhere near meeting our goals for greenhouse gas emissions across the country. We have to come up with strategies on how to partner different owners and get over the legal challenges that are related to this. That's probably one of the biggest problems we have.

● (1535)

Mr. Alex Hill (General Manager, Green Energy, Benny Farm): Thank you, Danny.

Thank you, to the committee, for the chance to speak today.

I'll just quickly tell you about Énergie Verte Benny Farm, which is the not-for-profit, community-owned energy company that has grown out of the Benny Farm project.

We're currently working on three priorities right now. One of them is installing and operating the geothermal and solar system at Benny Farm and selling the energy back to the housing projects to generate income for our activities. We're also working with a number of other social housing groups and tourist facilities and individual homeowners to investigate the potential of implementing similar projects and strategies in their own developments. And our most recent program is a buyers group for homeowners to install solar hot water, which is a new initiative for renovating existing homes.

From this work we've identified a few potential recommendations that could help the committee. I'm trying to be a bit specific here, because these needs that we've found have sprung up directly from helping other housing projects.

Energy mapping of Canadian cities could be a very valuable project to engage in, something similar to the solar map that's been done by Natural Resources Canada to see the photovoltaic potential across the entire country. If we had a database of energy use within different buildings, which engineers could refer to quickly, you could identify the potential of cooperating with other buildings for integrated and district energy systems.

One of the biggest problems with green energy systems is the increased risk. Homeowners and developers take on 10% to 15% additional cost. With that comes an associated risk, and also the risk from the complexity. They need support from the design side as well as from the financial side, and also from the coordination and management side to manage that risk. It's not simply a financial question.

We're working with the provinces and cities on building codes. We have national guidelines for water treatment. When it comes to things like solar energy and other new technologies, the codes can become so complicated at the local level, they can prevent implementation of these kinds of technologies. If we had a national guideline, it would at least give a baseline for municipalities and provinces to work from. At that point they could come up with a streamlined approach.

Support to cover design premiums for integrated energy systems, such as the CBIP program, is a thing to consider.

I would say that another very important aspect is to consider all distributed energy generation as energy efficiency, and not as actual energy generation. It's an upfront cost of energy investment for a longer-term energy saving from these projects. This would help to get around some of the monopoly issues related to Hydro-Québec, as an example, whom we deal with in Montreal, and in other parts of the country as well. How support is given to these projects could look very different from what it does now.

Finally, I would just say that the distributed energy production put into building projects, such as solar, geothermal, and wind, should be considered alongside coal, natural gas, and oil energy production as the baseline, not alongside hydroelectricity. Because of the interconnectedness of the North American grid, it's actually fossil fuels they'll be replacing and not hydroelectricity.

Thank you very much.

Mr. Daniel Pearl: I'd just like to complete the presentation with a last statement of our lessons learned from Benny Farm, which is that the money saved by not duplicating expertise ended up costing the project more than if we'd actually had more resilience within our design team.

We feel that a lot of the projects we look at now across the country have not been tried and true-tested in Canada. There's more experience in Europe.

We would like to make sure there's an understanding of the duplication necessary in pilot projects to learn more, and not put the residents at risk from having too low a budget and too little understanding of that component.

Thank you very much.

● (1540)

The Chair: Thank you very much.

Thank you both.

From the Canadian Urban Institute, go ahead, gentlemen, with your presentation as you choose, for up to ten minutes.

[*Translation*]

Mr. Glen Murray (President and Chief Executive Officer, Canadian Urban Institute): Thank you very much.

[*English*]

It's a great pleasure to participate in this on behalf of the Canadian Urban Institute.

Very briefly, we are a national urban policy and research institute. We receive no direct funding from any government in Canada. We generate and raise all of our money ourselves through services and membership, and we have worked for 20 years now in the area of energy sustainability.

You would probably know some of our projects. We were the catalyst that brought together the deep lake cooling technology in Toronto, which we brought back to Canada. I think it's probably one of the most successful and greenest energy solutions in Canada, and we've done extensive work on it.

I'm going to try to save some time by giving you our most fundamental recommendation at the beginning, and then I'll repeat it at the end, because I know you're very busy and have heard a lot. In-between I'm going to turn it over to my colleague, Brent Gilmour, who will give you some examples of what I'm going to describe.

We spend less money than any other country in the world on planning for land use, transportation, and energy. If you went through the entire OECD and tried to find one of the biggest differences between countries, you would find that we do less planning than almost any other country—and it's a disaster. When we spend large amounts of infrastructure money, we usually do it with less planning than almost any other country, with some disastrous consequences. Arguably, federal government involvement in infrastructure over the years has been one of the biggest subsidies to sprawl compared with any other source. I will leave that for questions, if you want to ask. But the federal government can wreak havoc on a city planning process.

Our biggest recommendation is that you fund plans, not projects, and you put more money into energy, transportation, and land use planning, and you drive integrated planning. Every single municipality, large and small, has an official plan. You've heard from Okotoks and Guelph. You've heard about the work we've been doing with the City of Calgary. With many of them, including Calgary, the aim was to integrate energy planning into official city planning processes. If you go to Calgary's website, it shows the Calgary's plan is probably the best plan any large city has now done. The savings in costs between a business-as-usual development of energy, land use, and transportation systems in that city is about $30 billion. And given that the public purse is tight these days, it would seem that smart grid and smart growth should be met by smart spending.

I won't get into the details of it. If you'd like us to, we can in questions. But I think it gives you the integrated solution. In the case of Calgary, halfway through this process they stopped their official planning process and redirected 30,000 hectares of development and changed their density requirements. We're talking about Canada's oil capital. The reason they did that was not just to reduce their carbon dioxide emissions—which they'll do by about 50% under this plan—but also because the cost of building out cities in the traditional way we've been doing the last 30 years was just prohibitively costly to Calgary, and you couldn't justify it to citizens and taxpayers.

So you have to integrate economic, land use, and transportation planning, because it's actually a matter of the synergies between good land use and transportation planning and energy planning. So if you worked with provinces, because this is a provincial area of jurisdiction.... Every official municipal plan in Canada, I believe, without exception, has to be approved by a provincial government, and becomes—usually by cabinet—provincial legislation and policy, implicitly and explicitly. You should take the models that municipalities and provinces across Canada are already doing and fund these and the plans, so that they decide what energy technologies do, based on good research and good planning. Then you can make the selection, not on a project-by-project basis, but based on an integrated understanding of how demand-side solutions should work, first, and supply-side solutions, second. And they can select how to do it most cost-effectively, or how they can get the least expensive and most effective technologies that are most durable over time. That's how you produce the greatest economic and green environmental dividend. That's our essential recommendation.

I'll turn it over to my colleague Brent, who'll give you some examples focusing on Calgary's energy mapping and energy sustainability plan.

● (1545)

Mr. Brent Gilmour (Director, Urban Solutions, Canadian Urban Institute): Great. Thank you.

One of the key things we forget is that municipalities in Canada do actually plan energy. Traditionally, most of their specialization in terms of energy planning has occurred in two areas, our local utilities and those responsible for our provincial level. However, municipalities are involved, both directly and indirectly.

They've been involved directly through setting up various types of corporations—you've heard a lot about district energy—and they've also been involved in energy services, whether that's poles and wires or also looking at energy efficiency improvements.

Indirect involvement, although this is where it becomes a little bit difficult to understand, is where it really happens. It's actually in the land use planning. Particularly when municipalities go and think about compact mixed-use development, a term that you often hear in planning, that is actually connecting a number of issues related to energy. But it's also occurring in the way we plan for transportation, such as transportation-oriented development.

One of the key things that help bring this together is a hierarchy, in this case an energy decision-making hierarchy, that actually helps us understand where our energy use occurs. In planning, it actually occurs at the infrastructure and land use level.

What it means, though, is that what we plan today impacts every single decision in terms of energy for 10 to 20 to 30 years. Buildings and site designs are actually also impacted by the thought that went into the land use planning. This means that land use, in terms of site design and development, really occurs every five years, but at the end of the day, energy-using equipment is also affected.

Those are the three different layers. A good example of this is district energy, which you've heard about. Most district energy systems that communities use tend to be more efficient in terms of distribution and management of energy, as well as economically feasible; there's a relatively constant demand for their service, such as a high-density mixed area of land.

Decisions, though, that are made at the regional or municipal level in terms of density and mix of uses can have a direct impact on the viability of a district energy system. What you plan today will actually dictate what's going to happen 50 years from now. That's how energy actually starts to occur, and that's how the thinking of decision-making processes result.

One of the key things that communities are doing across Canada to help understand how their land use planning is impacting on energy consumption and demand in communities is integrated community energy planning. It's something that we're starting to see as a requirement for some jurisdictions, particularly in British Columbia; they are now requiring communities to do community energy plans.

What integrated community energy plans really do, though, is help to connect energy supply and end use in terms of where energy is going to be used—transportation, water, waste, and so on—into the decision-making process by municipalities.

How does an ICEP actually do this? Well, it's a three-tiered process.

It starts at reducing energy demand within the built environment first, and looks at encouraging the application of renewable energy sources second. Then, what it really tries to do is link the built environment, transportation, land use designations, and what we're hearing a lot about today, renewable and alternative technologies, into informing long-range planning, whether at the provincial, regional, or local level.

We were asked last July to help the City of Calgary assess how it was going to achieve its greenhouse gas reduction goal—a community-established goal—of 50% reduction below 2005 levels by 2050. It was quite an ambitious goal. They recognized, though, their challenge: they will be adding 680,000 people over the next 28 years.

What we were really asked to do was threefold. First, we were asked to identify the different types of alternative energy sources that were applicable to that built environment in that community, and to really help them identify where they could go in that community. This led us to understand that connecting the land use and the built form, in terms of energy decisions, was not an easy thing to do.

We actually helped them do that through an illustrative process. You'll see that in your presentation outline; it's actually a map. This was able to show us the clear linkage between land use planning and energy efficiency.

Overall, the land use planning process helped them figure out where different types of systems should go. Whether it was district energy, whether it was photovoltaics, whether it was solar thermal, or whether it was, in this case, geo-exchange, which you've heard about, this helped them figure out where the technology could go.

● (1550)

When Calgary originally started, they were thinking of locating all their development traditionally, on the outside, as the city was growing out. What Calgary really took away from this whole process, what they recognized as they started to go through the energy planning process, was that they wanted to create a place for people to live, grow, and be viable in terms of economic investment, and that resulted in trying to pull things together.

That's what we helped them to do, through an energy process. We came up with a new metric, gigajoules per hectare, and that helped them understand where they should be making their investments in terms of energy infrastructure.

Mr. Glen Murray: Coming back to that, if you take that model going forward, you understand the natural environment. You can do different things in Montreal or Toronto. You obviously couldn't do deep lake cooling in Edmonton, but its unique geography, the unique resource space, the population growth rates, the nature of what the industry is in a community, and the configuration of the built form—how you co-locate where people live compared to where they work—are the things that really allow you to reduce demand and to derive more efficient supply.

If you look at what Calgary has now that most other major municipalities in Canada don't have, Calgary has the most cost-effective and appropriate technology fit for suburban low-density communities. They have the right kind of technology solutions, solutions that they know are going to work for their downtown, and for their airport they've configured a whole other range of existing, already commercially viable, deployed technologies. It allows you to accelerate that.

They're also not just looking at the cost side. Because they're using it and embedding it in their official plan and working with the Government of Alberta to do that, they're actually understanding that you allow more intense, higher-quality development and that you can actually identify greater opportunities for introducing technology in a way that maximizes jobs and investment and drives economic value, so that you're actually building the tax base of the municipality rather than doing it by building the tax burden. I think it was about a $17 billion cost, but the savings annually are $1.5 billion, so the payback is about eight years.

That is not counting any benefit. There's no return on investment counted in that. That's just simply on one side of the ledger, the actual cost savings operationally from capital.

We're now looking at doing this smartly and doing it in a way that clusters commercial activity in the way they did in Markham, Ontario, where IBM doubled its presence because of energy resiliency. You can start to use this as an incentive to cluster and to strengthen economic investment in business clusters and new business clusters in communities if you integrate it into your economic development policy.

We think the federal government, if it spent smart, would be able to support smart growth, and that if it respected provincial and municipal jurisdictions and played the role that it should play nationally, it could be a very effective player in this transformation economically, environmentally, and socially.

Thank you.

The Chair: Thank you, Mr. Gilmour and Mr. Murray.

Now we'll go to the Minto Group for their presentation. You have up to ten minutes. Go ahead, please.

Mr. Greg Rogers (Executive Vice-President, Minto Group): Thanks very much for having us here.

I'm Greg Rogers. I'll just do a quick introduction. Glen actually captured a couple of thoughts around my page, so I thought I was going to be a couple of minutes shorter, but I came up with some extra stuff while I was sitting here.

In any event, I'll give you a little bit of background on Minto. We're a developer of houses, condos, and commercial buildings. We've built about 60,000 homes in Canada, a few million square feet of commercial buildings, and we own and manage 16,000 apartment buildings in Ontario.

In the year 2000, Minto made a firm commitment to the environment. Since then we have been constructing every one of our new high-rise buildings to a LEED standard. All our new homes from this point forward are going to be constructed to an Energy Star standard, and we also formed a department to help us define, measure, and reduce our carbon footprint, with a long-term goal of getting that footprint down to zero. That department is headed by Andrew Pride and has a staff of 12 people. We invest in them to help us invest in turn in environmental initiatives.

We've made pretty good progress so far. We've received a number of national and international awards for our efforts, most recently at the sustainable buildings global conference in Australia, where Canada came number two to Germany, so we are on the map.

There certainly is a lot more we could be doing. Some of the new things that Minto is doing soon to help us become even more well known globally will be the LEED certification of Minto Midtown, a 900-unit building in Toronto. It will be the largest certified residential building in North America, so we are making some progress.

We're making progress in two ways. Andrew will talk about one, which is is top-down. It includes major initiatives such as gas turbines and other innovative research that we've looked at. The other is ground-up: we educate, empower, and reward our staff in the pursuit of carbon footprint reduction, because a lot of the ideas rest on the shop floor. These two methods are really a metaphor for broader policy initiatives that we'll talk to in a minute.

At this point I'll turn it over to Andrew to talk more specifically about some of the things we're doing.

● (1555)

Mr. Andrew Pride (Vice-President, Minto Green Team, Minto Group): Thanks.

I applaud the committee for taking on any right approach energy systems, because it isn't easy, and it's worthy of note. It's not just about one solution, or one technology. It's about integrating many technologies and many solutions from the point of a single home, to a large condominium community, to a new development, to a new community, to all our existing buildings. How do we integrate that all together? It's a pretty big challenge. I think we're pretty fortunate today to be here with you, because we can share some of our examples. We've integrated all of that together. We've looked at it together. We see a lot of barriers out there in the system, but we see a lot of opportunity.

One of the big things we've seen as an organization is that we lead by example. We live what we preach, what we build and what we deliver to our consumers. That's a pretty big example, and that's a big message I'd like to leave for this committee, that you need to lead by example.

We don't find that there's any one idea that's no good. Little ideas can magnify into huge ideas. Take a simple thing like two-sided photocopying, which is a pretty straightforward and simple thing. You have a two-sided newspaper, so why can't you have it on paper? Just by doing that, we saved $50 per employee. By looking at the conservation of natural resources, we can see that there's a bigger play at energy savings, cost savings, overall productivity and efficiency. There are a lot of little things we can do to make big ideas work. Integrating all of that together is a huge challenge, but we can do it.

Look at what we've done historically. We have projects that have moved on from a condominium size that started at 22% energy savings, and we've climbed up to 40% energy savings. We can do this as a developer because it makes sense. We have the financial economics to do it. Forty percent isn't enough; we need to go beyond that. We've looked at innovations from eight years ago, where we had an all-off switch that turned lights off simply at the front door. How much easier is it than just pushing a button and having all the lights go off in your apartment unit? These are very simple things. We do that right across the board in every home that we sell, every condo that we sell, empowering our residents to actually themselves conserve.

This all came from an integrated approach, putting everyone who's involved in the design of a building in a room together, and asking how we can do better. The brilliance that can come out of people is amazing. When you put your heads together, you'll come up with ideas, and some of those have really good economic return.

Some don't have really good economic return, like a distributed energy system. We experimented with one in 1998, 1999. It was very expensive to implement, very expensive to put together. The results were brilliant. We could get really good output from it, but it's a matter of getting that cost down and getting it out there in the public so we can use it more often. So it's really a challenge for us.

We can innovate as far as we can. We've looked at doing better fresh-air systems for condominiums; we've looked at using rain-water, stuff that falls free out of the sky, as water for irrigation, water for toilets—really simple things. There are massive regulatory barriers around doing that. Nonetheless, we can still put it together and make it work. We found great success in that.

We've taken that same approach to our existing portfolio. What can we learn, what can we integrate into our existing buildings to make them more effective? Frankly, that's where our challenge is. It's not the new stuff that's coming out; it's already regulated quite well. We really have to look at our existing building stock and ask how we can make our existing building stock more energy efficient, more natural resource conservation-oriented.

We created a number of years ago something called a comprehensive natural resource management plan—a focused effort on all of our buildings to see how we could reduce our environmental footprint, how we could reduce our carbon footprint. It gave us some return, and we're getting there, to that 40% mark again, but we seem to be cut off at 40%. We need to get beyond that. We need to innovate beyond that. I think Glen hit it beautifully when he said had we thought 20 years ago about a development in a community we were building, we would have had the opportunity at that point in time to put in the right systems and infrastructure to make sure we could have an almost net-zero community.

We started in our single-family home side last year by building a net-zero home out in Manotick, just south of here, which I invite any of you to come out and see at any time. It's open all weekend long. It generates as much energy as it consumes. It's all renewable energy, very simple to use, very simple to see. You can touch it, you can feel it. It's darned expensive, but it works really well, and it's really the future of single-family home construction, as far as we can tell.

It's working really well for us. We started integrating our single-family homes, our community design, our existing buildings. Overall, we've seen 20,000 tonnes of greenhouse gases reduced, and we see that as being just the start, the tip of the iceberg.

● (1600)

We need to work harder at changing what our culture is like, changing where we're going, and reducing the barriers.

I'll let Greg close out from there.

Mr. Greg Rogers: Thanks, Andrew.

We are only replacing our existing building stock at the rate of some small percentage per year. It's the existing building stock where we feel the focus is most important.

Speaking specifically to energy, it's a much bigger picture than that, but for energy alone there are three parts, in our view, to an integrated approach to energy supply.

Number one is that distributed energy has a future. Gas-powered turbines, locally distributed, are more efficient than a central plant because you can heat hot water with them. We don't do that in the central plants as they exist today. There's a recovery there. They're not going to burn any more fuel than the large plants will, so there's a future there. Solar also has a future, but the problem is regulation. We put a gas turbine in a hotel downtown and it took us about a year to get through high-pressure gas problems, to get through the fact that this might be an industrial production site, of all things. Any sane person would not have done what we did, because it just wasn't worth the brain damage.

The second thing is demand load reduction. Planning is a great idea; integrated planning is a good idea. There are other things that we can do to inform, empower, and reward our people for conservation. We can sub-meter our apartment buildings. You wouldn't believe how aggressive people will be about turning off the lights in their apartment buildings if they know that they can save a couple of bucks a month. You know what? We're not allowed to do that in Ontario because we're not allowed to sub-meter apartment buildings. So that savings is just not there. We're regulated at every turn against doing things that we think are the right things to do.

I would go into government procurement, the third way that I think we have to approach this. Government is a big buyer of goods and services, and a user of energy. I have a building downtown right now where I have a choice. I can install energy-saving equipment for a million bucks and save a pile of money and energy, or I can install not-so-efficient equipment for half a million bucks. If I install the million-dollar equipment, with a private sector tenant in place I can recover the cost of that, and it's a neutral cost to the tenant. He doesn't notice a thing. He gets a better building, he makes a contribution to the environment, and there's no change because I use the cost savings on energy to pay for that additional cost of the equipment. PWGSC's policy is in fact against that. Their answer is no, put in the wrong equipment and that's just the way it is.

I don't want to paint a picture that people are being malicious or mean; it just happens to be the way a lot of policies work. We're talking about a new world, a new age, where we have to incorporate into our economic system the environment where it's not been accounted for before. It's a big job, but there are a lot of small places where we can start.

Maybe I'll leave it there.

The Chair: Thank you very much.

For the last presentation, or presentations, I have Trevor Nickel, from Highmark Renewables, and Shane Chrapko, from Growing Power Hairy Hill.

I just want to say that I watch this project with particular interest because it is in my constituency and I went to university with the two gentlemen who started the original feedlot, which is the seed of all of this, Bernie and Mike Kotelko. I've watched this grow and am looking forward very much to an explanation of this, what has become a very sophisticated operation.

An hon. member: I think you're giving a speech.

The Chair: I do very little of that. It's my turn.

Go ahead, for up to ten minutes, gentlemen.

Mr. Trevor Nickel (Representative, Assistant General Manager, Highmark Renewables Research LP and Growing Power Hairy Hill LP, Town of Two Hills): Thank you very much.

It's a real pleasure and a real honour to be invited to come and tell our story to this committee. We were asked to share with you a little bit of the history. It's a bit of a story that spans a decade, and you may imagine that over a decade we accrue enough policy recommendations to fill up a book, so we'll try to keep those near the end and focus on the story.

You mentioned Bern and Mike Kotelko. Around 1999 they were at the genesis of this project. They owned a very large feedlot that produced 500 metric tonnes of manure a day. A soil scientist came to them and said, “Hey, what are you doing to the soil? There may be some issues that are building up over time”, and there was some disagreement. Obviously, manure is a good thing and it's a natural product for the soil, but there can be too much of a good thing. So they looked for ways to get the same value that they were getting using that natural product as fertilizer out of the manure technologically.

I've said manure about ten times in the last two minutes. Get used to it.

So they looked at all the available technologies. They looked at composting, they looked at drying and pelletizing, they looked at burning, they looked at gasification, and they looked at anaerobic digestion. It turned out that anaerobic digestion is about the best way to approach some waste management issues. Not only does it produce renewable energy, it also allows you to recover natural products. We can get into all the technical details on that without going too much further at this time.

It turned out, though, that there was no good anaerobic digestion technology available worldwide that could handle feedlot manure, due to scale and due to the fact that everywhere it had been developed in the past, everything was easy, liquid, nice, beautiful stuff. Feedlot manure isn't. So clearly there was an opportunity to develop a technology that would work. So a little company was formed to co-develop that technology. We put that together—well, I wasn't there yet, but it was put together and around 2002 they built a pilot plant on a lab scale. In 2003, after thinking that pilot plant was working well, they started building a commercial-scale demonstration plant that at that time was the largest anaerobic digester in the world. This was just a demonstration facility. You know, you're talking about scale. In 2005 that plant was commissioned. It can handle 20% of the manure produced at Highland Feeders. The total is 500 metric tonnes a day, so it's handling 100 metric tonnes a day of manure and produces a megawatt. When it was commissioned it was the largest in the world. It's been eclipsed, but it's about to become the largest in the world again, and I'll tell you a little bit about that.

In 2006 we deemed it a qualified success, a bunch of patents were filed, and I joined the company to write a business plan. We presented that business plan to the board in November 2007. In January 2008 Shane and his brother were brought into the company to really provide a lot more horsepower in the intellectual property development area. Subsequently, we divided the company into two: one that owns intellectual property and one that owns physical assets. It's the physical assets that are doing what we're all talking about today, this integrated community energy solution.

It's not just an anaerobic digester any more. What we're building at the same site where we built the pilot plant is a 400% expansion project of the anaerobic digester. That's a fourfold expansion. We call the new thing Growing Power Hairy Hill. That expansion also integrates with it a medium regional-scale ethanol production facility. So it creates—with the feedlot, the anaerobic digester, and the ethanol plant—what we call a virtuous loop. All the byproducts from each of those processes—manure from the feedlot, low-end heat from the anaerobic digester project, and distiller grains from the ethanol—become the input products for the next process down the line. That's true integration. What we're able to do with that integration, with those three facilities on site, is produce ethanol with an energy balance that far exceeds anything that's even in the lab for cellulosic ethanol, and we're not doing anything different. We're still doing moonshine, essentially. We're able to get a 4.4-to-one energy balance out of that. Corn ethanol in the States, for example, is at best 1.4 to one. Diesel fuel is 0.8 to one.

● (1605)

That's all due to integration. We can also reduce the amount of water that's used. Amazingly, by adding an ethanol plant that uses as much water as a feedlot to a feedlot, you only increase the amount of water 25%. All the liquid waste that comes out of the feedlot ends up being processed through the anaerobic digester and all the pathogens reduced out of that.

I've gone off my notes.

I do want to highlight that Growing Power Hairy Hill is a $100 million project. It's under way. We're doing the first phase, which is the anaerobic digestion phase, right now. We started construction of that when we got our permits in November. The second phase, the ethanol plant, is under way pending financing, which should close fairly shortly.

You don't build a $100 million project without having some pretty significant economic returns available for investors to get in on this. We all know that renewable energy doesn't necessarily provide the type of investment returns that, say, an oil and gas or a gas drilling play would in Alberta. It's only the integration that allows us to provide the types of returns that investors like.

We can go into why integration has lower risk and all sorts of that stuff in questions. I do want to just highlight a few reasons why anaerobic digestion technology at the centre of an integrated project is really important. It applies really well to all forms of organic material. And I don't like to use the word “waste”, but I'll say it now: anything that stinks when it rots can have the energy that's inherent in it recovered. And cities and towns produce an awful lot of this waste. There's some leadership in towns—Edmonton is one of them—to reduce it, but there's still an awful lot of waste out there. The food processing industry produces an awful lot of waste, and agriculture, as you know, produces an awful lot of odour. Currently only the largest projects of these types are economic. That leads us to go into some recommendations.

Because the capital investments are larger than any food processor or farmer can reasonably float, and liquidity challenges are ongoing, there is some room there for incremental government support. We see some leadership out of the United States in the 2008 farm bill. They're offering 70% of projects as loan guarantees. This is something that we really see as leadership and as really interesting.

There are some other items in section 9 of the 2008 U.S. farm bill that could apply, not only to farm integrated energy solutions, but also to community-based and city-based, municipal-based integrated energy solutions. The structure is there.

Anything we can do to de-risk the development of clean tech, putting a price on carbon, all of these things that have been talked about so much—the smart grid—anything we can do to invest as heavily as possible in research and development and commercial demonstration projects.... We've talked about multiple iterations of pilots. There is some real value in investing heavily in these areas. It really helps us get around the curse of resources, sometimes known as the Dutch disease, and coming from Alberta we sure know what happens at the end of a Dutch disease cycle.

I have about another minute, and I might ask Shane to finish it up for us.

● (1610)

Mr. Shane Chrapko (Representative, Chief Executive Officer, Growing Power Hairy Hill LP, Town of Two Hills): Thank you for having us here.

As Trevor touched on, the real story for us is the integrated nature of a digester next to an ethanol plant next to a feedlot. The three previous companies were talking in municipal terms, and you might wonder how this relates to a municipal value. Right now we are taking tens of tonnes of waste that would normally end up in the landfills out of the cities and towns. It's going into our digester and we're making energy out of it. So that's very much a waste-to-energy story, and it's a good one.

Trevor mentioned the energy balance that we have is 4.4 to one. That means one unit of energy goes into our facility and we get four out. With traditional or conventional oil, one unit of energy goes in and you get 0.8 out. It's a huge difference. You hear a lot about cellulosic ethanol. It's one to four; so one unit goes in and four come out. But it's five years out, and it has been five years out for the last twenty years or whatever.

We're there now, and my message is that dollars will flow to the jurisdictions that have policy that supports renewable energy. Our current facility is a $100 million project. There is room for five or six more in Alberta, next to big feedlots. If the correct policy is in place, there will be many more. It won't have to be the very large ones that get funded.

We went around the globe looking for investment, because they said that it won't happen in Alberta because all the policy goes for traditional oil. Recently Alberta put the RFS in, and it's a low-carbon RFS. They announced it; it's not law yet. That made all the difference in the world. So dollars will flow and there are billions of dollars at stake. Billions of dollars are going to flow and are flowing around the globe and they will go to jurisdictions that have favourable policy.

Some of that policy is support for low-carbon fuel, and some of the ideas there are the RFS loan guarantees, or lift to equity coming in from outside the jurisdiction for renewable fuel. There are many different examples of that.

I don't know if I'm over the minute now.

● (1615)

The Chair: Thank you very much, gentlemen. We appreciate your presentations very much. All of them were very interesting.

We'll go to questions now.

I will let you all know that channel 1 is the English channel. With the second questioner you probably will need that.

We'll start with the official opposition, Mr. Regan, up to seven minutes.

[*Translation*]

Hon. Geoff Regan (Halifax West, Lib.): You presumed I would speak English, Mr. Chair.

[*English*]

You were right. After all, our witnesses are, for the most part, anglophone, I guess.

First of all, I want to thank all witnesses for coming today. Some of you have come quite a distance, and I'm sure we all appreciate it.

And I want to reassure Mr. Nickel that although downtown Ottawa may not be a farming area, some might say that Parliament Hill is no stranger to manure, so I wouldn't worry about using the word.

In this study we're interested in highlighting the kinds of things you're all involved in, but we're also interested in looking at and understanding what the barriers are in terms of the federal government. What barriers are there that need to be removed, and what should the Government of Canada be doing to accelerate the use of renewable energy or the use of integrated energy systems across the country?

With that in mind, I'd like you to comment on the federal stimulus package. Do you think it's doing enough in terms of supporting integrated energy projects? What should it be doing differently?

There are really a bunch of questions in one.

Mr. Daniel Pearl: Thank you very much.

It's a very interesting question, because in Quebec we have two particular challenges. One is that our energy costs are far too low. It's interesting that the federal stimulus package doesn't easily address some of the local challenges we have on trying to bring forward geothermal and solar hot water to some form of equivalency that is necessary, given the fact that our electrical costs are so low.

At the moment, in order to try to get around that, we have some subsidy programs, but we find that the subsidy programs are what we call one-term subsidy programs. They actually help capital costs. They don't actually understand the long-term costs of running equipment related to district energy systems.

One of the models we tried at our Green Energy Benny Farm is to make enough profit and to hold onto enough money from not giving all the savings to our residents—which goes against the whole principle of affordable housing—to make sure we can do the long-term maintenance, have some risk management and some risk capital, in a certain sense, and make sure the whole system doesn't close down. We need some understanding that right now, particularly in Quebec, we sell the energy to the States at twice the cost, but locally we don't charge for it at the right cost. That right now is a big blockage.

Ontario is an example. You can sell solar energy, and the government will pay you about ten times what they'll pay us if we sell some extra energy to the grid in Quebec. One of our other products following Benny Farm will be a new sustainable community of about 3,000 or 4,000 units. We're trying to work with an organization out of England called BioRegional One Planet Living, which involves trying to live within your ecological footprint. We almost have to start buying energy from Ontario in order to work on our project in Quebec. I think that highlights one of the problems we have at the moment.

It's actually an ethical question. I think Alex very clearly stated that we should be looking at the fact that every time we use a kilowatt of electricity for heating, we're missing the opportunity to displace coal to our neighbours to the south, and even to the west, because even in Ontario there's a cocktail formula that's not pure on electricity. In Quebec, technically speaking, we only have nine grams of carbon in one tonne of energy. That's really a problem, and the package didn't seem to address that issue.

● (1620)

The Chair: Thank you.

Hon. Geoff Regan: Mr. Pearl, I'm likely to use up my seven minutes on this question. I'm going to add one more thought to it, if I may. You raised a question in relation to feed-in tariffs and their importance. Perhaps others could discuss that. I don't know if there's a role for the Government of Canada, but if there is, I'd like to hear that as well.

Thank you.

The Chair: Mr. Murray, go ahead, please.

Mr. Glen Murray: Thanks.

I think when you've been mayor of a large city—I was the mayor of Winnipeg—you look at the federal government's spending capacity and you just get overwhelmed. In the last term of Parliament, federal spending increased by nearly $40 billion. That's more money than all the major municipalities in Canada have to spend annually. Since then, the federal government's spending increase, not its total budget, is more than all municipal and regional municipalities—small, rural, large. You're now talking about one order of government that has increased its spending and imprint on the economy by more than one entire order of government spends, and that is increasing.

You have less money right now in Canada in the hands of municipalities than most others, and Canadian municipalities are twice as dependent on property taxes as any other source. We've been cutting consumption taxes and sales taxes. There is no appropriate carbon price. I don't know how you meet climate change without a carbon tax. You can call it anything you want, but people should be honest with people. I chaired the national round table. I was grilled by this committee. I think you got three years of excellent reports, and you didn't take any of the advice.

You need a carbon pricing policy that is coherent. You do. Because right now what you're publicly subsidizing in the federal government to an extraordinary level are brown buildings, sprawl, and brown technology. I would challenge you to do something, as a government. Look at how you're spending money and look at how you tax. Look at all the things that you want more of in this country—green energy, the kinds of things my friends from Alberta have—and then look at why it isn't happening.

There is a price barrier because you subsidize brown buildings; you put a premium on green buildings. Every single road, every single sewage and energy system in low-density areas when I was mayor, including in my own city, could get public subsidy because there are built-in green subsidies. People who live in highly transit-friendly neighbourhoods that are walkable, whether they're rural or urban, because there is a form for both, pay higher taxes and get less subsidy than any other group of Canadians. It's not a political issue—right or left, I don't care. There is an argument from either perspective to do that.

So that is one challenge.

I get back to the idea of planning, because I don't think you're going to pick the solutions. Mr. Chairman, from your own constituency you get a sense of the inventiveness of Canadians in solving problems.

These technologies that you've heard about all work, and they're all unique. I grew up not far from Benny Farm. If you have a framework, if you have a proper plan that lets these people know—because they can't decide what the most appropriate technology is for rural Alberta or for urban Montreal—if you actually provide an energy plan that identifies, that understands the geography, understands the age and nature of the buildings and gets the right technology solutions, and you spend through those plans and allow the projects to flow through those plans with provincial and federal support, your shovels-in-the-ground criterion—which I think was meant with the best of intentions to accelerate funding—is not going to work. If you fund the plans on the tables rather than the shovels in the ground, you'll get a lot more happening, because you'll allow the private, public, and non-profit sectors to accelerate these things and you'll unleash the creativity that you sought here.

That's how I would structure my approach to federal spending if I were in your shoes, which I'm not.

The Chair: Thank you, Mr. Murray.

Mr. Regan's time is up, but I do want the others to have a chance, Mr. Rogers and Mr. Nickel.

Mr. Rogers, could you go ahead with as brief a response as you can give?

Mr. Greg Rogers: First of all, I agree again with what Glen just said. Carbon trading is really important.

Energy is one of our key advantages in Canada. It always has been, and it's being squandered in the province of Ontario, that's for sure. They announced a provincial plan to shut down the coal-fired plants in Ontario with no plan to replace that power, so we have no new power to supply the condominiums that are being built downtown in Toronto or the industry we hope will one day return to Ontario. We're getting that energy from U.S. plants without scrubbers on their coal-fired plants.

It is a little bit of wrong-headedness that needs to be closely examined and corrected in terms of our approach to what has been for a long time one of our biggest advantages but is quickly becoming no longer. Distributed energy is something we should be investing in. More of that infrastructure money should go into the creation of new sources of energy and less into roads and bridges.

● (1625)

The Chair: Thank you.

Mr. Nickel.

Mr. Trevor Nickel: Since I don't have too much to add to that, I will address the feed-in tariff directly.

Feed-in tariffs are fantastic if applied properly. The lesson that I always look at is Germany in the anaerobic digestion market. They put in a feed-in tariff at a very high price, 22 euro-cents to 27 euro-cents per kilowatt-hour. That's ten times what people might be getting in Manitoba or Quebec for the price of power. Subsequently, over a very brief period of time, they now have well over 5,000 anaerobic digesters feeding electricity into their grid at any given time.

Ontario put in a feed-in tariff a couple of years back with some additional barriers that aren't related to the feed-in tariff. It works out to about 12 cents for anaerobic digestion, and they have one or two projects on the ground. Alberta put in a six cent per kilowatt-hour top-up to whatever is available on market, which essentially made a 13 cent or 14 cent feed-in tariff happen in Alberta. One or two projects were built during that time.

To make a feed-in tariff work, it has to be hefty but not overblown. It also has to be very long term so that investors realize that they can accept the lower utility-type returns because they're very low risk.

The Chair: Okay. Thank you all very much.

We go now to the Bloc Québécois. Madame Brunelle, seven minutes.

[*Translation*]

Ms. Paule Brunelle (Trois-Rivières, BQ): Good morning, gentlemen. Thank you for being here. Your presentations were very interesting and diversified. I have many questions and I hope to be able to ask a few at least.

The Benny Farm project is aimed at renovating social housing and building new housing. It may not be only social housing. Do you receive any provincial or federal subsidies?

Mr. Daniel Pearl: At the beginning of the Benny Farm project, it was very difficult for us to get funds from the three levels of government. We had money from the federal government but not the provincial government, or from the municipal government but not the federal government. It took us about fifteen years to be able to get the three levels of government to contribute. However, it necessary for us to get funds from the three levels of government but not because renovations cost more since we were able to demonstrate that renovating could ensure better quality at less cost. However, there are many barriers to getting funds from the three levels of government. That has been one of our biggest issues.

Starting a pilot project is rather complicated. However, Mr. Murray did raise an excellent point when he said that density at Benny Farm was not high enough. We have always insisted on keeping all the existing buildings and we wanted to add more. In that way, we would be able to fill more needs than if we stuck to one type of housing only. One should not think of young families only. Three-story buildings without elevator are not for everyone. So our idea was to integrate several different types of housing on the same site and to include other uses, such as a sports arena or a CLSC. That would give us the opportunity to use residual energy by storing it in a central system in order to redistribute it for other uses. However, this is still very problematic. We find that there is still not enough support for connecting clients.

We worked with Alex on the legal issues and tried to see how several different non-profit cooperatives or organizations could share geothermal wells. It is not easy. Even those who support this system fight about it.

Legal issues are one of our barriers. We need grants as much for legal matters as for technical issues.

Ms. Paule Brunelle: I found one of your statements absolutely amazing. According to you, the situation in Quebec is difficult because the production of power is a monopoly. I understand that our rates are low but, unless I am mistaken, hydropower is clean energy, green energy. Why would that be a problem for you?

Mr. Daniel Pearl: I may have spoken too fast and the interpreters may have been unable to translate my thoughts. I apologize.

One of our problems in Quebec is that each dollar spent on one kilowatt of power is a lost opportunity to displace that kilowatt in Vermont where they use coal. We believe this to be a problem. Nine grams of carbon per ton is not helping us. This is only from calculations relating to old hydroelectric systems that have been in existence for forty years. Now, with the new projects, we have indications that for the first time there will be serious problems of greenhouse gases because of damages to our forests and to our biodiversity systems. As Alex told you, it is much more effective to install systems in existing buildings than building new hydroelectric systems.

● (1630)

Mr. Alex Hill: I would like to add something. I will answer in English because I am more comfortable in that language.

[*English*]

Also, the price of electricity in Quebec for end-users is subject to a lot of pressure in the coming years, since Hydro-Québec has been split into three different companies: production, distribution, and retail. Retail now buys all of its additional energy at market prices. All new demand comes at a loss to Hydro-Québec retail.

This year, when oil prices were very high, we were getting calls every day from homeowners who wanted to switch from heating oil to electricity. That's 20% to 30% of the residential market right there switching to electricity, new demand.

Electric cars.... The Prius, which is the most successful hybrid model, is going to go to a plug-in model in its next form next year. We're going to have electric cars. All of this is going to compete with the existing capacity on the grid. And that's not just going to happen in Quebec; it's going to happen all across Canada. If we don't have ways of localized production that reduce the strain on this grid, we're not going to be able to deliver things like electric cars and green energy to people's homes. So it's very important that we consider a fair price for the production of energy inside the city.

I'm currently building a net-zero house, a very similar program, in the same program as the Minto home in Montreal. It's a three-unit condominium. We've run into exactly that problem of if we produce extra energy we don't get a credit for it. We're producing the energy right where it's needed, as opposed to in the north of Quebec and transferring it down. We're reducing the strain on that grid on the hottest says of the summer, and we have very little benefit to show for that.

[*Translation*]

Ms. Paule Brunelle: I hope it is not based on manure, however.

Some hon. members: Oh, oh!

Ms. Paule Brunelle: Mr. Murray, you referred to public transit, where our government does not spend very much. You stated that our government funds urban sprawl. Could you be more specific? Is it not Canadians themselves who want to live in suburbia? Our government certainly does not force people to leave downtown and settle in suburbia. Could you explain your thinking?

[*English*]

Mr. Glen Murray: The intention in what people do and the results are not always the same thing.

I'll give you an example from when I was mayor, because I know that best. In Winnipeg, every time there was a federal infrastructure program.... And they're not bad things. Thank God the federal government got involved in them. And I'm not making any partisan comment, because I think, quite frankly, all of us who have been in politics wear this fairly equally. Everyone gets money. We have the great peanut butter theory in Canada. Everyone gets the same amount of money for the same thing, which has, I think, been a disaster.

So areas that already have roads and bridges and sewers and water get money that goes into repairing broken water, sewer, and that. I won't get into it, but there have been all kinds of processes in Canada in public policy and taxation that have undermined the success of large urban downtowns in larger cities and destroyed the main streets of many small rural communities.

We subsidize. And I don't have time, but if you want us to write a brief on that, I'll submit it—about the tax system and how the way provincial and federal governments together spend money and tax has created a fundamental disadvantage. One of them is the way the assessment system works.

When provincial governments assess property, they assess buildings very heavily and land very lightly. So a Wal-Mart parking lot isn't taxed very much, but a Hudson's Bay, or in Montreal, the old Dupuis Frères store, lot to lot, pay huge taxes on their buildings. High-density residential and commercial pay 150% to 200% more property taxes than low-density cinder-block buildings in peripheral industrial parks that you cannot service with public transit.

I could go on through provincial sales tax, federal income tax, federal corporate tax. I would tell you I haven't been able to find a tax in Canada that doesn't have an anti-urban, anti-rural bias. It subsidizes low-density, auto-dependent.... It also subsidizes different energy choices.

Direct federal spending, when we get into the shovels-in-the-ground mentality—this isn't the first time, and I don't think anyone's clean on this one, because every party of every stripe in almost every government has used that argument in that exact language—skips through planning and skips through regulatory process.

I think when that happens and everyone gets the same thing.... What was happening was that the sewage treatment plant built outside the city of Winnipeg, or the subsidization of natural gas extension, or a large road that no one could reasonably afford to build, or the subsidy of trunk water and sewer to low-density.... It's not picked up on the property taxes or on the utility bills of those homeowners. It's heavily subsidized by the federal and provincial governments, which makes that development now affordable when it wouldn't be. What it does is it now makes the existing service land in the urban area or in the small rural community that already has services lose its competitive advantage. Because now what you've done is you've taken an area that was unserviced, that wasn't economical to service, that the market wouldn't support and isn't a good environmental choice, and you've had the big hand of provincial and federal governments lower the cost of it using federal and provincial spending undermine to make it equally or less expensive to develop on that kind of land. So you're subsidizing sprawl in that sense.

You can look at natural gas pipeline extensions in small communities. You can look at a sewage treatment plant that was built just outside of Winnipeg that gave them the cheapest water and sewer in Manitoba, and they didn't have to pay for it. And everyone else, whether they were in Portage la Prairie or in Winnipeg, had to pay for their own water and sewer and have higher rates. That's what I mean by perverse subsidy.

I will close by simply saying one last sentence, Mr. Chairman. I appreciate your indulgence.

The International Institute on Sustainable Development, set up by the Mulroney government, did a major paper on perverse subsidy in Canada, and it would answer your question across the country in detail, a case-by-case of how that works.

Thank you, sir.

● (1635)

The Chair: Thank you.

Merci, Madame Brunelle.

Now to the NDP, Mr. Cullen, for up to seven minutes.

Mr. Nathan Cullen (Skeena—Bulkley Valley, NDP): Thank you, Chair.

This has been very good. I very much appreciate the direct answers. It's probably because you folks are somewhat engaged in the actual doing of things. We often get to sit with the people who don't necessarily do a lot.

Mr. Nickel, I wanted to pick up on a point. You talked about waste.

We hosted a conference in northern B.C.—it must have been 10 or 12 years ago—called Zero Waste Northwest. No one understood what we were talking about. It was an effort to try to change the terminology we use around some of these things. When something is classified as waste, by definition we no longer have value on it; we no longer consider it. Yet we pay for it. Mr. Murray was talking about perverse subsidies when we try to handle waste streams and such.

When you approach the financial markets right now, as you folks have gone through the first initial expansion, is it coming to the point where what you're talking about is seen as a proper energy source, as something that's just as viable as an oil well project in Alberta, or are you still struggling with the culture of things being seen as waste?

Mr. Trevor Nickel: Well, I wish.

We are still struggling with it very much, and not just with the idea of waste. We've come to the point where we can educate investors and we can educate consumers by saying there's no such thing as waste, really. They're really just resources that either have a negative value or a positive value because there's a market driving them in either direction. The most sophisticated investors generally understand that.

On the other hand, it's very difficult to gain financing for renewable energy projects, in general, because there's this massive and rather unfair risk premium applied to anything that's new. There's a real investor xenophobia out there about that. Even though anaerobic digestion has been done in every gut since the gut evolved, this is still seen as new.

Mr. Daniel Pearl: We're working on a project in Montreal that's trying to do zero waste by 2020. There's a twofold process. One process is to look at a technology, a pneumatic, centralized waste system, which actually takes the responsibility, to a certain extent, away from the resident. The second one is to actually change our living habits and go about it from a low-technology perspective. We're in the midst of discussing this with the City of Montreal. We don't know which way they're going to go.

One of the examples I have, which is very frustrating, is happening in London, England. Everybody knows about the amazing requirement to have 5% renewables, and yet at the same time they're taking waste wood chips from outside of the city and trucking them in every day. The amount of carbon that's related to the transport to actually truck in the wood chips is actually worse than the actual burning and saving of the waste, and it's turning "waste" into a verb and not a noun.

I agree with Mr. Murray's attitude that we cannot look at one item in isolation. We have to understand the entire life cycle analysis of any of the systems we're talking about.

I know this lack of cyclical, holistic thinking is very exhausting—and I appreciate Andrew Pride's comment on how exhausting this exercise is—but as we simplify in order to pass subsidy strategies, we actually shoot ourselves in the foot. There's a built-in complexity that's healthy and that's related to a certain duplicity that's important.

● (1640)

Mr. Nathan Cullen: Thank you.

I have a question for Mr. Rogers.

Is the Minto company sitting in the middle of the spectrum in terms of developers with regard to this question? Are you at the higher end? Where do you sit? Are you the norm, I suppose? I'm trying to understand.

The reason I ask is that we at this committee often hear from the great projects, the success stories, the things that are pulled off, but we don't often get a sense of where the industry as a whole is, and that's actually in some ways more important for us to know.

Mr. Greg Rogers: Where we position ourselves is in front of the industry. We don't talk about it as much as we just do it. Andrew's team does a lot of work for the company on new innovations such as turbines, and we test them out; we pilot them. We haven't done much in the waste industry, but there's a good business opportunity we're going to talk about after this.

There's a lot we do. As I say, we try to position ourselves out in front. They call it the bleeding edge for a reason. It hurts to be out there sometimes.

I'll be honest. Our motivation is we have gross rents in a rising cost environment to the extent of our 16,000 residential units. Our costs are rising and the rents don't change, so we have a real financial incentive to work hard, and it's tough. Our returns are eroded every year.

Mr. Nathan Cullen: We've struggled with this government and the previous one around the procurement aspect of this. Is government betting on the next energy? Or is it hedging its bets in the past? Firming up government procurement policy into green energy, whether it's buying vehicles or buildings, has been extraordinarily frustrating.

Mr. Murray, you spoke with some passion. Some other witnesses here and others have mentioned about pricing carbon, about that fork in the road, I suppose, where we're at. We're in an economic crisis, and I think because it's easier to explain to Canadians, the government uses bridges and roads to describe how it's going to stimulate the economy on an infrastructure level, whereas some of the things we've talked about today take more than an eight-second soundbite.

How do we move past that and choose the right fork in the road so the cyclical nature of this doesn't come back and we're not sitting here, 20 years from Mr. Harper's government, looking at a report done 40 years ago by Mr. Mulroney's government, saying we should take the correct route? What is the language that needs to be adapted and adopted by this committee when we go forcefully to government and say that it needs to change course?

Mr. Glen Murray: I think it's asking if they've done their homework before they get the money. Do you know what I mean?

Mr. Nathan Cullen: But we have speed needs. We have an economy in crisis. We need to get it out the door yesterday.

Mr. Glen Murray: Then I don't think you should call it an economic stimulus.

A bridge across the Red River in Manitoba, which I can watch one car go across in an hour, was part of a political stimulus package. Mirabel International Airport, which does not get too many flights these days, was part of a political stimulus package. A natural gas system on the prairies was part of a political stimulus package. Everybody wanted to get bureaucracy out of the way.

If you funded Guelph, if you funded Montreal, if you funded Calgary, if you funded the community that these folks are in, they all have community energy plans. They've all assessed what the best choices are. They've all figured it out. The Calgary system right now will avoid about $30 billion in unnecessary public and private sector costs because they've done their homework.

There's no shortcut. You have to do your homework. I can point to a hundred different municipal, federal, and provincial public infrastructure expenditures that drove sprawl that was unsustainable. With an aging population, seniors won't be able to live in those communities. There's all kinds of other non-energy clutter. And they're more expensive to maintain—for instance, the roads and bridges that we will never, in my lifetime...because we didn't put in public transit routes where it was cheaper to put highways. We put in a BRT because it was cheaper.

That's part of it. The other thing is return on investment. When I was Mayor of Winnipeg, I cut property taxes by 2% per year. I reduced the entire debt of the municipality by 50% in just six years. I was the most fiscally conservative mayor they've had. We cut the city's input in the GDP from 6.1% to 4.7%. You can go to Moody's, you can go to Standard & Poor's, and you won't find a government.... We spent less money and had 20% less staff at the end. I was CUPE- and labour-endorsed in both elections. I built spending in the city by building the tax burden and lowering people's taxes.

My biggest criticism of government right now—of all of you, but not as individuals, because I think you're all hard-working members of Parliament who are trying to make a difference in the world—is that we have forgotten that when we use the word "investment" in infrastructure, there has to be return on investment. It should generate revenue and increase economic activity at a greater rate than it's increasing debt. It should not leave municipalities with operating costs that they can't sustain.

The people who use the infrastructure should pay for it. If it's an automobile-dependent piece of infrastructure, little elderly senior citizens in their homes shouldn't be subsidizing it on their property taxes. Those of us who drive vehicles should be paying a greater share at the pump. We have to have some rationale between user pay and that. I think that right now we're asking everyone else to pay for it...and that there's a possibility, because there is no return on investment.

I practised this for six years as mayor. You can go to every member who served with me on that city council or to the Chamber of Commerce. The city hasn't had a property tax increase since I left. It's done a better job than many cities at closing its infrastructure deficit.

So when you spend money, if you spend smart in your communities, and you work with municipalities and provinces, and you work with organizations like Benny Farm, you give them a chance to participate in this. You ask them, "For every dollar we're giving you, what is the dollar back?" We averaged about $9 of private sector and non-profit funding. If you look at the housing programs, we grew the tax base, property values came up, people got the value in their homes back, and neighbourhoods became safer.

We as the Urban Institute do this in seven countries around the world right now. With all of the expertise you have, I've never been asked for help by the federal government, nor has the International Centre for Sustainable Cities, nor has IISD—all established by the federal government, by both your party previously, and yours, who were very critical in B.C. in establishing these things.

Why don't you come back and ask us to do these things for you? Why don't you ask us to help you spend smarter? Why don't you engage us in a partnership with you? Invite the non-profit and private sector to work with you to come up with delivery assessment. I'll bet you that you'll get there a lot faster. You'll get more leverage. You'll get more built for fewer dollars, and they'll be more sustainable and greener. You'll create more jobs than if you simply try to do it on your own.

That would be my best advice. Use the community planning model. Try to get community energy plans out there. You'll be there faster and you'll be much more popular. All of you will find it much easier to get re-elected.

● (1645)

The Chair: Thank you, Mr. Murray.

Thank you, Mr. Cullen.

We'll go to the government side now, to Mr. Anderson. If there is some time left, we'll go to Mr. Shory.

Oh, you're going to start, Mr. Shory? Go ahead.

Mr. Devinder Shory (Calgary Northeast, CPC): Yes, thank you, Mr. Chair.

I have only one question, and it's for Mr. Pride.

Mr. Pride, you mentioned a single home system somewhere. Can you elaborate a little on what you mean by "single"? Is there only one system? And is that system practical from a cost perspective?

Mr. Andrew Pride: If I understand your question correctly, we constructed a net zero project that produced as much energy as it consumed. Further to your question of whether it is affordable, we have feed-through tariffs here in Ontario, so putting photovoltaic cells up on the roof pays somewhere between 40 cents and 80 cents a kilowatt-hour, an astronomical sum of money, which makes the project a bit more affordable for people to use.

Overall, I would say that you can build a single family home that is tighter and more efficient, using way less natural resources, from wood to energy to electricity to water, and have it as a wonderful example of why you should buy, but unfortunately, the price goes up and it becomes a more expensive home. Your overall operating cost as a homeowner is lower, your mortgage cost is a little bit higher, and your expenditures are way lower, so you wind up with an overall affordable situation. Your cashflow is always positive, but your home price goes up.

The consumer today looks at that first home cost and says, "Oh, I don't want to pay that much money". The federal government looks at first home costs, where the GST rebate comes in at $400,000, and for anything below that, you're okay. If I add $100,000 to the home, a $325,000 home now has GST applied to it. That's all because of renewable energies that are being put on the roof and because of having a better and efficient home. It's a more cost-effective solution for the homeowner, but they have to pay GST and all these other things because now it's an expensive home. It doesn't make sense.

We really need to see a way to say that renewable energies and energy efficiency should be excluded from the price of the home. The consumer really needs to understand that. I think that's where we can all start delivering a better message. It's the cost of home ownership that's important; it's your mortgage cost and your utility costs that add up to what a home price is, not $300,000 or $400,000.

Overall, yes, it's very affordable. Yes, it's great for the environment. But we have bad marketing and bad education out there from the entire community and we need to do better at that.

● (1650)

Mr. Daniel Pearl: I have literally just a one-sentence comment.

Mr. Shory, one of the things I also teach is sustainable design. When our students do their first energy audit on a single house, they come to the conclusion that we can save 75% of our energy costs by turning a single house into an apartment building or a townhouse. So literally the first step, before we look at district energy, is understanding how to live in a more dense and sustainable fashion. In some ways, I think the technology is way more expensive and is taking away our capacity to multiply and replicate the example across the country.

The Chair: Mr. Anderson, go ahead.

Mr. David Anderson (Cypress Hills—Grasslands, CPC): I would like to follow up on that with Mr. Pride. We had some folks in here from Alberta who did have a figure on what the extra cost was on their development in terms of the market. Do you have a figure that you're willing to give us on what the extra cost would be if we were to develop a neighbourhood of these houses?

Mr. Andrew Pride: We're still working through the exact numbers. One of the difficulties we're having today is that there are very few people to feed into the green-collar jobs. There's a real lack of capacity in the industry today to provide the necessary equipment and the necessary labour to build high-performance buildings. That's a huge restriction that we have today, so to get firm pricing is a very difficult thing to do.

We're anticipating looking at somewhere in the order of a $300,000 home becoming a $450,000 home, so it's in the order of $150,000. Interestingly enough, a $600,000 home becomes a $750,000 home. It's not a percentage increase, necessarily; it's just a fixed cost to increase to a higher level of efficiency.

Again, when we look at efficiency, we're always looking at reducing the amount of materials and energy needed and then putting technology on top of it afterwards to get it to a net zero perspective.

Mr. David Anderson: Thank you. That's actually pretty close to the number we heard from the other folks as well.

I don't think I have a lot of time left here—

The Chair: You still have six minutes.

An hon. member: That's a lot of questions.

Mr. David Anderson: Six minutes? Good. I do have a lot of questions.

I would like to address the issue of monopoly regulators. You had a couple of comments on that, but I would like to hear from the other folks on the issue of monopoly regulators versus the challenges of deregulation. I would like to start on this side of the table, because I think Alberta is in a situation that is a little different. In Saskatchewan, we have a monopoly regulator as well, and I know that restricts some of the development. I am interested in your conversation on that.

The Chair: Mr. Nickel.

Mr. Trevor Nickel: Right.

In Alberta, the production of electricity and the retailing of electricity is almost completely deregulated, but the distribution of electricity and the transmission of electricity is still a monopoly. Unfortunately, if you want to sell electricity, you have to go through the distribution of electricity. So there's some of that still going on.

I can speak very briefly to two particular examples of working with the energy companies, and one case is Saskatchewan. An anaerobic digestion project was put up in Saskatchewan, at Cudworth—a very good project, very good technology, should have worked. However, dealing with a monopoly power company in Saskatchewan proved to be too much of a management burden for that company. There were other problems, but that could be pointed out as one of the reasons that particular project is a complete failure at this time.

On the other hand, in our project we worked very closely with the power distribution company and we were able to overcome some of the burdens, which they weren't able to overcome, because of the looming field of competition in that environment.

I don't have any experience with Ontario, so I'll pass on that.

● (1655)

Mr. David Anderson: Are there any recommendations you might have, as well, while you're going? But I want to hear from each group, as well.

Mr. Trevor Nickel: For small power producers, the right of access to the grid is important. In Alberta, if you get a permit to produce, you must be connected. There will always be an argument about who pays for how much of that connection cost, and that's fine, but you have the right of access to the grid. It is different in other jurisdictions, and that is a problem for getting these projects hooked up.

Mr. David Anderson: Anybody else?

Mr. Andrew Pride: Being Ontario-focused mostly, we're in a mostly regulated electricity supply and an unregulated gas supply. It's a double-edged sword. Clearly to us, the benefit of being deregulated is massive. If we disconnect subsidies to electricity, we'll actually see real conservation happening. When the electricity market opened up in Ontario, on the residential level we saw a lot of activity of people trying to reduce their consumption and trying to change their behaviours. Frankly, behavioural change is around 25% to 50% opportunity on energy savings, so it's big. So if we get real price-point drivers, that would be really important to us.

The downside is that apartment buildings and commercial buildings can be gross lease opportunities or situations, where the landlord is paying all the cost and the user is using all of the commodity. There's a disconnect there. Now you're increasing the cost for the landlord, but the user continues to use as they would have, because they're not seeing that price point. I think there's a regulatory fix that needs to happen first to make sure those who are using are paying and those who are supporting that, enabling that, are not paying for it. Then going to a deregulated marketplace becomes much easier, much more straightforward.

So I'd say fix the regulations so that if I use, I pay; if I'm not using, then it's not my responsibility. Let the person using it pay for it, and then open up the market so the real price drivers come out.

Mr. Glen Murray: I would agree with everything that Andrew said.

The other challenge, both in the public sector and in the private sector, is that the technologies that are the most energy efficient tend to be the most expensive upfront, and one of the problems for municipal governments, which are very constrained, is that their capital budgets and their operating budgets are separate. So municipalities will buy street lighting, for example, that is the least expensive, but 86% of the cost to the municipality is in the life cycle of the operations of that.

There is some excellent work that has been done and is continuing by Bob Page, who took over from me as chair of the National Round Table on the Environment and the Economy, which is your agency to advise you as parliamentarians. It has done world-recognized work in this area about how to manage market shift, because you have the older technologies that may be cheaper, but how do you transition that?

I would say the Government of Canada, Natural Resources Canada, your own department, have done some work. I went to brief the Swedes, the Norwegians, the British. I was in London. I was invited by four or five national governments that are leading, ahead of Canada, that are representing work that the taxpayers of Canada paid for in this very area. So you might want to invite Bob Page to come to speak to you and ask him that question, because I don't speak for the national round table any more, but I can assure you they could answer that question in full.

There are some ways that you could help. Going back to Mr. Regan's comment before the question, the federal government could help municipalities by creating the situation, as with individual citizens and businesses, to amortize those costs against the lower operating cost, if you could provide depreciation allowances or tax write-offs that levelled the playing field for them. If you don't want to put a price on carbon, which is how the Swedes have done it, I'd love to hear the argument against a proper carbon pricing system that must include cap and trade in carbon. I've seen five countries do it, and they are so far ahead of us and their tax burden has been reduced and their energy sectors, including oil producers, are doing better.

I spent three years studying this. We have large support in Alberta, in the oil patch, for these kinds of things. And you now have a chair out of the oil patch who I think would agree with me—Bob Page—that you can get a mechanism that will get you a bigger economic bounce, help you fund carbon storage and sequestration, help clean up Canada's oil industry at the same time, and help municipalities and individuals fund and remove the financial barriers to our local governments and to our citizens being able to manage and make the right financial choice. If you talk to all of us, I think we would all agree that the pricing problem is a very real one.

I suggested I wasn't going to talk about pricing because I said if you fund plans and not projects the project will fund by the plan. If you can get the pricing right and end the perverse subsidies, you'll stop penalizing all of us. I think every one of us would tell you the current taxation and pricing system penalizes us. It makes it inherently more expensive to do the right thing.

I don't think that's anyone's agenda here, Mr. Anderson. I think we would be on the same page.

It is just a matter of getting the right policy solutions in place, and I would use your own expertise. I would start with the national round table, which I think are recognized as world leaders, to answer that question for you.

● (1700)

Mr. Daniel Pearl: I have one more comment, Mr. Anderson.

The Chair: Be very brief, please.

Mr. Daniel Pearl: It's an excellent point. We're working on a new project now, again, a sustainable net-zero community energy project by 2020. One of the problems we have with a monopoly system is that if you try to get the promoter, the land developer, to put in an infrastructure underneath the road, he needs first of all to get permission from the municipality to put the infrastructure in, and he needs to have some idea that eventually there won't be a monopoly on the distribution of energy in that loop. If we don't get either of those solved now, we're building a community a bit like Rome, where the roads are there for thousands of years, and if we have to rip them up every time to put in the district energy system in order to share that energy, basically we are removing the whole concept of resilience, which is the way I started off the day.

The Chair: Thank you.

Thank you, Mr. Anderson, Mr. Shory.

Now, on the five-minute round, Mr. Tonks.

Mr. Alan Tonks (York South—Weston, Lib.): Thank you very much, Mr. Chairman.

This has been a very comprehensive discussion from a variety of perspectives and a number of things come out. Across the country, there is no one-size-fits-all matched to the energy menu of choices and technology to the plan development. But if I can be a little more.... There are rural applications, there are suburban, and there are urban applications with respect to the experience in Toronto.

Glen, you mentioned the Toronto district heating and cooling example as a best practice, and I certainly would agree with you on that.

The issue of smart growth and intensification is a lesson well learned. The objective of these hearings is to attempt to have a strategy where instead of this experiential looking backward and repeating the mistakes of the past, we're looking at the opportunities to take large developments off the grid, and in fact not only take them off the grid, but offer the opportunity to contribute to the grid and reinvest those moneys into sustainable development parts of projects.

Now, in Toronto, as in many of the large urban areas, the challenge is that you don't just have a single development; you have a 60-acre brownfield site with a choice of options. In a mixed-use development, you can try to include many jobs that would be localized to reduce commuter times to try to add to your transit system in a sustainable way, to serve that development but also to integrate with the rest of the system. So the issue becomes very much what you have said: it's matching a planning template to an action plan that's going to add the value.

My question is whether there is a pilot project in Canada that has attempted to look at those objectives—some of which I mentioned—that could be used as an option of choice that could be looked at by large cities right across the country. It would have the costs and benefits worked out and the financial backing that would be required that wouldn't be sort of a grant on a specific road improvement or a specific infrastructure piece, but would be a more comprehensive grant and support regime for the concept of that sustainable community. In Toronto, I can think of a half a dozen right away, a mixture of industrial and commercial and residential uses with a transit system that's localized but is part of the growth strategy for the Toronto area. So is there an example, or would you support a pilot project that would attempt to have the objectives and meet them through the program that would be suggested?

● (1705)

Mr. Glen Murray: Well....

The Chair: We have about a minute for an answer. Great question, though, Mr. Tonks.

Some hon. members: Oh, oh!

Mr. Glen Murray: The best answer I could give you is Calgary. I think that's the best model. If the federal government told the Government of Alberta that they would fund matching dollars, but Alberta would have to follow the energy plan that they have now approved with the City of Calgary, and get the right technologies and follow the plan through to all of the savings, that would do it.

Ontario Power Authority looked at the Calgary plan and said exactly what you said, all kinds of good things. They knew we'd been involved with a deep water cooling. They looked at Guelph, looked at the brown...the areas that are at risk, and they asked if we could do the same thing. And I'm hoping the Ontario government, when they come to our friends here in the federal government and say let's replicate the Calgary model, because now that everyone can sell into the grid...but how do we know that it's not a free-for-all and chaotic? How do we make sure that we're getting the right technologies that are actually durable, sustainable, get the kind of energy efficiency reductions in place and do that?

Guelph is another Okotoks. I think what you just heard from our friends here near Vegreville.... But you've got those. But I think the plan is important. There's lots of good stuff happening in Quebec right now. They have traditionally had integrated energy planning, and they're arguably ahead of many. You could take up any of those. And what Daniel said earlier about the relationship between price and plan is also important.

The federal government simply said that the provincial governments and municipalities have official plans; they're legal documents that determine what plan to use, they determine everything. We will use those. We won't micromanage the country; we will use the provincial and municipal official plans. And as long as energy is in them, we will fund that plan, and the cities and the province and the private sector can then develop the partnerships and deliver the energy. It would be a pretty fast and efficient system to rebuild our energy infrastructure.

The Chair: Thank you.

Thank you, Mr. Tonks.

Now we'll go to Mr. Allen, for up to five minutes.

Mr. Mike Allen (Tobique—Mactaquac, CPC): Thank you, Mr. Chair, and thank you, everybody, for being here.

The first question, to Mr. Nickel, is with respect to the development.

I was very intrigued by your development and the closed loop you have there. You say you're at one megawatt now, and you're expanding...you said a 400% expansion. Does that mean you're going to four megawatts, or is it going to be plus or minus that?

Mr. Trevor Nickel: It's a bit more complicated than that.

We'll be able to take 400 tonnes of manure, plus 40 to 70 tonnes of some other products. We've identified municipal solid waste as something we want to take into that particular facility. The amount of gas we're able to produce is almost five-plus times as much as we're currently able to produce.

Unfortunately, the energy required in the whole system doesn't require exactly 33% electricity and 67% heat, so we'll be installing an additional 1.4 megawatts of generating capacity, bringing our total to 2.4 megawatts. The total thermal capacity there is 10.5 megawatts. So we're swaying in favour of thermal in that particular location.

If we were to make only electricity, it would be between four and a half and five and a half megawatts, depending on the exact recipe we'd put in there.

Mr. Mike Allen: I want to talk a bit about your investment model. Your recommendations were on the loan guarantee side, but you didn't say there was any kind of government support into this model. Are you able to share your investment model with us?

Obviously the people who are investing, whether it's a cooperative or whatever, are seeing a return in this; otherwise, they wouldn't be in it. Can you tell us how that investment model works?

The Chair: Mr. Chrapko, go ahead.

Mr. Shane Chrapko: We're getting some support from the provincial government. We don't have financial closure yet, but at the end of the day we will probably be one-third government support, from a variety of programs, one-third debt, and one-third equity.

Mr. Mike Allen: Okay, so it could be from two levels of government then.

Mr. Shane Chrapko: It absolutely is. Yes.

Mr. Mike Allen: Just on the ethanol side?

Mr. Shane Chrapko: Sorry?

Mr. Mike Allen: Is the federal government support going to come on the ethanol piece of it?

Mr. Shane Chrapko: And technology—STDC.

● (1710)

Mr. Mike Allen: Thank you.

The next question I'd like to ask is for Mr. Pride.

You were talking about government procurement. I think it was Mr. Pride who said that Public Works and Government Services Canada policies were forcing you to install equipment that really didn't make sense. Can you elaborate on that a bit? I find that interesting. Is that because of the way the sale and leaseback agreement is negotiated, or how PWGSC is negotiating the rents?

Mr. Greg Rogers: The government procurement of office space is typically on a semi-gross basis, which means they pay a defined rent that includes a number of operating costs. Included in those operating costs is a defined amount for energy. And it's indexed. It increases every year by the amount of the index. If I change equipment in a building, I'm inclined to change the equipment such that the energy cost remains the same. If it goes higher, I eat it; if it goes lower, they benefit.

I'm incentivized under the terms of a gross lease arrangement to keep those energy costs the same because it's a defined amount in the lease. They get the benefit; if I over-invest and produce a saving, they get it. I get no recovery of my investment in that benefit to the crown and to the country.

Under a normal net lease arrangement with the private sector, I would go to the tenants in a building and say, “Look, I have an opportunity to reduce energy costs by 50¢ a square foot. It's going to cost me some extra money. Of that 50¢ a square foot, I need 40¢ to recover; I'll give you 10¢ back. The alternative is we can remain as we are with no change.” So there's a small benefit to them. I get a recovery of my additional cost over a period, typically, of between 15 and 20 years. That's the way it would work in the private sector.

We have approached PWGSC on a couple of occasions and said this is the right thing, and they said yes, but the policy says we can't.

Mr. Mike Allen: Okay.

Mr. Chair, how much time do I have left?

The Chair: You are out of time.

Madame Bonsant, up to five minutes.

[*Translation*]

Ms. France Bonsant (Compton—Stanstead, BQ): You talk about subsidies. You know that the federal government provides subsidies to oil companies through billions of dollars of tax credits each year. We will pay for carbon sequestration through our taxes, as well as for cleaning up Alberta. Seen from space, oil sands operations look like the end of the world.

I am asking that question because we absolutely have to reduce our greenhouse gas emissions before 2050 because of climate change. If we do not, some countries will have to displace their populations and some cities will disappear.

Since I also used to be a city councillor, I am aware of the situation. We do not want any interference from the federal government in our cities. It is already hard enough to answer to the provincial government without also having to answer to the federal government. By the way, that is one of the reasons why I am a sovereignist.

How could we ask cities to plan for the arrival of millions and millions of refugees from all over the world who will have no place to live because of the increased flooding of our planet? That is a sustainable development issue.

Mr. Glen Murray: That is an excellent question. Very difficult to answer but I will try.

● (1715)

Ms. France Bonsant: You can answer in English, I will understand.

[*English*]

Mr. Glen Murray: I think we have a couple of crises. The elephant in the room that we're not talking about is the fact that we're about to lose 35% of the species on this planet between now and 2050. I would love to hear what the Government of Canada is going to do about that.

Of the 20 most common bird species in North America, for example, we've lost 50% of the population within the last few years, which is way ahead of any of the estimates.

We're all nodding here and some of you are smiling, but the biggest problem we're going to have is the loss of diversity and resilience. It's going to kill agriculture. It's not about rising waters; it's about the loss of species.

As for our part of our challenge, how will that affect cities? It's going to reorient us to food supply and to those kinds of changes. Where is our food going to come from? I'm a western Canadian and have spent most of my life on the prairies, and I looked at what some of the water supplies mean to cities like Regina and Calgary, and where the water is coming from to grow that wheat. And now we're competing for food, because cities are driving up energy costs.

I think those folks at the other end of the table are brilliant, because they're shifting away from using food as a supply, to municipal waste, and farm waste, and I congratulate you. Thank God for what you're doing. And the energy payback you've had is extraordinary, by any standard. So that's the big challenge.

The other big problem we're going to have in our Canadian cities is that the mean temperature of continents like Africa isn't going up by two degrees; it's going up by five to ten degrees. One-third of the world's population by 2015 will lose its water supply. Canada is going to be heavily pressured to accept environmental refugees, and we have no population policy in Canada.

I will tell you, as mayor of the city of Winnipeg, which struggled to retain population, we had a great relationship with the federal and provincial government—with the government from Mr. Dewar's party, and, at the time, with the Chrétien and Martin governments—and I think it continues to this day with Mr. Harper's government. How we are going to deal with the environmental implications of how we settle people, and how we're going to deal with those tensions, is a subject for major national policy.

Parliamentarians, I have to tell you, I have huge thanks for you. I know you have a tough job....

Sorry. Yes, Madam. I apologize.

[*Translation*]

Ms. France Bonsant: Spoken like a true politician.

Mr. Glen Murray: You are very kind. Thank you.

Ms. France Bonsant: I am not a good politician but I am a good representative of my electors. In my riding, Enerkem Is starting to produce energy from all types of waste.

We are going to be faced with another problem: people living close to water will not have any drinking water. Seawater is not good for farming. That will become an additional problem.

Do you not think that our government should invest in research and development on desalinating seawater to make sure that people have enough water on this planet?

Some hon. members: Israel does it.

Ms. France Bonsant: Really? It is not being done very much in Africa however. They do not have money for that.

[*English*]

Mr. Glen Murray: The Canadian Urban Institute does a lot of work in Africa, in Ethiopia and Somaliland, some with the federal government as a partner and some on our own. Those are very critical issues.

The other thing I want to say—and it might be a bit controversial—is that we have existing energy architecture in this country. We have existing energy systems. I think in Ontario we're going to have to increase nuclear by about 50%, and that's not popular.

We have to clean coal in Saskatchewan and Alberta simply because we do have clean coal technologies that I think work, and you can't economically replace that.

We are dependent on oil exports for a lot of our national wealth. I think we have the technologies to clean them up, but I don't think they're tested yet, because I don't think anyone, politically or realistically, in this country is going to compromise our energy.

Those are all tough decisions.

Water supply is going to be one of the biggest issues. Mr. Cullen has spoken out articulately about this as well many times. How do we have water security? That's going to be an issue. These are huge things.

We have very good relations, I think, with all parties around this table. At the Urban Institute one of the things we're working on with IPAC, which you would be familiar with, is trying to launch a population strategy for Canada. We're the only OECD country that doesn't have a population strategy, so we would be talking about energy mapping, and all of the things you just....

How do you create—which many countries have done—the capacity in rural and urban Canada to sustain sufficient population? As I said, we're the only OECD country that doesn't have that, and we'd love to invite all of you to be part of this dialogue about how we develop a population strategy.

Madam, you have raised some of the most critical issues of our time, and they go way beyond the issue of what we're talking about today. They actually drive the decisions we're making today. You've blown it up into the bigger question—that's the purple elephant in the room that no one really wants to talk about—and I think you've nailed it.

Thank you.

The Chair: Thank you, Mr. Murray.

Merci, Madame Bonsant.

Mr. Regan, go ahead, please, for up to five minutes.

Hon. Geoff Regan: Thank you, Mr. Chairman.

I'm trying to read Mr. Anderson's lips as he's indicating something to me. I'm not sure what it is, but if he has a question for me.... It's really his turn, but I appreciate having an opportunity to ask some more questions.

The Chair: I saw no indication of anyone wanting to—

Hon. Geoff Regan: That's fine. There will be other opportunities, I'm sure.

I have questions for three of you at the moment, but I'm going to save Glen's for last. You'll never guess why.

Let me start with Andrew Pride. Mr. Pride, you talked about regulatory barriers to using rainwater and grey water, and I'd like to know what those are and what level of government they're at.

Mr. Andrew Pride: We had pretty magnificent barriers associated with using rainwater to irrigate our lawns. There was perhaps good but perhaps unnecessary concern about contamination of that rainwater as it came down onto a roof and into a cistern. The concern was that the water would not be good enough for people walking by a sprinkler to drink. So it was a little bit difficult to try to get through all the regulatory aspects of using rainwater for irrigation.

I think it really stemmed from trying to do something different. It wasn't what we traditionally do, and for some reason every time we go down the path of trying to do something different that makes perfectly good sense to everyone, the regulatory barriers come out, and they start saying you can't do it; it's different. You have to be pretty tenacious to beat through that and to get through to where you need to be. There was a regulatory barrier from the city, from the municipality, and from the province, all of which independently said sure, we'll do this, but when we got down to the proof in the pudding, they wouldn't do it. So it was a matter of pushing it through, collaborating, integrating everyone together and asking, why is this a problem? And everyone said, “Well, actually it's not”. We got through the problem, and now this is a common development technique we use in all of our developments in Ontario, and now other developers are picking up on it.

It's amazing that when you change the pace from what is the norm, it's a large obstacle to go through. And thanks go to CMHC, actually, which stepped in and intervened on our behalf, saying this isn't working and we need to correct it; we need to use rainwater harvesting. It was through CMHC's leadership that we actually got to the point where we are putting rainwater harvesting in all of our buildings.

● (1720)

Hon. Geoff Regan: Do you know if it's still an obstacle elsewhere? I know there are places in the U.S. where I've seen water used for irrigation, for watering lawns and so forth, that is pretty smelly stuff. It's been reused a few times, and you certainly wouldn't want to drink it, but that isn't an obstacle.

Mr. Daniel Pearl: Actually we're dealing with an ethical issue when it comes to even using rainwater for irrigation. We feel that grey water should be used, with special taps that actually make sure it's non-potable, so that kids understand this issue. Rainwater should be returned to the aquifer. If we're trying to deal with the fact that we'll be missing water, the more we start to abuse water and don't actually put it back into the aquifer the more serious problems we're going to have long-term. So we've started to deal with that problem at Benny Farm. Even using rainwater for irrigation is a real ethical issue.

Hon. Geoff Regan: The next question is to Mr. Rogers.

You talk about the policies of Public Works and Government Services Canada that require you to put in the wrong equipment. Could you expand on that, please? Tell us what you mean.

Mr. Greg Rogers: I think I just answered that a minute ago.

Hon. Geoff Regan: Sorry.

Mr. Greg Rogers: It was regarding the lease. I was using the example of putting in the equipment. There's a disincentive under a semi-gross-lease arrangement for me to invest in energy-efficient equipment because the energy savings that I would normally use to repay me for the additional investment I've made in that equipment, as opposed to buying the regular stuff, are not permitted by PWGSC. PWGSC will not permit that saving, or any portion of it, to be paid to cover the cost of that better equipment, as would be the case under a private sector arrangement. It would be neutral, in fact slightly better, to PWGSC to go in that direction, to do that kind of a deal with me, but the regulations prevent it.

Hon. Geoff Regan: Thank you for reinforcing the point.

The Chair: Thank you, Mr. Regan.

I'm going to actually ask a question here.

Mr. Chrapko, you're involved in the intellectual properties side of this, and a key part of this new technology being developed is that people can commercialize the intellectual property and make money from it. I'd just like to ask you if there are any particular problems you'd like to mention in the protection and development of the intellectual property side of it.

Mr. Shane Chrapko: In our case, no particular problem, other than going through approaching it from a world-class scale. So it's not just protecting it for Alberta or for Canada; it has to be protected globally, and that's how we approach it.

ARC has been an interesting dance for us, but I think that will get solved fairly quickly.

The Chair: Thank you very much.

Mr. Lobb.

Mr. Ben Lobb (Huron—Bruce, CPC): Thank you very much.

I was in Kitchener maybe a year ago and you were speaking at the Delta there. That was a nice presentation.

The folks at Minto can answer this question, or anybody can answer this as they see fit. In my previous job I worked for a company and I was in charge of the building as far as the relationship goes, I guess. What we found very frustrating was the cam structure, and you've touched on it already. There's really not an incentive for the landlord or the building owner to make any improvements to the building that would reduce costs, such as your heating costs vis-à-vis natural gas and or your electrical costs. Do you have any recommendations or suggestions for that?

I know this is a frustrating thing as a tenant, and the way the landlord situation is set up is they normally add about a 15% cost to it as well, so there's really almost a disincentive for them, because actually the more it costs them the more of a percentage they take.

What are your thoughts on this?

● (1725)

Mr. Greg Rogers: I think there's a really easy answer, and that would be we have agreed under the terms of the gross lease to accept all the energy cost risk. The government would get the benefit of energy costs, should they ever fall. It doesn't happen that often, but it does from time to time. Another way of approaching it would be to say the energy costs are this much going into the deal, they'll be indexed on the way through, and if they happen to be any less than that the landlord is free to use that as a means of recovering investments in equipment that would reduce energy, and they would have to prove it. And they can only get it.

So the landlord then has an incentive to pursue the savings because they're now available to the landlord. Believe me, lots of landlords would be all over it. PWGSC occupies millions of square feet across the country.

Mr. Ben Lobb: I have another one further to that on the building side, and this is really reduction or conservation, as there are many old high-rise office buildings throughout Canada. There are millions of square feet out there—we know this. The region of Waterloo put in a program with a bit of success, I think, on actually looking at all the water that's used—the taps, the toilets, and so forth—because we know there's a tremendous amount. Whether it is on the back end or the front end, whatever way you want to look at it, it's reducing the actual infrastructure costs that they're going to have as the economies expand.

I just wonder if you have any comments, Mr. Murray, on this one. Do you have any ideas or thoughts to help us promote this? I think it was a good program, and it's really tough for a region to promote it, because they have a limited marketing budget.

Mr. Glen Murray: Really quickly, I'd have a look at New Zealand. In the property tax system, they virtually don't tax buildings in New Zealand. They tax land and they have unit charges for services. There is huge incentive to retrofit your building, to build it as high as you can.

The federal government and Natural Resources Canada—your staff in this department are very good. If you could import that knowledge and look at some of the systems that are doing that.... When I said we tax the wrong things, I'm quite radical on this. I think if we just simply tax land, and I don't mean agricultural land—we don't want to tax productive land—but if we did that....

The second thing is that utilities used to allow—if you bought a green technology that was more expensive to buy, a better heating system or better insulation, you could write that off against your utility rates. So your utility rate was sealed, but as you were actually using less energy, the difference for the energy you weren't paying for allowed you to write down the higher cost of the technology.

The federal government has been very good at introducing those kinds of programs. Those would be two examples. But if you wanted something really big and very cool and dramatic, try to negotiate something along the lines of what New Zealand has.

The Chair: Thank you, Mr. Murray.

Actually, we have one final question coming from Mr. Anderson.

Mr. David Anderson: It is a question to Mr. Rogers.

You mentioned that we were number two in something, just behind Germany. Could you just elaborate on that?

Mr. Greg Rogers: Sure. I'll let Andrew answer it. It was his team that went over and was part of the whole event.

Mr. Andrew Pride: Yes. It's part of a program, Sustainable Building Challenge 2008, which runs every three years. It's an international competition for sustainable buildings. A Canadian group put together a submission. There was a Manitoba Hydro building and Minto Roehampton, one of our buildings, that were put forward as key sustainable buildings in Canada, where Canada is going.

It was a competition among many different countries. Germany, of course, came out first because they've got a federal government and an infrastructure that completely supports the idea of sustainability and taxes that are supportive of those who do good things and not of those who don't. So they hit number one. Canada, through what we believe is good leadership from Manitoba Hydro and through ourselves, came in second. So we're quite honoured by that.

It was focused on all the different geographies coming forward and saying what they have done for sustainability, how they've shown green buildings to be a good and practical way.

● (1730)

The Chair: Thank you very much.

Thank you all very much. Two of the witnesses had to leave early to catch a train, and some of our MPs had to leave to catch planes, I know, and others are on the way.

I really do appreciate your input here today; it is very helpful to us in our study and very interesting, fascinating. Thank you all very much.

The meeting is adjourned.

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