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Chair

Mr. Lee Richardson

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● (1540)

[*English*]

The Vice-Chair (Mr. Alan Tonks): Before we start, I have just been informed that Minister Lunn will be appearing next Wednesday, a week from today.

Without any further ado, welcome to Richard Quail, from the Town of Okotoks, and Barb McDougall-Murdoch, coordinator of growth and development for the City of Greater Sudbury.

This is the Standing Committee on Natural Resources, in case anyone is confused about that. It's meeting number 46. Pursuant to Standing Order 108(2), we are studying the greening of electricity consumption in Canada. Today we're very fortunate to have two of the premier municipalities with respect to sustainable development making their deputations before us.

With that introduction, I would now like to introduce the chair.

I understand that we only have these two deputants before us. I have said, Mr. Chairman, that we'd be as flexible as we can with respect to timing, as we just have these two deputants. I'll let the chairman indicate if that's okay.

The Chair (Mr. Lee Richardson (Calgary Centre, CPC)): Thank you, Mr. Tonks.

Sorry for being a little tardy. Mr. Holland will be along shortly, too. He has some business in the House.

Welcome, fellow Albertans, and Ms. McDougall-Murdoch as well.

I don't know if Mr. Tonks went through the procedure, but I think you're fully aware of it.

Mr. Alan Tonks: I did brief them on that.

The Chair: Okay, as we don't have any other business today, if you've had an opportunity to speak among yourselves as to who would like to start, you can begin. I think we'll probably hear from both of you first, and then get into questions from those who have them.

If you could give us a little background, first of all, that would be welcome. Who's going to start?

Ms. McDougall-Murdoch from Sudbury, please proceed.

Mrs. Barb McDougall-Murdoch (Coordinator, Growth and Development, City of Greater Sudbury): Thank you, Mr. Chair.

I'm very pleased to be here today representing the City of Greater Sudbury. I am an environmental planner with the City of Greater Sudbury and I coordinate an initiative called EarthCare Sudbury.

I think there would be great value in telling you a bit about the community I'm from. Greater Sudbury has a population of 155,000. We're geographically spread out over 3,600 square kilometres. We're home to a university and two community colleges. We're also known as a wet community, as we have 330 lakes in our community, each over 10 hectares in size. We're also well known for our mining initiatives, and home to the world's second-largest integrated mining smelting complex in the world, CVRD Inco. We're also known worldwide for our land reclamation efforts and for restoring our natural environment, after suffering decades of environmental devastation.

In the presentation, the next series of photos shows images taken from the same vantage point. The first one is a photo from 1971 of the Apollo 16 astronauts, Mattingly and Duke, who were sent to Sudbury to study the geology of the Sudbury basin. At that time, Sudbury was known as “the moonscape”. This is a real photo of them. But the next slides show what's happened in the transformation of our community over the last three and a half decades. It's this experience in land reclamation, or greening, that has led us to where we are today. Over 12 million trees have been planted on over 16,000 hectares of land. This land reclamation process is only half complete. It has been this recovery process, combined with some innovative thinking on the energy side of things, that has led us to where we are today.

We are a committed community. We understand environmental damage. Building upon this reputation is incredibly important to us and to our sustainability and the future of our community.

Our move towards sustainability began with some early work with ICLEI, the International Council for Local Environmental Initiatives, a United-Nations based organization; and with the Federation of Canadian Municipalities. Sudbury is one of 600 cities worldwide participating in a program called cities for climate protection. We are one of over 140 cities across Canada participating in a national campaign known as the partners for climate protection. It's that initiative that is known as EarthCare Sudbury.

The program, nationally and internationally, has five milestones: developing our greenhouse gas baseline emissions inventory; then setting a reduction target; developing a local action plan; implementing it; and monitoring follow-up and evaluation. EarthCare Sudbury was launched as our local action planning process, and we have been acknowledged by the Federation of Canadian Municipalities as a model or leader in our work around local action planning.

When we launched the process in May 2000, we launched our initiative by signing a formal declaration. By that time, 38 community organizations made a commitment to help us develop this made-in-Sudbury plan for our community. This declaration was really a social contract signed by the senior person from each of the organizations. Those signatories have become very strong champions for us.

The plan itself was developed through a multi-stakeholder consultation process and a public consultation process that involved individuals from all sectors of the community. It also took several years and the investment of time. We launched the plan in October 2003, with the signing of a second declaration by 93 community partners at that time. These partners, as part of their commitment, agreed to help us implement the plan, both within the community and within the organizations, where possible.

Although this plan was initially intended to address the issue of climate protection and the reduction of greenhouse gas emissions, we very quickly realized it was really about becoming a sustainable community, one that addressed issues such as improving the quality of life for residents in our community, reduction of waste, improving local air quality, and enhancing our local economy. Yes, we are pleased to be making a positive contribution to the reduction of greenhouse gas emissions, but it was really about the local benefits to our own community.

● (1545)

Early into this process we realized that energy would become the foundation of our local action plan. There are a number of reasons for that, and I'll get into that in a minute.

We focused on energy because of the many opportunities that exist, one being the reinvestment of those dollars back into our own community. It would help us reduce our dependence on the outside marketplace, which is incredibly important for a more remote northern community. We wanted to be able to use this to attract new business and green business to our community, and it was also critical to helping us reduce our greenhouse gas emissions, as well.

I'll refer you to the pie chart on page 5 of my slides. We hired ICLEI energy services to prepare an energy profile for the community. We realized that we spent nearly $393 million a year on energy costs, and in the case of Sudbury, almost all of that money leaves town. So we wanted to put a plan in place to retain and reinvest some of those dollars in our community.

A number of things have happened since then that have helped to support this initiative. Council has adopted this as one of its strategic priorities, and they've created an alternative energy technical advisory committee. We're using this to position ourselves at the forefront of emerging new technologies technologies so we'll be able to move that agenda forward.

In terms of the leadership we've shown as a municipality, in the mid-1990s we undertook a strategic energy retrofit of our building stock and retrofitted 30 municipal buildings. We reduced our energy costs by nearly 30%. We reduced our CO_2 emissions by 26%. We're saving the community $1 million a year in energy costs. The total aggregate payback for that work was 7.23 years.

What set us apart from other municipalities in the mid-1990s was that we chose an integrated approach. We did projects that had a payback in the range of 0 to 14 years. At the time, industry and businesses would generally look at things with a one- or two-year payback; they would never get to something with a 14-year payback. We took a comprehensive, integrated approach to this work and are now realizing the benefits and savings—as are our community and taxpayers.

Some of the technologies we implemented as a result of that strategic energy retrofit were heat pumps, recovering heat from sewage sludge; geothermal systems; and some solar walls. We are now embarking on a landfill gas utilization initiative at our Sudbury landfill.

The next slide shows one of the solar walls at one of our water treatment plants. The payback for that solar wall was five years.

I'd briefly like to touch on some of the initiatives in our community by our community partners, who are showing tremendous leadership, as well. Inco, for example, has launched a program called Powerplay, in which they invested $60 million over a five-year period. Almost 90% of that was invested in our own community. We're also working with the Mining Association of Canada, which in 2006 released a study on the opportunities of geothermal heat within underground mines in our community.

I have included the photo of Creighton Mine in the presentation, because it's a unique energy initiative. In the winter they spray water on a lower level of the mine and create an ice field, which is the size of several football fields. It's rudimentary technology that was employed at the turn of the century. They pass air over the ice and use it as cool intake air for the mines throughout the summer periods. That's one of the initiatives they've embarked on to pursue energy conservation strategies in the community.

Our Living with Lakes Centre is an initiative at Laurentian University. It's the cooperative freshwater ecology unit, which is an amalgamation of the university, the Ministry of the Environment, and the Ministry of Natural Resources. It's a research facility that is known worldwide for water quality and lake stewardship. They're actually building a new facility, starting in 2008. What's unique about this facility is that they're building it to LEED's platinum certification. LEED stands for leadership in energy efficiency and design. There are only five LEED platinum buildings in the world currently, and we're striving to be the sixth.

● (1550)

One unique aspect of this facility is that in the design they required that the annual operating costs not exceed what their current operating costs are for what is in existence—a number of small cottages. So their annual operating costs are about $40,000 to $45,000. This new facility, which is six times larger, will not exceed that annual operating cost.

The payback for building a premium green facility is six to eight years. The green premium to build this facility is about $700,000.

One of the other unique features about this initiative is it's the only initiative of its kind that is actually incorporating climate scenarios into the development and design in the building. They're projecting climate change scenarios up to 2050 into the development of this facility.

Mrs. Claude DeBellefeuille (Beauharnois—Salaberry, BQ): The translation is kaput. My German is very good.

The Chair: There seems to be a problem with the translation. The clerk will just check it out.

Okay, please continue.

Mrs. Barb McDougall-Murdoch: The Living with Lakes Centre will be the first initiative of its kind to incorporate the climate scenarios into the development and design of the building. It's also the first time we've seen the teaming of both architects and scientists. A scientific team has been appointed to oversee the development of the facility.

This year, at our local community college, Cambrian College, we're starting a new training program for young people called the energy systems technology program. We see great value in working with the educational institutions in our community to train young people in this new and emerging field. Along with this three-year energy systems technology program, they're building a new research facility called the Sustainable Energy Centre of Excellence. This will be a prototype facility, to study energy systems and showcase examples of sustainable development conservation initiatives and building products and materials, which will hopefully facilitate the generation of new business.

The next slide is about an initiative we're doing with both the elementary schools and the high schools in our community called Dearness Conservation. It's a national program that targets educating young people on the opportunities for conservation of energy, water, and waste. It is being delivered in all 94 schools in greater Sudbury. Along with the educational program with young people, we also have a training program for teachers, principals, and maintenance and custodial staff. We are educating all the people involved in that sector.

Through behavioural change, the savings a school will realize range from $2,000 to $5,000 a year for an elementary school. High schools are achieving between $10,000 and $20,000 a year in annual savings. This is through behavioural changes alone, without doing any retrofits whatsoever. And the schools are moving ahead with retrofits.

The Rainbow District School Board in greater Sudbury is building the city's first new school in 40 years, and it is the province's first green school. That school will be open in September 2007.

Another initiative we have launched within the school sector is something called the interactive home audit, which is an online web-based tool. As a homework assignment, all 27,000 students in greater Sudbury were asked to complete the interactive home audit with their parents. Through the schools, we hope to reach at least 50% of the population. As well, we're asking individuals in the community to take the interactive home audit, either online or on a paper copy, so they can look at energy conservation opportunities and initiatives that will help save them money in the home.

We were one of 41 communities to roll out the federal government's one-tonne challenge program. Our focus with that initiative was threefold: we engaged individuals, we had a youth initiative, and then we had a corporate challenge. That work was a very nice lead-in for our community to our most current campaign, which is called Efficient Sudbury. You'll see samples of some of the materials of the campaign there.

Our Efficient Sudbury initiative is a retail-consumer community conservation program. It's the only one of its kind being delivered in Canada. Our goal is to educate both retailers and the public about the benefits of premium energy efficiency products and services in the community, such as Energy Star. Our goal is to transform the marketplace to better support these products and services and to educate the public about the cost savings and benefits to choosing Energy Star. We want to remove any barriers that might exist from lack of knowledge of Energy Star. We want to educate the public on conservation opportunities, both through procurement and purchasing habits, and within the home as well.

● (1555)

As part of this campaign, on the retail side of things, we started with a comprehensive series of train-the-trainer workshops for both store owners and managers and front-line retail staff. We've also developed a comprehensive in-store marketing campaign. I have some copies of these materials here today, if any of you are interested.

The other aspect of the campaign, in terms of reaching consumers, involves a comprehensive public education outreach initiative. We started the initiative with presentations to our neighbourhood groups and community action networks in greater Sudbury, and we launched a library loan program for energy monitoring devices for home owners—a power cost monitor and a watt meter reader. We've also started a door-to-door campaign, where we are going to residences in the community, targeting both single family dwellings and low-income housing, where tenants pay their own utilities; and we're working with some first nation communities as well. We're also talking to people about the interactive home audit, our Efficient Sudbury campaign, and what to look for in the marketplace.

What's unique about this initiative is that we've successfully engaged nearly all retailers in greater Sudbury. So we have over 50 involved in the program, ranging from hardware and building stores to home electronics and appliance stores, grocery stores, and general retail stores. So the public will start to see this information and these messages throughout the community. So we've created a brand identity around this. We're trying to remove the barriers relating to the lack of knowledge, the inconsistency in information, throughout the community. There are many large companies, such as Home Depot and Home Hardware, with their own campaigns—equal options, EcoLogo, and what have you. We're really trying to create one uniform message and to engage the public and consumers in making wiser choices when they're in the market for new appliances, new electronics, or even something as simple as a compact fluorescent light bulb.

The last thing I wanted to mention is something called a regional centre of expertise. The years 2005 to 2014 are the United Nations decade of education for sustainable development. Sudbury was invited by Charles Hopkins, a United Nations University chair who operates out of the York University Centre for Applied Sustainability, to apply for this designation. We were actually approved early this year, in 2007. So Sudbury will be one of 35 regional centres of expertise worldwide. There are only four in North America, the other ones being Regina, Saskatchewan; Toronto; Grand Rapids, Michigan; and of course greater Sudbury now.

The regional centres of expertise are essentially a network of organizations whose objective is to use education as a means to promote sustainable development—and this is in all forums and at all levels of education, from formal to informal and non-formal, using transformative education. We're doing this by establishing a network within our community to really mobilize the groups who are already doing positive work in our community. We have essentially developed some guidelines on how we can move forward and plan for creating a more formal process to ensure that anything we do with respect to education and any other initiative in our community incorporates the principles of sustainable development. We are actually moving ahead with this initiative, with an official launch in May 2007.

What I'd like to say about the lessons learned in our community is that our local action plan, or our sustainable community plan, took an incredible investment of time to develop, as did securing partnerships in our community. But that has been a very valuable exercise for us, because now that we're at the implementation stage, we have a constituency of very informed and very engaged partners and supporters in the community. And that network of partners continues to grow; we now have over 100 organizations involved in this initiative in greater Sudbury.

We engage these groups of individuals one at a time. We met with them individually and developed rapport and respect with them, and now we continue to move forward and are implementing programs in our community because of that. We're doing this one step at a time.

● (1600)

That wraps up my presentation. I'd like to thank you for your time and this opportunity.

Thank you, Mr. Chair.

The Chair: Thank you.

Mr. Quail.

Mr. Richard Quail (Municipal Manager, Town of Okotoks): Good afternoon, ladies and gentlemen.

It's a real honour to be here this afternoon to speak to you about a little town in southern Alberta with two OK's.

As I was flying across this beautiful land last night and somewhat lamenting the absence of one Canadian hockey team in the Stanley Cup playoffs, I was thinking about the abundance of resources or the lack of resources in this country and how that is constantly challenging Canadian ingenuity in terms of how we manage our affairs. I'd like to provide you with a very brief overview of how one community in southern Alberta has decided to manage its affairs relative to natural resources.

To give you context, our community is located a brief 20 minutes from Calgary—45 minutes on a bad day. We're located within the South Saskatchewan River basin, with the beautiful Bow River that flows through Calgary. There are a series of rivers from the mountains that feed that, including the Sheep River, which flows through our community.

Alberta has come to the realization that the water supply in our province is diametrically opposed to our settlement patterns. Seventy percent of the population of Alberta lives in southern Alberta and thirty percent of the water supply is in southern Alberta. In part, that's at the root of the situation our community has faced with respect to managing growth.

I'd also like to give you a little context on managing growth. As you all know, Alberta is in a heated economy right now. When I went there in 1988, our community was about 4,000 people. In the 1996 federal census, Okotoks was 11,500, and the recently announced census has us at well over 17,000—a 50% increase in growth. We're managing within the context of a very growth-oriented community. We're a community of 17,000 people that issued 1,000 building permits for new homes last year. That is about a 20% growth rate.

I'd like to share a vision of sustainable Okotoks and provide you with a bit of a background as to why we became, and are becoming, a sustainable community.

I spoke about the Sheep River, which is the heart of our community, and the fact that it flows through our community. It is one of those pristine mountain-fed rivers that is untamed by man. If you'd been in our community in June 2005, you would have seen how untamed it can be. We had three record floods in the month of June. We're fortunate from a geographic point of view, because we have a relatively constrained river valley. In the early settlement days, if you were flooded in the spring you moved to higher ground. Fortunately, most of those folks on the flood plain moved to higher grounds, so we have minimal settlement patterns within the flood-plain area. As you can see from the air photo in your package, we're a community that's split by the river that runs in an east-west direction. About half of our population growth is on the north side and half is on the south side.

In 1995 our community was at a crossroads. It was partly as a result of government-imposed legislative requirements for communities in Alberta to come up with new, long-term planning frameworks to deal with growth management, as well as intermunicipal planning issues because the Province of Alberta had chosen to abandon the regional planning system. Our community was faced with the challenge of either the traditional planning of growth without limits or choosing a different route. That route ended up being a planned destiny, a route that is premised on living within the natural carrying capacity of our environment, i.e., the Sheep River. The Sheep River is a very sensitive and important aquatic habitat for fisheries. During certain periods of the year there are times when flows are very low, so the amount of water you can withdraw from shallow aquifers is limited relative to its impact on aquatic habitat.

Why be a sustainable community? When Okotoks adopted its plan in 1998, it became one of the first municipalities in the world to actually establish growth targets that were limited to infrastructure and environmental carrying capacity. As I explained, we've done that in part as a result of a water supply issue and in part as a result of a desire by a community—a fundamental right of communities—to manage and plan its own destiny. Our community said that we very much want to maintain that small-town community and asked how we go about doing it within the context of corporate limits and urban densities and growth management and pressures.

● (1605)

There is a commitment from our community. As you can see from the slide entitled “Commitment”, the percentages there speak to survey results of our residents from 1996 and their support for the initiatives we have in place. You can see resounding support for the town's move to sustainability, for awareness, for water conservation and for recycling.

We have created a population limit, often referred to as a cap. In essence, we have a build-out boundary established by virtue of lands annexed into our corporate limits. As applies to any Canadian municipality, if an urban municipality annexes lands, they have a duty in law to provide for highest and best use. If you want to limit your growth relative to carrying capacity, or whatever the case may be, you have to stop annexing lands and then live within those built-up boundaries. In many metropolitan areas, one urban boundary meets another, so there are many examples across Canada where communities have, by default or purpose, limited their boundaries. There are not many examples where folks have done it by way of a planned destiny.

The measures of our success and our decision-making are premised on four foundations: environmental stewardship, economic opportunity, social conscience, and fiscal responsibility. With those come hard targets. And if there is one lesson we've learned, it's the articulation of hard targets with respect to your goals. It's essential that you articulate those at the early stages and move towards them.

So you can see that we talked about a build-out population. We talked about distribution of the population. And we talked about something that is important for our community from a fiscal responsibility point of view, and that relates to the assessment ratio of residential to non-residential. As I'm sure you folks know, the more non-residential assessment there is, the greater the ability of municipalities to generate revenues to service their residential population.

We talked about densities. We talked about water consumption, because to grow to our build-out limit—that population extrapolation of 25,000 to 30,000—we've actually had to reduce per capita water consumption by 30% from 1998 levels. And I'll get to that in a minute.

In terms of strategic growth management, we have developed clear targets well in advance. There has been a gradual, managed evolution, and there has been extensive consultation with the development industry to make this sort of thing happen. There have been no significant annexations, and there's been a 15- to 20-year build-out—and at today's rate, that might be a 10- to 15-year build-out.

Of course, good governance, as I'm sure you folks are all aware, is essential in terms of engagement with citizens, in terms of participation and in terms of nurturing a safe and caring community.

As for some of the results, I know that one of the topics you're studying is the greening of electricity in Canada, so I'd like to speak to a couple of special projects we've done within the context of fiscal responsibility for the municipality, environmental stewardship, etc.

In terms of solid waste management, this is a community that's grown from about 7,000 people to 17,000 people between 1991 and 2006. So keep in mind when you're looking at those numbers, the context is more than a doubling of the population.

On solid waste management, we have one of the most extensive recycling programs in Alberta, if not Canada. Our program—as Barbara mentioned about Sudbury—is premised on getting into the schools, educating our children, who go home and tell their mom and dad why a pop can shouldn't be thrown in the garbage and should be recycled.

With respect to solid waste management, on the next chart you'll see that we've actually begun to track the recycling tonnage we've processed. As you can see, between 1991 and 2006 there's been a steady increase in the tonnage. The interesting statistic from that is that if you take into account processing fees, there have been 1,912 tonnes of recyclables received and diverted, equating to about $1.5 million in savings, both in terms of tonnage and processing fees. So conservation and resource management can pay off as well.

When I moved to Okotoks, our resource recovery team consisted of two operators picking up garbage on a daily basis over a five-day period. We've more than doubled the population and we still have two operators. You do that through education, through limitations on curbside waste, through accessibility and convenient recycling facilities. This saves money at the end of the day, and this extends the life of your landfill, etc.

On the next graph, we simply show what the total tonnage would have been if we hadn't diverted the recyclables versus the actual tonnage with the recycling.

● (1610)

Now, in terms of energy efficiency, there was a recent highly favourable news item on CBC with respect to some work Okotoks has done around energy management, because we've taken advantage of the abundance of solar energy available to our community and put together a number of solar applications. You may not be aware—though I'm sure Mr. Richardson is—that southern Alberta receives more solar thermal energy in the months of May through November than Miami, Florida. The challenge is how do you capture that and how do you use it for your heating season? I've got a couple of interesting projects we've undertaken in that regard.

Many of our initiatives, however, couldn't have taken place without the deregulation of Alberta's electricity and natural gas markets. Ironically, it's the regulated side of these utilities that's having a hard time keeping up with electrical transmission. Alberta's deregulated electricity approach, we're told, has resulted in the highest per capita build of low-impact renewable energy in Canada, with no direct provincial support through subsidies to the generator. Indeed, it's our view that subsidies do not promote conservation.

Okotoks, in the late nineties, because of concern about deregulation of electricity, got together with the Alberta Urban Municipalities Association and went out to the marketplace and aggregated our electricity load. In our first aggregation of electrical consumption for urban municipalities in Alberta, the green percent component stipulated in the aggregation was 2%, and that came at 100% premium in terms of cost in the marketplace. We recently went out for a second aggregation, and I'm pleased to say that as of a week ago Monday, the Okotoks town council endorsed having 80% of all electricity consumption in Okotoks sourced from certified renewable energy. These are renewable energy certificates issued by EcoLogo Canada, primarily through wind, in-river, and biomass generation. The deregulation of the electrical industry—creating the generation, the distribution, the transmission and the retail components—enabled municipalities to take their big load across the province and go into the marketplace and the futures markets and purchase that commodity. It also enabled us to stipulate a green component.

Every municipality in Alberta that participates has a baseline of certified green energy of 20%. Our community happens to lead at 80%—but that relates back to the targets I spoke about earlier. In 1998, our community said we were going to see a 20% reduction in greenhouse gas emissions from 1998 baseline levels. Well, that's a 20% reduction from 1998 and a 60% increase in population since then.

How does one go about doing that? You have to begin sourcing renewable energy sources to make that sort of thing happen. We also have engaged in considerable energy efficiency initiatives, with solar applications and retrofitting buildings, and many of the things that Barb spoke about in Sudbury. And communities across this land are doing it because it makes sense.

In our case, as a small community with an operating budget back in the late-eighties of perhaps $5 million, we received a rebate through the electrical regulator. My council of the day, in their wisdom, chose to put those funds into an eco-efficiency reserve and to utilize those funds for retrofits for energy efficiency purposes, and to take the differential between the budgeted energy expenditure and the savings and pour that back into the eco-efficiency reserve, creating seed money for further retrofits. That's how we, as a small municipality, began to finance the initiatives that have resulted—as you can see on the energy efficiency chart—in a very modest 10% increase in natural gas consumption between 1998 and 2006, and a significant increase in electrical consumption. It's almost 50%—again, between 1998 and 2006. Keep in mind this takes place while you're doubling and, in some cases, tripling your municipality and installing new recreation facilities, libraries, fire stations, etc.

At the same time, we're pleased and proud to say that based on electricity and natural gas consumption, we've actually reduced our greenhouse gas emissions by 15% from 1998 levels. So we're not quite there, but our council just increased it to 80% green, and we believe that will get us there.

So we've had a 20% reduction in greenhouse gas emissions and a 60% growth in population—building footprint, street lights, motors, recreation centres, etc. So it can be done. You can go both ways. In our case we chose to go both ways through energy efficiency, through utilization of renewable energy sources, and through extensive and aggressive utilization of certified renewable electrical generation, which we're able to do in Alberta because of the deregulated environment.

● (1615)

We have also identified some charts in here—I won't get into detail, because I know my time is just about up—with respect to water management and the criticality of us reducing our per capita consumption, so we live within that natural environment.

Waste water management is a story we are very proud of, not just by way of the procurement process that we use, which was a “design, build, and operate”, but as well the results of it. There is a chart that reads “Treatment Results” in your package. It speaks to an incredible drop in terms of detected levels, the suspended solids, BODs, ammonia, phosphorous, etc.

We did all of that with the retrofit to a waste water treatment plant that was initially budgeted at $30 million. We also examined, by the way, a regional utility system to Calgary, and capital costs were comparable but operating costs were double. And then we looked at an alternative approach to procurement. We went to the marketplace and asked, “Is anybody out there interested in designing a waste water treatment plant, in building it, and in operating it under a 20-year contract?” That contract came in at $11.5 million. We took the savings between the $11.5 million and the $30 million and immediately poured it into expansion of our recreation centres, which is desperately needed, given the growth in our community. But these are the treatment results.

We can now say with certainty, and indeed the Government of Alberta will say it, that the Okotoks waste water treatment plant is the highest-efficiency and most effective treatment facility in Alberta. The quality of effluent we are putting back into the Sheep River—remember, living within that ecological footprint, that environmental carrying capacity—is better than the receiving stream.

There is a slide on “Drake Landing—A North American First”, and I'll briefly speak to this. As a result of the work we have been doing, some of the initiatives, the building of a sustainable community, living within an environmental carrying capacity, the Government of Canada took notice, the Federation of Canadian Municipalities took notice. We, and myself personally, have been on a number of energy missions to Denmark and to the Netherlands, to look at the application of technologies, solar, wind, district heating system, cogeneration, electrical.

The city of Copenhagen, I'm not sure how many million people, has one furnace stack serving the whole community. It's amazing.

It can be done in Canada. It can be done in the North American context, but there are lots of challenges relative to the marketplace that you have to look at, and Drake Landing is the first. I must say that without the support and funding of the Government of Canada and Natural Resources Canada, this project would have never happened.

What we've done is we've built a 52-home demonstration technology innovation project. As that rancher said to me about a year ago, “about that solar sink you've built”, we capture this solar energy that's on the backs of these detached garages. We pump it underground. We use nature's crust as the thermos. We heat up the ground to well over 90 degrees Celsius, and then you extract that heat and you heat the homes in the winter.

The technology and the performance criterion is that a minimum of 90% of the space heating requirements of these homes is met through solar thermal energy. We also have solar hot water heating systems on each of the homes, and the performance specification on that is a minimum of 60% of the hot water heating requirements of those homes is from solar.

So that's one we're very proud of. We're just commissioning it. The challenges associated with that and the support we've received from the Government of Canada, the Government of Alberta, from Climate Change Central, from the partners that we have in place.... From a development point of view, it takes four years to charge this BTES, these boreholes that are into the ground, and providing a mini-utility operator that was prepared to take on that system was quite a challenge without there being demonstrated performance. You're dealing with European technology never tried in Canada.

It's not just consumer preference that's the issue, it's the technology and its performance. So we've actually created a not-for-profit corporation called the Drake Landing Company, which is composed of the four principal partners: the mini-utility company, which happens to be ATCO Gas, one of the largest natural gas distribution firms in western Canada, who are in the home heating business, and this just happens to be a different kind of home heating; the town of Okotoks; the developer, United Communities; and the home builder, Sterling Homes.

We as a partner have a four-year program to develop and commission this residential neighbourhood to meet these performance standards, after which ATCO will take over.

● (1620)

So what have we learned? We've learned that you have to leap outside the box. You have to articulate a clear and concise vision. You have to make your goals tangible and deliverable. You need to continuously revisit your goals as a community, whether the community of Okotoks, the community of Alberta, or the community of Canada. You have to go back and talk to your constituents continuously. Remember, we were a community of 7,000 people in 1998, and now 17,000. So over half of the community is new. So your community has to continuously revisit its vision, its priorities, etc. We are now at the point, as you can see from the statistics in the survey, where there is overwhelming support.

We knew as we went down this road less travelled that it would be very difficult to turn around and say we've given up on this notion of just growing to our natural carrying capacity, because the community is of a mindset—and that's the vision the community has for itself.

You have to make sustainability a business that you're in. It is not a “department of”.... And you have to adapt and have to learn from others.

As a leader in sustainable development, the Town of Okotoks is choosing to make broad and comprehensive choices that recognize a strong reciprocal relationship between the environment and community development.

A sustainable Okotoks does not wax nostalgic; rather, it represents a desire for a better community, in the form of a practical working guide to follow along a community development path.

As Mr. Churchill said back in World War II, “You make a living by what you get; you make a life by what you give.” In our opinion, these initiatives are certainly giving something to future generations.

● (1625)

The Chair: Thank you, Mr. Quail.

The presentations, and what you people have done, are quite remarkable. It is quite amazing. It is understandable why we have heard from Mr. Menzies, who has been bragging about this for some time. I am delighted you were able to share that with the rest of our members here.

We are going to begin questioning with Mr. St. Amand.

Mr. Lloyd St. Amand (Brant, Lib.): Thank you, Mr. Chair. I won't take the entire time. I will defer momentarily to Mr. Holland.

Thanks very much for the very fine presentations—both of you, for sure. I just have two or three questions, which deserve nothing but short answers, if I can politely say that.

I didn't hear any mention of municipal bylaws, so I take it there was no forced compliance in what was done, that in Sudbury and Okotoks it was voluntary partnering with however many individuals or entities there were. Is that correct?

Mrs. Barb McDougall-Murdoch: Yes.

Mr. Lloyd St. Amand: I've been to Sudbury, and perhaps have driven through Okotoks. I take it there's nothing so unique about Sudbury or Okotoks that would preclude other communities from following the example your far-sighted communities have demonstrated. Is that fair to say?

Mrs. Barb McDougall-Murdoch: It would be. I would say the lessons learned in greater Sudbury from our local action planning exercise or initiative are applicable in any community. I would also say that some of our experiences of being able to mobilize organizations and entire sectors within our community might be somewhat easier in a community of our size or scale than trying to replicate the same thing in the city of Toronto, or some place of that size. But I think there is a certainly applicability of many of the initiatives and means in our plan and process.

Mr. Richard Quail: I think the community needs to take stock of itself, in terms of its resources and its community aspirations and where it is, and articulate a vision from there. That is the core of the issue.

To your first question, if I may, there are many bylaws in Okotoks with respect to these initiatives, particularly around waste management and limitations on material at curbsides and on water management. We have a very aggressive utility rate structure. Typically, municipalities have about a fifty-fifty division in their utility rate structure, between a 50% flat rate and 50% variable rate. Our community has moved to seventy-thirty split. So 70% of your water bill is based on consumption and 30% is based on the flat rate —the bottom line a municipality needs to ensure there are services to that home, whether there is someone living in it or not.

We have also tied in our sewage utilities relative to water consumption. When we did that, there initially was a hue and cry from the community during the irrigation season—and in sunny southern Alberta, we have quite an irrigation season—because the water they were consuming was not being returned to the sewage treatment system. We've addressed that through generating water consumption in non-irrigation as the basis for sewer charges during the irrigation season. We have very aggressive outdoor watering requirements in place.

We also have mandated or required that low-flow plumbing fixtures be used throughout. And we've negotiated with our developers for density bonuses, whereby they have to do things such as pre-scarify the sub-soil; use a minimum of eight inches of top soil for landscaping purposes and use special landscaping strategies, especially around outdoor facilities; and use low-flow plumbing fixtures, front-load washing machines, etc.

There is one more thing. When we did this initially, there was a big pushback from the building industry, in particular, especially around technology issues for low-flow toilets. Indeed, technology has caught up with respect to these issues. There are no longer these kinds of issues, and it's become the expectation.

Mr. Lloyd St. Amand: Ms. McDougall-Murdoch, you mentioned the one-tonne challenge, and Mr. Quail, you mentioned the not insignificant role of the federal government in terms of financing. Your respective projects are clearly years in the doing. They haven't happened overnight. If you can, would you describe the specific federal government programs that were utilized to get your communities to where you are now?

● (1630)

Mrs. Barb McDougall-Murdoch: We actually started on this initiative with ICLEI, the International Council for Local Environmental Initiatives. We hired ICLEI to do some work with us on the energy side of things.

We embarked on our local action planning process before the federal government came out with the FCM green funds. Now, there are many, many communities using the green funds to help fund this type of research and development at the community level. We went ahead with this because we thought it was a good thing for our community.

What is unique about Sudbury is that we strongly focused on energy. When we engaged our political leaders in Sudbury, it was really sold on the local benefits to our community. We're happy to be making positive contributions to greenhouse gas emissions reductions. We started this initiative on the energy front, and we really did this on our own, without accessing any federal government programs.

In the interim, we've moved ahead with projects where we have accessed the green municipal enabling funds. We have the community energy plan, to look at energy conservation opportunities for our community on the conservation side of things and on renewable generation with wind, solar, biomass, fuel cells, small-scale hydro, landfill gas utilization, and geothermal. That's how we've utilized federal government initiatives.

Mr. Lloyd St. Amand: Mr. Quail.

Mr. Richard Quail: We've utilized extensive FCM green municipal funds for projects and municipal rural infrastructure funds. On the Drake Landing there were a significant number of contributors, from TEAM, PERC, SDTC, Natural Resources Canada, the Government of Alberta, and the Climate Change Centre.

You might think, what does this have to do with energy? Well, this infrastructure lag that municipalities have is causing a considerable and unnecessary consumption of energy. For example, there are communities in this country that pump 50% more water on a daily basis than they actually consume; it's lost through the system. If you can reduce those losses through replacement of water-main distribution systems, then you're saving energy. We're proud to say that we're able to track 95% of the water we produce on a daily basis, but we're a relatively new community. If you want to talk about the greening of electrical consumption in Canada, such as the tightening up of water distribution systems, you need to go back to the source issues and begin to aggressively address them.

Mr. Lloyd St. Amand: Thank you, Mr. Chair.

The Chair: Thank you.

Well, that's our eight minutes. We'll probably have to move on and get Mr. Holland on the next round.

Madame DeBellefeuille.

[*Translation*]

Mrs. Claude DeBellefeuille: Thank you for the quality of your presentations. It is refreshing and encouraging to see municipalities taking the energy challenge seriously and coming up with very concrete courses of action.

My first question goes to Ms. McDougall-Murdoch. I notice from your two presentations that your initiative comes from an underlying political will. Your elected officials believed that the process would have significant implications for the economy as well as for energy. A lot of energy then had to be expended, because the second challenge was to promote this idea and make all the citizens of the communities aware so that they would support the political decisions.

In my constituency, municipalities are in demographic decline. This means that their property tax base is also declining. It is no longer possible to generate wealth from other infrastructures. Here is the challenge they now face: the municipalities' fundamental needs, such as roads, regular maintenance and community services, are more and more difficult to meet because of declining revenues.

How can an initiative like yours be carried over to municipalities or cities where demographic decline is putting them into financial difficulty? Does your wonderful model apply only to growing cities where revenue from property taxes is going up?

● (1635)

[*English*]

Mrs. Barb McDougall-Murdoch: I would say that our model or planning process was successful because we had a champion at the local level. And I would say that was an incredible value to us because we had an individual within our own organization who was able to steward this initiative, both through our own corporation and within the community. So we garnered tremendous support through our local action planning process by engaging partners at the local level. It was the senior level of staff person within each of the organizations who signed the declaration of community partners. It was the president of Laurentian University, the CEO for the Sudbury Regional Hospital, the president of Cambrian College, and our financial institutions. We had a senior level of staff in buy-in.

About assisting other municipalities to move ahead with these types of initiatives, when you start to talk about the incredible local benefits that a community can accrue or realize because of this initiative, then it starts to make economic sense. For us, as a more remote northern community, if we can rely less on the outside marketplace for energy and start to reinvest some of those dollars in technology in our own community, that will help us create a new economic base for our community, besides mining. We'll be able to use it as an attractor for new business to our community, including green business. And if we start investing in our own technology—because within our community energy plan, we're positioning ourselves to take a vested interest in this—then perhaps we can start to offer long-term power purchase agreements towards new business coming to our community that will make it an economically viable attractor to bring in and generate new business to our community.

So those are some of the initiatives that are available to any community of any size. It not only builds on the quality of life for a community but it also talks about quality of place and a whole host of things that contribute to what a sustainable community is all about.

Mr. Richard Quail: All of the above.

We just went through an interesting philosophical debate at the council meeting a couple of weeks back, whereby we were advocating to council that they pay a premium to purchase additional green electricity to achieve our targets and to show environmental leadership in the community. In so doing, one citizen spoke about being philosophically opposed to the municipality spending his taxpayer dollars on a premium for electricity, and in our case it's about one-quarter of a cent per 20% increment in electrical consumption, which we were able to absorb within our operating budget.

The will of council was to move towards increased green consumption, to meet those long-term targets, because the will of the community was there to support that. At the end of the day we're all servants of Canadian citizens, and it's the will of Canadian citizens that we're seeing in Alberta that is pushing very hard with regard to energy conservation.

Imagine: we have a complete moratorium in the South Saskatchewan River basin—that's from Red Deer south to the border, all the way from Saskatchewan to British Columbia—on new water licensing. There is no more: you have to reallocate, you have to transfer. That is significantly going to affect economic growth. But the citizens of Alberta are supportive of the principle of living within natural carrying capacity. At the root of it is population support to do things smarter and wiser, and from that we believe, and we have demonstrated, that you can save dollars to then address concerns such as declining population, economic development initiatives, etc.

● (1640)

[*Translation*]

Mrs. Claude DeBellefeuille: Thank you.

Ms. McDougall-Murdoch, I would like to know what staff you needed to coordinate your program. Did the municipality have to invest in human resources to carry out the project? I notice that you are able to measure your annual savings and changes in behaviour, and that you are able to offer energy audit services. Surely all that needs human resources.

Did your municipality create a position? What is the human resources situation?

[*English*]

Mrs. Barb McDougall-Murdoch: With some of the work that we did on the verification of our energy use profile in the community and our greenhouse gas emissions and reduction opportunities, we did work with ICLEI Energy Services. We did hire them to do that work for us because we wanted that information to stand up to a very high regard and to be held to very high standards. Many municipalities do hire staff to do that work for them, that inventory process.

About additional staff for this type of work, I would say yes, this is definitely different from any other core piece of business within the municipality. But I think that many communities now see the benefits of a vested interest in pursuing sustainable development initiatives and pursuing energy opportunities. There seems to be a business case for doing this work, and then a whole host of benefits that go along with it.

Mr. Richard Quail: We're a small organization, with about 150 employees. As I said in my presentation, it's a way of doing business, it's not a "department of". That's the context under which all of our business planning is undertaken. We don't specifically right now have an environmental coordinator. We'd like to have more specialization in that area, but we actually have physical space limitations in our community, where we've outgrown our administrative facilities, and we're working on that issue.

I'm certain that if we were to go back and analyze it, there would be a payback, not a payout, with respect to engaging expertise to undertake these kinds of initiatives.

The Chair: Thank you.

Ms. Bell.

Ms. Catherine Bell (Vancouver Island North, NDP): Thank you, Mr. Chair.

I'd like to thank our two presenters for their very interesting and inspiring presentations.

Some of my questions have already been asked, so I'll try to think of some new ones. Following along the lines of what's been asked previously regarding the federal-provincial programs that were available and that you accessed to get started down this road, I'm assuming that if they weren't available, it would have been a lot more difficult, or maybe impossible, to get jump-started. I'm just wondering if those programs are still available for other communities, if they wanted to start greening their energy and their communities, because I know there are a lot of towns in northern Ontario that could probably take advantage of this.

I'm just wondering if you've had an opportunity, Ms. McDougall-Murdoch, to go to any other communities and talk about your success story—as well as coming here.

And the same thing for you, Mr. Quail. Have you been able to share your experiences with other communities and help them move down this road as well?

● (1645)

Mrs. Barb McDougall-Murdoch: We found great value in working collaboratively with the Federation of Canadian Municipalities and ICLEI. We have been acknowledged for the leadership we've shown, not just around strategic energy planning, but also for our work on local action planning in becoming a more sustainable community. That recognition has extended throughout Ontario and nationally, and even internationally, as both of those organizations have provided us with tremendous exposure.

We also take any opportunity we can, in partnering with the Federation of Canadian Municipalities, to network with other northern communities and to share our experiences. We've participated in an ICLEI best practice exchange with the City of Phuket, which sent a delegation to Sudbury to study the work we've done.

We also work collaboratively with municipalities across Canada at various stages in their local action planning process, and help guide and steward them through that process by sharing our expertise in it.

Mr. Richard Quail: Some of the most successful funding programs we've had have been three-part programs: federal, provincial, and municipal. The real issue, or crux of it, relates to eligibility, as there are core infrastructure needs in municipalities who desperately need to repair and replace their infrastructure, and the funding formulas need to reflect and prioritize around these areas. If you don't take care of the structure of your home, the cracked paint on the inside wall is not really important; and if you look at municipalities from an infrastructure point of view, the same sort of analogy does apply.

So we've had really good success with respect to federal-provincial-municipal cost-sharing agreements and with the financial support that's provided, particularly around utility infrastructure replacement, upgrades to waste water treatment plants, water treatment facilities, etc.

Ms. Catherine Bell: I have another question with regard to electricity use in your community, because you're using so many different methods to generate that electricity, including solar, in-river, and biomass generation. Have you measured electricity use in the community on a residential and commercial basis?

Mr. Richard Quail: No, our focus has been on municipal accounts and municipal electricity consumption. We haven't been able to do it on a broader basis; we just don't have the authority to do that.

But there is, for example, a municipal showcase project out right now in Alberta. We're building a new municipal facility and are installing solar photovoltaic panels on the municipal centre to generate electricity to meet its electrical needs—though I'm not sure about the percentage.

So our focus is on municipalities, and where you folks come in is in taking care of the other element. We can take care of our own backyard, or we can work hard at it with your support and policy initiatives, but in terms of the broader Canadian public, that's where municipalities really don't have jurisdiction or ability.

Mrs. Barb McDougall-Murdoch: Through our work with ICLEI Energy Services, the community's supply is 47% electrical, and we've set some very stringent goals and objectives for us to help offset some of those needs through renewable energy generation like wind and small-scale hydro, biogas, solar panels, and demonstration projects around domestic solar hot water. So we're looking into opportunities in these areas to offset some of those requirements.

Ms. Catherine Bell: And of the sustainable technology that you're using, are you able to purchase any of that in Canada, or is it all coming from offshore, from somewhere else? I was just wondering what our manufacturing capacity is.

Mr. Richard Quail: On the Drake Landing solar neighbourhood, for example, that was the largest procurement in Canadian history of solar thermal panels: 800. And the firm that we purchased from was EnerWorks. They're based in and manufacture out of Ontario.

Of some of the challenges that we had on that project, there was quite a bit of European technology that we had to depend on, not the least of which was glycol. There was not a North American manufacturer for the glycol required for the system that met the spec. But as a result of doing this—EnerWorks, the solar panel manufacturers, the evolution of technology, the learning, the demonstration—how critical it is to have those research development dollars to move to the next step.

I can tell you, I met with our project facilitator on Drake for lunch today, and there are projects of this design and much broader scale being proposed in western Canada, in Ontario, in the Maritimes. It's moving forward, but you have to have those demonstrations, you have to have those "learn from your mistakes", both from manufacturing and from installation. We now have home builders where R-2000 has become the norm because they now understand the technology and the procedures, and it makes sense, and the marketplace is asking for it.

● (1650)

The Chair: Thank you.

I should note that we are having CMHC here on Monday next to look at some of these. We had a home builder doing it from Calgary, Jayman Quantum, who was going to come too, and who has developed the same kinds of programs. They're very popular among homebuyers these days. They want to save energy. It's all about the technology, and it's amazing what you can do with free enterprise.

Mr. Gourde.

[*Translation*]

Mr. Jacques Gourde (Lotbinière—Chutes-de-la-Chaudière, CPC): Thank you, Mr. Chair.

I would like to thank the witnesses for the quality of their presentations.

I feel that you have created a greener way of life in your cities and you are to be commended for that. When you began to work on the plan, did the people accept the idea reasonably quickly or was there a lot of work to do in that context? At our level, we have to take much the same approach with all Canadians. Was it an easy task? What was the biggest obstacle you had to overcome to convince people to save energy and to embrace renewable energy? Explain to me how you went about it.

[*English*]

Mrs. Barb McDougall-Murdoch: I would say that it was fairly simple, with respect to our community, because I would say that the citizens and constituents in our community are very aware of our environment as a result of our history and what we've come through with land reclamation and recovery. So I would say that the citizens in our community were very receptive to this type of initiative. And, again, we focus on the benefits that will accrue locally and continue to promote that.

Mr. Richard Quail: This dates back to 1995, when we began this initiative of managing growth and living within our ecological footprint. There was considerable dialogue in our community and extensive letters from council to the editor. For example, one said: imagine you're in a helicopter and looking at this community 20 years from now; here's what it's going to look like. It spoke to the distribution of land uses, diversification of housing types, employment, recreation, and housing—to a self-contained, sustainable community. It articulated a vision, and it had a number of critical factors or foundation points in order to achieve that vision. All of that resulted in a cautious okay, we'll go down this road. But there was a lingering perception that we can change our mind if it doesn't make sense.

Now we're at the stage where within the next decade, we approach build-out. In our case, they're saying, what happens afterwards? The afterwards is what we're dealing with now as a community with respect to growth management, redevelopment activities and opportunities, a change in the evolution of commerce, and working as a community within a much larger regional context—in our case, it's the Calgary regional partnership.

We're dealing with how to manage those settlement patterns with finite, renewable natural resources, such as the water supply, for the next million people who are slated to move to the Calgary region over the course of the next century. So there's a broader understanding and a movement towards managing settlement patterns in harmony with the natural environment.

[*Translation*]

Mr. Jacques Gourde: Have you looked at the difference in cost in an average single-family house with a family of two adults and two children? Given the energy savings with this house as a model, perhaps there is no difference. Do you see a noticeable difference in comparison with other regions of Canada?

● (1655)

[*English*]

Mr. Richard Quail: In our case, for example, in the Drake Landing solar community, the investment in the home and the upgrades to turn it into an R-2000 home—putting in the specialized solar thermal hot water heating systems and the air handling systems, which is stuff that's not off the shelf in the marketplace—cost in the order of $30,000 to $40,000 a home. I'm not positive of that number, but it's in the order of that amount, and the homeowners paid a percentage of it.

At the end of the day, there has to be market receptivity to moving in that direction. What we've seen is a steady decline in the cost of these innovative, energy-efficient initiatives, and that has helped to increase absorption and demand.

Mrs. Barb McDougall-Murdoch: In Sudbury, we haven't quite moved as far forward as Okotoks, in terms of that kind of residential housing development. Recently we built Sudbury's first Energy Star home, so we're just sort of embarking on that forefront.

I'll address the question from a slightly different angle, in terms of opportunities on the conservation side of things for residential applications and within the single family home. In promoting something such as Energy Star products, and the purchasing or procurement of household appliances and electronics over conventional models, if a home switched out all of its appliances and electronics to Energy Star products, the savings would be in the order of $700 to $800 a year in energy costs. So very easily, somebody could start to realize savings by making different consumer choices, if they're in the market for a new appliance or electronics.

[*Translation*]

Mr. Jacques Gourde: For new subdivisions with between 50 and 100 new houses, what would be best: a communal solar energy system or individual ones? With geothermal energy, would it be possible to connect several houses to the same hot water supply system? In your presentation, you mentioned that it would be possible to heat an entire city with one system.

[*English*]

Mr. Richard Quail: That furnace was in Copenhagen. It was a very big furnace.

What we're finding from the research, from what we've done in Drake Landing, where we collect the solar and achieve 90% of the space heating requirements from solar, and from discussions with our technical folks is that there's a more optimal combination around capital costs for solar-thermal energy storage systems in combination with geothermal energy systems and solar photovoltaic to generate the electricity to run the geothermal systems, so our example has resulted in new thinking with respect to increased efficiencies and application of a group of technologies in one single framework.

What we found in Drake Landing was that the capital costs associated with it were in no way market competitive, but it was a demonstration, as we said before, and it would have to be on a much larger scale in order for it to make more economic sense. It would likely be in more of a multi-family style of housing complex than in a proliferation of single detached dwellings.

Our intent, and the desire from the forefront of the project champions, Natural Resources Canada, was to introduce this technology into typical residential housing forms to see the response and to see how the application would work.

The Chair: Thank you.

It's now five o'clock. I think we have time for another quick round, but we're going to have to be pretty strict about limiting the questions and the answers to five minutes.

We're going to go now to Mr. Holland.

Mr. Mark Holland (Ajax—Pickering, Lib.): Thank you, Mr. Chair.

Thank you to the witnesses for taking time to speak to us, and also for the great work you're doing.

I want to ask a couple of questions, and then, Mr. Russell, I think you have something you want to sneak in.

I first wanted to ask you about the Federation of Canadian Municipalities. Obviously you've done a lot of tremendous work. How much have you been working with FCM to try to model some of this, so that other municipalities can tap into the experience of what you're doing? In other words, how helpful has FCM been in coming to you, collecting the experience you've gained in the projects you've led or that other municipalities have been involved in, and trying to create something that municipalities nationally could participate in?

● (1700)

Mrs. Barb McDougall-Murdoch: We've worked very closely with FCM throughout this process. We are actually acknowledged by Louise Comeau, through the Federation of Canadian Municipalities, as a model for our local action planning process.

We've participated in a number of initiatives with FCM through capacity-building and promotion of FCM programs, and continue to work within that framework to support and build upon those initiatives and opportunities that exist with FCM and the green funds and the partnering between FCM and ICLEI.

I would like to say that ICLEI has done a tremendous job of profiling best practices or case studies internationally. They actually have a team that works out of the world secretariat office that partners with municipalities to help develop these case studies. For the many municipalities that might not have the resources to do this, ICLEI has a program whereby they will work with a municipality to prepare these leading-edge examples that are showcased internationally. Those are some pretty positive examples.

Mr. Richard Quail: I have a favourable comment as well. The green municipal infrastructure fund, an enabling fund, has provided valuable dollars, and the contribution of the federal government through the endowment fund has been critical. The administration of that fund through a municipalities association has really enabled targeted and streamlined funding assistance.

We were also involved in the initial articulation of what's become known as these integrated community sustainability plans and this exercise that municipalities across this country are going through right now as we speak. I think the message has really gone out through FCM to communities about the importance of integration and sustainability in community building.

Mr. Mark Holland: Maybe I could ask the last two questions, and maybe, Mr. Russell, you'd want to add your question on, and we'd just answer it in one round.

First, what can the federal government do beyond what it is? You have green enabling funds. You've mentioned a number of other programs you've been participating in. Obviously, we're looking at ways the federal government can aid in efforts such as yours in greener electrical consumption. What are your thoughts on what you would like to see the federal government doing that it isn't doing today?

Second, if you could take a look at the efforts that you've undertaken, is it possible for you to quantify in percentage terms what that means to global energy consumption within your municipalities? In other words, in percentage terms, how much of a difference have all these efforts made in terms of the global utilization of energy within your municipality? I ask so that we can get a scale of what impact these efforts are making.

I understand that you talk about the dollar value and savings, but the big issue for us in energy consumption is that while we make gains, there are all kinds of new appliances and things being added, so I'm wondering what kind of impact it's had on the overall load.

Mr. Russell, did you want to toss your question in for good measure? No?

There you go. Go ahead.

Mr. Richard Quail: Those were tough questions.

I can certainly research that; it's an excellent question. Relative to global community energy consumption—what's our percentage and what does that represent in terms of savings—I can't answer that off the top of my head.

Mr. Mark Holland: On the issue of the federal government and its role, would additional...?

Mr. Richard Quail: Research and development, and the ability to support risk-taking adventures around new technology—I think those are critical. The continuation of funding for upgrades to infrastructure and working through the endowment fund with FCM have been very important factors for our community. We're a newer community in a growth mode, so that's our context.

Mrs. Barb McDougall-Murdoch: Again, I would have difficulty in saying what role our municipality has in terms of making a contribution towards the reduction of energy consumption in the community on a global scale. We are actually just in the process of doing a greenhouse gas baseline emissions inventory for the next calendar year, so we can look at achievements that we've made since our 1990 baseline, when we set ourselves a target of a 30% reduction of greenhouse gas emissions in our community. We're likely well on our way to meeting that goal, because one of the initiatives in our community was the planting of 12 million trees, but we still have a long way to go in terms of our contribution on a global scale. That's something I'd have to look into as well.

In terms of the role the federal government can play, I would certainly build upon and support what Richard said about support for some of the existing programs, for the generation of new programs that will help support some of the initiatives and technologies that are being developed, and for things happening at the local level. The local level of government is the one closest to the people, who are in a good position to enact change on many levels when you start to talk about the individual, as well. Programs that support that work, such as the one-tonne challenge and EnerGuide for houses, are very valuable to us.

● (1705)

Mr. Mark Holland: Mr. Chair, being as kind and generous as you are, do you think you could get Mr. Russell in, recognizing there won't be another round? I think he has just one quick question.

The Chair: I'm going to go to Mr. Tonks very briefly.

Mr. Alan Tonks: My question is very short.

Ms. McDougall-Murdoch, you mentioned local champions. Who was the local champion you had in mind when you said that?

Mrs. Barb McDougall-Murdoch: It was a gentleman by the name of Paul Graham. Paul was a plants engineer responsible for our waste water treatment plants. Paul sat at the municipalities table when the federal government commissioned the NCCP, the national climate change process. Paul sat at the municipalities table and really championed this work throughout the community. He made tremendous inroads within the political organization in our own communities, and with senior staff and management. We developed an incredible rapport and respect with our EarthCare partners within the community. Paul is now the CEO for the town of Blue Mountain.

Mr. Alan Tonks: Right.

I think Tom Davies, who was the original mayor—I can't remember the name of the municipality prior to amalgamation—and the regional chairman, could also be considered one of those champions.

[*Translation*]

The Chair: Mr. Ouellet, you have five minutes, please.

Mr. Christian Ouellet (Brome—Missisquoi, BQ): I think that what we have heard this afternoon is fantastic. We knew about it, but it was great to hear. Thank you for coming to tell us about it. But the loveliest words that I heard this afternoon still came from Mr. Gourde, who said that the government is going to do exactly like you, and I applaud him warmly, because that is what has to be done.

Perhaps you may not be able to equal Mr. Gourde's fine words, but I would still like to hear a little more from you about the role that the federal government could play in these programs. You also spoke with Mr. Tonks about a champion. It seems to me that this is going to take a champion in the federal government. Something else is needed too. You said that there was a lot of awareness-raising and education.

If the federal government were to embark on an energy-saving program on a huge scale, like a national scale, do you not think that a number of awareness programs would be necessary? How do you see that?

[*English*]

Mr. Richard Quail: The initiatives that we've undertaken around energy management have been an evolution. The deregulation of electricity in the marketplace in Alberta has been an evolution. The introduction of innovation has then created the investment climate for entrepreneurs to move in and to capture. We have a threshold right now in Alberta of a maximum of 960 megawatts of green wind power allowed into the grid, because of challenges with respect to variability of wind—peak flows of wind—and the system operator's capability to ramp down the wind when it exceeds the volume allocated to that generation source.

● (1710)

[*Translation*]

Mr. Christian Ouellet: Let me stop you, because I do not think that you have grasped what I meant. I was talking more about Sudbury, where, as we were told just now, there are a number of programs to educate the people. I am not talking about techniques, but rather of people becoming aware that they can change their energy lifestyle. My impression was that this was very important, at least in Sudbury.

Your city is a little different. There have been several programs in similar cities in the United States, particularly in California, for 30 years or so. I see you more as a new bedroom community grafted onto a large city, whereas in Sudbury, they have taken an existing city, a manufacturing and mining city that was, let's admit it, dirty when they started, and they have made it into a green city. That is a little different, I find. I see Sudbury's awareness programs as a model that will have to be put in place all across Canada in order for the federal government to realize the potentially enormous energy savings.

[*English*]

Mr. Richard Quail: I'll conclude and hand it over to you, Barb.

My initial point was with respect to the regulatory and policy framework that needs to evolve over time, and that's the role of government—to allow for these innovations to occur. I couldn't agree more with respect to education; our greatest success in education is getting into the schools and educating the next generation. It's the next generation that is making these innovations happen.

Mrs. Barb McDougall-Murdoch: I would like to support that as well—educating youth in our community, as well as educating individuals. Engaging and reaching out to the public and involving them in this process has been vital to the success of the actions outlined in our local action plan.

A number of key implementation tools have been identified as a result of that. One of the most important is something called community-based social marketing, or CBSM. It's changing how we behave, and this is true whether you're talking about waste reduction, recycling, making homes more energy efficient, using modes of transportation other than the private automobile, or eliminating pesticides on lawns and gardens. What community-based social marketing does is remove the barriers out there that exist to prevent somebody from moving forward with a positive action.

In many of our projects we've incorporated CBSM tools. We've worked with an international expert by the name of Doug MacKenzie-Mohr. Many of you who are familiar with him will be familiar with his book, called *Fostering Sustainable Behaviour*. He does workshops worldwide.

We see a great value in recognizing that education and awareness alone will not necessarily lead to behavioural change. It's implementing community-based social marketing strategies to identify the issues, remove the barriers, and put programs and mechanisms in place to get the desired result or change or action. I think that a campaign, a national backdrop that would support local initiatives, must include elements such as that.

[*Translation*]

Mr. Christian Ouellet: Mr. Chair, I would just like to add one more little thing.

[*English*]

The Chair: Why don't you save it for your wrap-up at the end of the meeting, your traditional closing address?

Go ahead, Mr. Trost.

Mr. Bradley Trost (Saskatoon—Humboldt, CPC): I have to run to see a constituent very shortly.

I'm curious about how you picked and prioritized projects. Was it purely financial—this is where the most savings are, so that's where it starts? I'm asking how you prioritized your programs, your targets, or whatever you were going to do. What were your basic criteria, and how did you prioritize what you did when it came to projects?

Mr. Richard Quail: I can briefly respond: need.

● (1715)

Mr. Bradley Trost: Now, is that financial?

Mr. Richard Quail: Well, it would be a waste water treatment plant beyond capacity, or a recreation facility in dire need of expansion, a number one community facility. What sort of energy—

Mr. Bradley Trost: So the squeaky wheel got the grease.

Mr. Richard Quail: The priorities evolved in the community, and from that the opportunities were assessed. The opportunities are influenced by the funding sources that are out there; the solar applications were a result of a very innovative funding program that Alberta put in place. It's a combination of demand, need, and funding source availability.

Mrs. Barb McDougall-Murdoch: I would briefly build on what Richard said. We had a number of quick starts that were a result of some immediate needs with respect to infrastructure, but in terms of prioritizing initiatives happening in our community, that was as a result of our local action planning process. It was a community collaborative. When we started this process with 38 community organizations, we struck five different working groups—residential, municipal, commercial-industrial, institutional, and business plan development—and those individuals, those community partners, really charted the course for our future and identified the priorities within each of the respective areas to move initiatives forward in our community. So it's not only our—

Mr. Bradley Trost: How did they pick the priorities? Did they say this is going to carbon dioxide, or this has the quickest payback, or this is a proven technology, or this is the democratic vote of the area? What was it that people were responding to?

Mrs. Barb McDougall-Murdoch: I would likely say it's a combination of those things.

The Chair: All right, then. For our traditional wrap-up address, Monsieur Ouellet, have you got anything more to add?

All right, Mr. Russell can answer.

Mr. Todd Russell (Labrador, Lib.): Thank you as well. The presentations were fantastic.

I'm just wondering—if I'm a municipal taxpayer, am I going to end up paying more because of your innovations and improvements in Okotoks, or more because of the types of programs you've introduced in the greater Sudbury area? Will I pay more, or less, or will I see any difference?

Mr. Richard Quail: In our community we'll argue that you'll pay less because of efficiencies achieved. Instead of pumping two million gallons of water—treating it, putting chemicals in it, and distributing it through the community on a daily basis—we're only pumping and treating one million, so you're saving the costs associated with that or other energy efficiency initiatives. At the end of the day, we believe there's a bottom-line saving for the constituents of our community. We're in a market-competitive environment as municipalities, relative to property taxes payable, utility rates, etc., and council is very conscious of that as well.

Mrs. Barb McDougall-Murdoch: I think Sudbury is interesting in an iconic sort of way. I talked a lot about industry and mining in my presentation, but what I'd like to say is that in 1985-86, *Time* magazine did an article about Inco, saying that their investment of $500 million was the single biggest investment in energy retrofits at that time in the world. Economists at that time talked about the collapse of mining with respect to more stringent emissions reductions. We moved forward with that investment to a reduction of 60% of sulphur dioxide emissions, and the payback for that work was less than ten years.

The environmental improvements we realized because of that were a byproduct of energy consumption and energy conservation. Now that we're talking about managing greenhouse gas emissions and carbon dioxide, it's just like how we managed and dealt with sulphur dioxide. Across the country, companies are—

Mr. Todd Russell: Let's talk about the taxpayer—the Sudbury taxpayer, the municipal taxpayer.

Mrs. Barb McDougall-Murdoch: I would say that there is an investment initially, but the paybacks to the community individuals are substantial.

Mr. Todd Russell: Thank you.

The Chair: Monsieur Ouellet, may we have your final comment?

[*Translation*]

Mr. Christian Ouellet: Mr. Chair, I would like to know if they have done anything about external lighting, because this is the most significant factor in our cities in Canada. Have you done anything to reduce losses in lighting? House lighting, street lighting, lighting in general represents a net loss.

[*English*]

Mr. Richard Quail: Do you mean like pollution?

Mr. Christian Ouellet: Yes. There is light pollution, and there's also a loss in energy. A light outside is a large loss.

● (1720)

Mr. Richard Quail: That's true, although the other side of it is that as a municipality, you're bound from a liability point of view, from a public safety point of view, if you don't have appropriate illumination levels. We've developed and pushed hard for low-illumination, high-efficiency, reduced-light-pollution types of lighting standards throughout the community—that's the one thing we've done around that—but you have to balance out the public safety factor, and we're not at a stage of forgoing street lighting for energy savings while compromising public safety.

Mrs. Barb McDougall-Murdoch: We've done similar work in greater Sudbury, but I would say on the light pollution side of things that the push toward a reduction has come more from the non-profits or NGOs in the community in moving that agenda forward.

The Chair: We will go to Mr. Tonks for a final comment.

Mr. Alan Tonks: Thank you, Mr. Chairman.

I mentioned the name of the late Tom Davies, who was a mayor and regional chair. He was an officer on the North American board. I think he was the North American vice-president of ICLEI and an executive member of the Federation of Canadian Municipalities. His name is legend in Sudbury. He was one of the finest elected people I have ever met in my life. I just wanted to make sure that Tom, if he's looking down, is remembered for the initiatives that he took in the area of sustainable development. He was really one of the spark plugs, along with Paul and others in Sudbury.

Second, Mr. Chairman, I want to thank you and to thank Chad and our translators and those who helped put the visit together to Churchill Falls, Grand Falls. From my perspective, and I'm sure I speak on behalf of the committee, it was an excellent and most educating experience, and it couldn't have been done without the planning that went into it. On behalf of the committee, I express our appreciation. I'm sure it will assist us in the future with respect to bringing the report together in terms of a balanced commentary on what we saw. We express our appreciation to you and Chad.

The Chair: We express it to our researchers as well.

Also, I wanted to thank Mr. Russell for his help on the ground. We've had quite a week.

It's been a very good week for the committee, not the least of which was your appearance today. It is really quite remarkable to have two communities so very different in terms of history, background, age of communities, and so many other things in a joint goal with the same target and achieving such remarkable progress and sustainability. It is really quite inspiring to those of us on the committee who are getting to know more about this. These are wonderful examples, and I'm very appreciative of your appearance today.

Thank you very much.

Some hon. members: Hear, hear!

The Chair: With that, we are adjourned.

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