



ISSN 1180-5218

Legislative Assembly  
of Ontario

First Session, 39<sup>th</sup> Parliament

Assemblée législative  
de l'Ontario

Première session, 39<sup>e</sup> législature

## **Official Report of Debates (Hansard)**

**Tuesday 14 April 2009**

## **Journal des débats (Hansard)**

**Mardi 14 avril 2009**

**Standing Committee on  
General Government**

**Comité permanent des  
affaires gouvernementales**

Green Energy and Green  
Economy Act, 2009

Loi de 2009 sur l'énergie verte  
et l'économie verte

Chair: David Oraziotti  
Clerk: Trevor Day

Président : David Oraziotti  
Greffier : Trevor Day

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111 Wellesley Street West, Queen's Park  
Toronto ON M7A 1A2  
Telephone 416-325-7400; fax 416-325-7430  
Published by the Legislative Assembly of Ontario



Service du Journal des débats et d'interprétation  
Salle 500, aile ouest, Édifice du Parlement  
111, rue Wellesley ouest, Queen's Park  
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Publié par l'Assemblée législative de l'Ontario

LEGISLATIVE ASSEMBLY OF ONTARIO

## STANDING COMMITTEE ON GENERAL GOVERNMENT

Tuesday 14 April 2009

*The committee met at 0901 in Algoma's Water Tower Inn, Sault Ste. Marie.*

### GREEN ENERGY AND GREEN ECONOMY ACT, 2009 LOI DE 2009 SUR L'ÉNERGIE VERTE ET L'ÉCONOMIE VERTE

Consideration of Bill 150, An Act to enact the Green Energy Act, 2009 and to build a green economy, to repeal the Energy Conservation Leadership Act, 2006 and the Energy Efficiency Act and to amend other statutes / Projet de loi 150, Loi édictant la Loi de 2009 sur l'énergie verte et visant à développer une économie verte, abrogeant la Loi de 2006 sur le leadership en matière de conservation de l'énergie et la Loi sur le rendement énergétique et modifiant d'autres lois.

**The Chair (Mr. David Oraziotti):** Good morning, everyone. We'll call the meeting to order. Welcome to the Standing Committee on General Government.

First of all, I'd like to welcome all of the members of the committee to my riding of Sault Ste. Marie. It's a pleasure to have you here, and thank you all for joining us. We appreciate the opportunity in northern Ontario to have

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

## COMITÉ PERMANENT DES AFFAIRES GOUVERNEMENTALES

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individuals from the region be able to have access to the committee in a more convenient manner. It's tremendously appreciated, I'm sure, on their behalf as well.

*Interjection.*

**The Chair (Mr. David Oraziotti):** Just as a reminder, unlike at Queen's Park, you'll need to press the button for the microphone to be able to speak on this.

A reminder for individuals making their presentations: Just state your name for the recording purposes of Hansard, and you can begin your presentation when you like. You have 10 minutes and there's five minutes for questions from committee members.

### SAULT STE. MARIE REAL ESTATE BOARD

**The Chair (Mr. David Oraziotti):** Good morning, and welcome, Derek.

**Mr. Derek Crowell:** Good morning, ladies and gentlemen. My name is Derek Crowell. I am the current past president of the Sault Ste. Marie Real Estate Board.

I want to thank you for the opportunity to speak with the Standing Committee on General Government in regard to the Green Energy and Green Economy Act, 2009, or Bill 150.

The Sault Ste. Marie Real Estate Board represents 157 salespersons and brokers, and has a geographic trading jurisdiction over the entire Algoma district, with a land area of almost 49,000 square kilometres and about 59,000 dwellings. Those stats are from StatsCan's 2006 figures.

The Sault Ste. Marie Real Estate Board was established in 1954 to organize local realtors, promote higher industry standards, and to lobby to preserve property rights on behalf of property owners in Sault Ste. Marie and Algoma district.

Realtors, as you may be aware, are licensed to provide professional services by the Real Estate Council of Ontario and are governed by the Real Estate and Business Brokers Act, 2006.

We are acutely aware of the impact of governmental decisions, and the impact they have on real property owners in Ontario and locally here in Sault Ste. Marie and Algoma district.

Realtors across Ontario, represented by the Ontario Real Estate Association, have determined that portions of the Green Energy and Green Economy Act, 2009, specifically schedule I, subsection 2(1), will have a detrimental effect on real property owners, both provincially and locally here in Sault Ste. Marie.

Schedule I, subsection 2(1), describes implementation of mandatory home energy audits prior to the sale or lease of an interest in real property. The creation of a law making something mandatory immediately causes one to pause for thought. What is the reason for this law? Who will be affected? What will the effects be? As realtors, we have considered these questions and we know the answers will negatively impact homeowners throughout Ontario, but they will be disproportionate for homeowners here in Sault Ste. Marie and Algoma.

Statistics provided by the Canada Mortgage and Housing Corp., or CMHC, show that 61% of Ontario's dwellings were built before 1980, and 15% overall before 1945. According to CMHC, the percentage of homes in Sault Ste. Marie built before 1945 is equal to the provincial total of 15%, but for those built before 1980, the percentage rises to a staggering 78%. This means that over three quarters of the homes built here in Sault Ste. Marie were constructed well before the current building codes reflecting energy conservation and efficiency were created. Mandatory home energy audits will cost these homeowners, above the price of the initial audit, potentially thousands in upgrades to the home or reduced value in their property based on the purchaser's review of the audit report.

Realtors also have great concern with how these mandatory home energy audits will be implemented and conducted. According to Natural Resources Canada, there are about 450 licensed energy auditors in Ontario. There is only one licensed company, CanSpec Inspection Services, with two licensed auditors for Algoma. The Sault Ste. Marie Real Estate Board had 902 residential unit sales in 2008. We wonder how these two auditors can possibly conduct audits on every sale in our region in an effective manner without delaying the sale of a home.

The government of Ontario has been describing the cost of an energy audit to be \$300. According to CanSpec Inspection Services, the actual cost is \$392.75, including current tax, for the initial audit, and \$236.25 for the follow-up audit required for any government rebates on upgrades. This does not include any cost for distance travelled by the auditor, which in our region, for the two required audits, could cost more than the Ontario home energy retrofit program's \$150 rebate.

CanSpec Inspection Services has reported a current waiting list for home energy audits in excess of four weeks. What will happen if the audits become mandatory? Many sales are negotiated and close in four weeks or less. How can it be ensured that these sales will proceed and close as negotiated?

Realtors are also concerned that should Bill 150 become law as written, many home energy auditors will be required immediately and many will be hired and inadequately trained. There is no current standard process for training, and audits have proven to be inconsistent. The current licensing of auditors is conducted by the approved providers to their own auditors. If home energy audits are made mandatory by the government of Ontario and sales of homes are directly impacted, homeowners should have the peace of mind that these auditors are being rigorously trained and closely monitored by the appropriate government agency.

The current residential building inspection system works to the benefit of buyers and sellers as part of the negotiating process. These inspections already detail many of the same elements as a home energy audit. Mandatory home energy audits could create a duplication of some services with increased costs to the public. We have seen the residential building inspection service expand in the last decade in Sault Ste. Marie as a result of the free market economy in which we live. Homebuyers and sellers, through supply and demand, have created a market in which there are 10 home inspectors to choose from, where only one existed several years ago. This service industry has grown and benefited homeowners in our market without any mandatory government policies. The education of the public is the driving force behind the increase in the supply and demand of the providers of residential building inspection services.

We must also consider who will be affected by mandatory home energy audits. In Sault Ste. Marie, as previously mentioned, we have a large supply of older homes. The owners of these homes are most often seniors or young families, including single-parent families. These homes typically offer the required amenities for these people at a reasonable cost. If the government of Ontario imposes mandatory home energy audits, many seniors and young families will see the value of their biggest asset decrease. They will be required to pay for audits and then be forced to decide whether to upgrade the home for less return than the cost to upgrade or to take a reduced sale price for their home. What this means is that these homeowners, should they choose or be required to move, will have less equity in their property. Many seniors

require moving to an assisted living situation, and mandatory home energy audits will negatively impact their ability to do so.

**0910**

On behalf of the Sault Ste. Marie Real Estate Board, I ask the Standing Committee on General Government and specifically the Chair, Sault Ste. Marie MPP Mr. Orazietti, to take our concerns to Queen's Park for a sober second thought as to how mandatory home energy audits would negatively impact a majority of homeowners in Sault Ste. Marie and Algoma. The current economic landscape is one of caution and hesitation at best and is bleak for many. The passing of Bill 150 will negatively impact the value of the assets of the majority of homeowners, it will create an unnecessary cost to home sellers and will create a hindrance and in some cases a deterrent to sales.

The ascent of Bill 150 as currently written into Ontario law as the Green Energy and Green Economy Act, 2009, would be an irresponsible decision by the government of Ontario. The Sault Ste. Marie Real Estate Board, in cooperation with the Ontario Real Estate Association and its 45,000 members, pledges to inform homeowners about the drastic effects this law would have on their most valuable asset. Realtors will fight the implementation of mandatory home energy audits. Instead, we urge the government of Ontario to bolster incentive programs and to work in tandem with realtors to educate homeowners on the value of energy-efficient homes.

Again, thank you for the opportunity to speak today.

**The Chair (Mr. David Orazietti):** Thank you very much for your presentation, Derek. Mr. Yakubuski is first with questions. We have five minutes for questions.

**Mr. John Yakubuski:** Thank you very much, Derek, for joining us this morning here up in the Soo.

Many of the things that you've mentioned we have raised, as opposition, to this portion of the bill, particularly the issue of the cost to those who can least afford it with something like this once it's implemented. I look at this sometimes as being like an amicable separation, and all of a sudden, the two lawyers get involved and it becomes a negotiation, and suddenly these things drag on for months. I see this possibly happening in real estate deals, where people are aware of the energy efficiency or inefficiency of a particular home, being based on its vintage and the visible signs, and all of a sudden, you bring these audits into place and suddenly these things become a huge bone of contention, and they can actually break the deals because of it.

What I'd like to know, Derek, is, because of the adversarial nature of this type of legislation that is going to be created, were you people consulted? I'm not aware that OREA was consulted. Were any of the boards or anybody consulted before the government decided to go ahead with bringing this kind of legislation as a part of this Green Energy Act?

**Mr. Derek Crowell:** I know the Sault Ste. Marie Real Estate Board was not consulted. I know OREA, at the provincial level, has been lobbying. Whether or not they were actually consulted: I'm not aware of that. I know they

will be presenting to you; I believe it's on April 22. So maybe they can answer that question at that time.

**The Chair (Mr. David Orazietti):** That's time, a minute and a half, five minutes for questions. Mr. Tabuns.

**Mr. Peter Tabuns:** Derek, thanks very much for the presentation. There's a lot of useful information there for us.

One thing that I'd like you to speak to is the balancing of the rights of the buyers and sellers, because I would think that as a buyer, I would want to know how a house would perform in terms of efficiency. I think in the next few years, energy costs are going to rise substantially—setting aside electricity, energy costs in general—and that it makes sense to inform buyers.

In many ways, you're saying that we should not be telling the buyers how this house will perform because in fact they may want to pay less for it. I don't see why the buyer shouldn't have full disclosure.

**Mr. Derek Crowell:** Again, I'll reiterate my point that we live in a free market economy and there is an element in every transaction of "buyer beware." Buyers have every right and are encouraged to make any and all investigations possible into all aspects of a home. Like I said, the current process of hiring residential building inspectors is a great example of that. The buyer wants to know if the structure of the house is sound.

Again, many of the elements that are disclosed in a residential home inspection report would also be in a mandatory home energy audit, whether it's the efficiency of the windows, the doors or the insulation in the attic; they're all elements of a visible inspection, and those are, like I said, what would be noted in a mandatory home energy audit as well.

We see the value in having energy audits, but making them mandatory has a detrimental effect.

**The Chair (Mr. David Orazietti):** Thank you. Ms. Broten?

**Ms. Laurel C. Broten:** Thanks very much, Derek. I'll just pick up on the line of inquiry that Mr. Tabuns was examining. When a family buys their home, I would suspect you in this industry would agree that it's a big investment for those families that are looking to buy their homes. When we buy our cars and our appliances, we have access to information about fuel efficiencies and how much that vehicle would consume.

Although you raise a number of issues which we're examining with respect to implementation, I still go back to the basic premise: Do you not agree that a home seller who has taken that very old home and done some work with respect to putting in cooling systems or various different things should benefit in the sale price of that home? Why should they not benefit from the investments they've made and have their house compare in a better light to a home that hasn't undertaken any of that work?

**Mr. Derek Crowell:** That's a great question, and I agree with you that when people invest in their home, they should see a return on that investment at the time of the sale. But I believe a homeowner can clearly disclose that they've made various improvements to the home without

being forced to have a mandatory home energy audit and pay the price for that. Again, if a buyer chooses to have a home energy audit conducted on a home and chooses to negotiate their offer price or whether to buy or not buy the home based on the audit, that should be their choice.

**The Chair (Mr. David Oraziotti):** That's time.

**Ms. Laurel C. Broten:** Thanks.

**The Chair (Mr. David Oraziotti):** Thank you very much for your presentation, Derek. That's the time we have.

0920

#### NORTHERN LIGHTS ENERGY SYSTEMS

**The Chair (Mr. David Oraziotti):** The next presentation is Northern Lights Energy Systems, Laurence McKay. Good morning, and welcome to the Standing Committee on General Government. You have 10 minutes for your presentation. There will be five minutes for questions from committee members following it. Please state your name for the recording purposes of Hansard, and you can begin when you like.

**Mr. Laurence McKay:** Good morning. My name is Laurence McKay and I am a licensed electrician. My company is Northern Lights Energy Systems and we are a licensed electrical contractor with the Electrical Safety Authority. We design, sell, install and maintain solar and small wind power systems throughout the Algoma district. Northern Lights also manufactures a solar tracking system called Sun-Link Solar Tracker, and it's sold across Canada through solar distributors.

As one of the pioneers in this industry, I have 22 years of experience. I'm very pleased that you've asked me to talk to this committee. I've committed my life's work to renewable energy. I commend the Ontario Liberal government under the leadership of Dalton McGuinty for taking this bold action with legislation to push forward to a green economy that fights climate change and leaves our children with a cleaner and more secure world. The act speaks strongly against the resistance to change, and for that I am very grateful. We've experienced the resistance to change in connecting net metering PV systems as utilities, cities and other entities learn to deal with unfamiliar technologies. While the resistance is fading, the acceptance is less than universal.

My experience with photovoltaics and my knowledge of the issues that have cropped up in other jurisdictions have brought me here today to ask you to proceed with some caution. Please don't take my comments as negative; my intent is to help this act reach its stated goals.

The picture on the screen is the one and only project that we managed to sell under the standard offer contract, which pays 42 cents a kilowatt hour. You'll notice on the right side of the screen that there are no PV modules. That's because of a shading issue from the two-storey part of the building.

I'm going to give you a really quick science lesson on the impact of bad siting of a PV array. Each solar cell is a small square within a module, and it produces only a half

a volt. The current or amps are controlled by the intensity of the light striking that cell. In darkness, a solar cell is a one-way device blocking current flow. Each module contains 72 cells wired in a series to bring the voltage up. If you cover one cell, you lose up to 50% of the power of the whole module. Power production is limited by the cell receiving the least amount of light. In grid-tie applications, we typically connect seven to 10 modules in series, so there are now 500 to 720 cells in series. The shadow cast by a pencil across one cell will affect the power output of all 10 modules. This is not a flaw or a bad design of a solar module, it's a fact of the technology, which very few people understand. We use a professional site survey tool that shows us exactly what might shadow the array at any time of the day throughout the year.

Everybody wants to be a solar dealer, but very few have the knowledge, the training or the specialized tools required to do the job properly. Don't expect your local electrician to automatically have this knowledge. There are a number of experienced solar dealers across Ontario that make their livings selling PV systems, but we were never in this game for a fast buck. We care about our customers, our environment and our industry. We are worried that unqualified and unethical individuals are going to spoil it for everyone. It would be a shame to have our courtrooms plugged up with clients suing their contractors for performance issues related to bad installs. I accept and welcome competition. There's room for many in this new green economy, but climate change does not allow us the time to recover from a bad start. Training will take some time, and educators such as Sault College here in Sault Ste. Marie are already stepping up to the plate.

In the meantime, I'd ask that the minister direct the OPA to require that applications for the feed-in tariff program include a documented site analysis stating the orientation, the tilt of the array and the number of hours a day that the entire array will be shade-free.

Knowledgeable staff needs to be employed by the OPA to review these data and flag the projects that should not proceed. Applications that appear to have poor site conditions should be referred back to the client, not the contractor, for a final decision. This action will help prevent poor installations that would be almost impossible to correct once they're in place.

The success of this act is hinged on public uptake of the feed-in tariff program. While the Green Energy Act does not set feed-in tariff rates, it does allow the minister to override the OPA on this issue if necessary, and I support this section of the act. I wish to point out that the draft feed-in tariff issued by the OPA on April 7 for roof-mounted PV systems is 71.3 cents a kilowatt hour for 10- to 100-kilowatt-hour output systems. The same modules, mounted on the ground, will only receive 44 cents a kilowatt hour. It costs more to mount them on the ground, so why does it pay less?

I want this committee to understand how limiting the rooftop option is to the uptake of the program. Installed, roof-mounted PV systems ranging from three to 10 kilowatts will cost roughly between \$30,000 to over \$100,000.

This is a demographic of the population that is higher-income households and very successful small businesses.

Systems less than three kilowatts are not financially viable due to the monthly service connection charge. Since these systems are connected ahead of the meter but still use the same wires, the cost to the utilities is only for the administration work, and I wonder if we could consider waiving the connection fee to allow more people to participate.

Of the small pool of potential clients, there are a number of issues that can prevent a rooftop project from going ahead: Roofs that face east, west or north are not suitable; dormers, stacks and chimneys or valleys reduce the usable roof use space by more than they occupy, as with the shadow issue; shadows from neighbours' trees; power lines; power poles; other buildings; worries about voiding a roof warranty or a new home warranty; and concerns about water leaks. Lastly, large roof spaces on commercial buildings may be taken up with heating, air conditioning and make-up air units, so there may not be as much available space as you might think.

The Ontario building code should be revised to promote the use of solar energy. We see it in the subdivisions, where the roofs are really unsuitable; there are large roof spaces, but they're just full of dormers and stacks and all sorts of things. It would be nice to see that amended so that that roof space is usable.

With the vastly diminished potential there, there's a risk that the program will not be able to build the critical mass and that it'll fade away just like the standard offer program. To mitigate this risk, allowing ground-mount systems up to 100 kilowatts to receive the same feed-in tariff as roof-mounted systems will boost the activity and also make the program useful to small municipalities.

Small municipalities struggle with the costs of running water treatment plants, arenas and other facilities due to their very small tax base. Projects in small communities would spread the technology and public awareness.

While PV installs are labour-intensive projects, there must be opportunities for Ontario manufacturers as well. The opportunity to open up a new PV manufacturing facility that is not connected to one of the big players in the market is extremely difficult with the stiff competition that exists in today's market. There is opportunity for manufacturers of racking systems. Racking systems are metalworking jobs using Canadian labour and materials. These jobs require some training but can be quickly created.

Allowing the feed-in tariff rate for systems up to 100 kilowatts of output to be the same as roof-mounted will result in more direct jobs being created and will increase the demand for steel and aluminum. I submit that the German model for the feed-in tariff was concerned with dense populations to protect farmlands and open spaces. We don't have the same concerns here in northern Ontario. I'd ask that the minister direct the OPA to use the same feed-in tariff of 71.3 cents for ground mount between 10 kilowatts and 100 kilowatts of output in rural and northern Ontario communities.

### 0930

I disagree with the Navigant Consulting forecast of declining installed costs submitted to the OPA. The bulk of the cost is for the modules. The cost of energy to refine silicon and produce solar glass and aluminum extrusions used in the manufacturing of a module is not going down. Economics of scale have reached near their peak, and exponential growth in demand for raw materials puts upward pressure on prices.

I suggest that ground-mounted systems should allow smaller players, like Northern Lights Energy, to grow with projects up to 100 kilowatts. These projects are large enough to attract small firms but too small for the big players who are establishing megawatt solar farms.

I'd also suggest that small projects under 10 kilowatts, currently under the standard offer contract, be given the opportunity to upgrade to the new feed-in tariff. This cost would be quite low, as there are only 240 projects across the entire province. The project owners would certainly spread the word about solar being a good investment, but excluding these people may well anger a group that we need to promote renewables.

In summary, I applaud the Ontario Liberal Green Energy and Green Economy Act. I appreciate your efforts for holding this hearing here in Sault Ste. Marie and in northern Ontario. I thank you for listening to my concerns. I urge everyone to get behind this legislation and make it work for Ontario. Thank you.

**The Chair (Mr. David Orazietti):** Thank you, Mr. McKay, for your presentation. Mr. Tabuns, you're first up with questions.

**Mr. Peter Tabuns:** Laurence, thank you very much for the presentation. Sorry; to be official, I have to turn on the mike.

The cost differential between ground-mounted and roof-mounted solar arrays: First of all, my understanding was that the higher price was given for the rooftop arrays because there are greater problems with installation. Not the case? Is that your experience?

**Mr. Laurence McKay:** There are certainly problems with roof installations. It depends on the size and the type of installation. So on a large, flat roof, say on a shopping mall or an industrial building, there may be engineering issues. There may be all sorts of issues. With a typical residential roof that's going to be flush-mounted, there are very few issues. So it's going to vary across.

Basically, we don't have an understanding of why ground mount is so much less. That's the issue. It costs more to put them on the ground. Now we have to put down concrete foundations. We're creating a structure, where a roof-mounted system is attaching to an existing structure. We've got a lot more costs involved in that installation.

**Mr. Peter Tabuns:** Okay. Thank you.

**The Chair (Mr. David Orazietti):** Ms. Broten.

**Ms. Laurel C. Broten:** Thank you very much for your very thoughtful presentation. I'll let you know, Mr. McKay, that the OPA, the Ontario Power Authority, as you know is consulting with stakeholders, starting over the next several weeks, including large and small renewable

energy suppliers, on the proposed FIT details. I would encourage you to engage in that consultation. I will certainly make sure that the presentation you've given to us today makes its way in through our process to that at the Ministry of Energy.

I just wanted to ask you one question with respect to the analysis you were talking about, in terms of the site analysis. How much would a site analysis cost to be undertaken in advance of putting in every application? I'm just trying to figure out, to follow your suggestion: How much would we be asking people to undertake as they applied?

**Mr. Laurence McKay:** It depends on the size of the system. A residential might be a couple of hundred dollars if it's not part of—if I'm going to do this site analysis but I'm not actually going to sell them anything, it might be a couple of hundred dollars. If it's in a commercial installation there's more work involved, so of course it would be more. It's not a big project, but it's so important because of that critical shading issue. If they're going to shade it with air conditioning units or trees or power lines, it really affects the performance. So our worry as an industry is there's a market there, and it always brings new people out of the woodwork. There's so much pressure to put it on a roof at 82 cents rather than on a ground mount, so we're really worried that they're going to pile them on the roof. They don't really care; they've sold a project and they can run away afterwards.

Also, as the core group that's been here forever, hoping that this would happen someday, we're really worried that we're going to have a lot of people doing things wrong. We're doing our best to try to prevent that from happening. We want it to be successful.

**Ms. Laurel C. Broten:** Thanks for coming today.

**The Chair (Mr. David Oraziotti):** Thank you. Mr. Ouellette.

**Mr. Jerry J. Ouellette:** Thank you for your presentation. Just to follow up on the site analysis, we heard from the realtors a little bit earlier on regarding the cost for a mandatory inspection. Can you visualize this as being a part of that mandatory inspection so the energy efficiency could be included, to include your proposal?

Another aspect would be, I know with a lot of camps here there would be a lot of offline. Are you doing most of your business online or offline, and what are you using for storage offline if so?

**Mr. Laurence McKay:** Our traditional business has been a lot of off-grid homes. It's surprising how many off-grid homes we've done. These are full-time, residential, year-round, and then a lot of cottages. Cottages can mean anything up to a building worth a half of a million dollars. These are not little shacks out in the bush; these are very high-end homes that are on the water on Lake Superior and around the area. So we've done a lot of that, we've done some tourist lodges, but our core business has been off the grid. Only with the net metering were we able to get a few projects that were grid-connected. Again, these are people who are more concerned about the environment or a backup system. It's not really about saving money or

making money; it's about the environment and it's about maybe energy security. That's where our beginnings in the grid connect came.

As far as storage is concerned, we're still working with lead acid batteries, whether they be sealed or vented. That's the traditional, most economical way to store energy. I know there's a lot of talk about new battery technology. It's still very expensive for stationary applications. It makes sense in electric cars and portable tools, but the old standby lead acid battery is still our main storage device.

With grid-tie applications, we won't have any batteries at all. We're using the utility as storage.

**The Chair (Mr. David Oraziotti):** Thank you very much. That's the time for the presentation. We appreciate you coming today.

#### PUC DISTRIBUTION INC.

**The Chair (Mr. David Oraziotti):** Our next presentation: PUC Distribution, Brian Curran, president and CEO. Good morning, Brian. How are you?

**Mr. Brian Curran:** Good.

**The Chair (Mr. David Oraziotti):** You have 10 minutes for the presentation and five minutes for questions. Again, please state your name for the purposes of recording Hansard, and you can begin when you like.

**Mr. Brian Curran:** My name is Brian Curran and I am president and chief executive officer for PUC Distribution Inc., which is a local distribution company or LDC for the city of Sault Ste. Marie. With me is Ella-Jean Richter, chair of the PUC Distribution board, and Larry Guerriero, chair of the PUC Inc. board.

Before I provide my remarks on the Green Energy Act and related legislative changes, I would like to describe the corporate structure of PUC Distribution. Distribution is a wholly-owned subsidiary of PUC Inc., the holding company which in turn is wholly owned by the city of Sault Ste. Marie. As required by the Electricity Act, 1998, the company is registered under the Ontario Business Corporations Act.

The company has three affiliates: PUC Telecom, which provides high-speed broadband telecommunications service over a fibre optic network in the city; PUC Energies, which was established to provide a range of energy services; and PUC Services, which provides utility management services. PUC Services has long-term contracts to manage its affiliate companies. It also provides management services to Espanola Regional Hydro and operates water and waste water treatment plants for several communities in northeastern Ontario, including those owned by the city of Sault Ste. Marie.

#### 0940

The Green Energy Act calls for LDCs to have an important role in the promotion of renewable energy, enhancing energy efficiency and achieving higher levels of energy conservation. Are LDCs ready to fulfill this role? Projects that have been pursued by PUC affiliates

should provide an indication of our readiness and ability to fill that role. The list of projects includes:

(1) an assessment of the use of bio-oil produced in local waste forestry material in northern Ontario to fuel a cogeneration plant for the Great Lakes Forestry Centre and the Ontario forestry research centre here in Sault Ste. Marie;

(2) an assessment of electricity generation potential of small hydro sites in the Algoma district;

(3) an assessment of the viability of a district heating system for the city's downtown core in conjunction with industrial cogeneration;

(4) an evaluation of the potential to use landfill gas to generate electricity and thermal energy at the city's landfill;

(5) the installation of electric thermal storage units in social housing and the evaluation of their acceptance by residents and the ability of the units to shift electric load to off-peak periods;

(6) an assessment of the cogeneration potential for a new hospital;

(7) the installation of a pressure-reducing turbine at the municipal water treatment plant to generate 330,000 kilowatt hours of electricity annually. The turbine is being installed with funding from the northern Ontario heritage fund.

The participation of local and province-wide energy conservation programs: Many other LDCs in Ontario have pursued similar initiatives. The province should be confident that LDCs such as PUC Distribution are not unprepared to do their part.

Despite the activities in which LDCs and the affiliates are engaged, the Green Energy Act will not mean business as usual. LDCs will be required to provide priority connection access to renewable generation facilities within a time period provided by regulation. We will be required to prepare plans and submit them to the OEB on how we intend to expand and reinforce our distribution system to accommodate renewable generation facilities and for the development of a smart grid.

The connectivity requirements will have a significant impact on LDCs. How significant will depend on the demand for connections, where in a distribution system that connection will be requested, the nature of the generation facility and the time prescribed by regulation to respond to connection requests.

We will need to augment our skills sets. System protection control will be a greater priority for LDCs, and one of the challenges will be to hire individuals with those technical skills. These people are scarce now and will be in even greater demand tomorrow. As long as we face this critical skills shortage, our ability to respond to connection requests for distributed generation may be adversely affected.

It must be noted that there will be additional costs to LDCs to connect distributed generation facilities to the distribution grid. Such costs cannot and should not be borne by the LDC. We expect that an efficient process will

be put in place by the OEB to ensure adequate recovery of LDC costs.

A welcome provision in the energy act is the allowance for LDCs to own and operate distributed generation facilities. Existing legislation restricts the business of LDCs to simply delivering electricity to customers. Up until now, generation projects had been pursued by LDC affiliates. Going forward, there will be no ambiguity whatsoever with the right of LDCs or their affiliates to own and operate renewable energy or cogeneration facilities.

The act calls for the development of the smart grid, which is defined as the advanced exchange system and equipment that, when utilized together, improve the flexibility, security, efficiency and safety of the integrated power system and distribution systems, particularly for the purposes of: (1) enabling the increased use of renewable energy sources in technology, including generation facilities connected to the distribution system; (2) expanding opportunities to provide demand response, price information and load control to electricity consumers; (3) accommodating the use of emerging, innovative and energy-saving technologies and system control applications; and (4) supporting other objectives that may be prescribed by regulation.

Smart meters are the foundation for the smart grid. In addition to providing time-of-use pricing to consumers, in giving them proper price signals to modify electricity consumption, smart meters will provide a two-way communication platform between individual customers and the LDCs. At the outset, there will be improved outage management and response, we will be able to identify electrical demand on individual circuits and make adjustments if we find a circuit to be heavily loaded, and we will be able to calculate what our system losses are in the distribution system. Over time, more devices will become available to monitor the many thousands of pieces of equipment that are a part of our complex distribution systems. These devices will advise us of impending failures and allow us to take pre-emptive action to avoid an outage. There will be devices in the home and commercial facilities that will have the capability to control individual appliances.

The smart grid will also allow for better integration of small-scale distribution generation facilities, reducing the need for large, centrally located generation plants. We will also be able to respond to the needs of plug-in hydroelectric vehicles, which, if the car makers have it right, will have a significant impact on the electrical industry. The electrical distribution system of the future will be more complex but also more robust, reliable and secure.

PUC Distribution will start installing 30,000 meters next week and plans to have the installation completed by the end of December. We will be working with the IESO to register and test our system for integration with the central meter data management and repository facility. We want to give our customers the opportunity to take

advantage of their smart meters to shift their electricity use as soon as possible.

PUC Distribution recognizes that there are provisions in the Energy Act and the Green Energy Act that will bring more scrutiny to LDC efforts to achieving the province's targets for energy conservation and demand management. I think that LDCs have demonstrated that they are able to pursue effective conservation projects individually or in co-operation with provincial agencies.

PUC Distribution has participated in several provincial conservation programs sponsored by the Ontario Power Authority and it has exceeded its objectives. We also have been working with local organizations and the city to encourage the adoption of specific energy conservation measures. We accept the additional scrutiny that will be brought upon us and we welcome what appears to be provided in the legislation: a greater freedom to pursue CDM measures individually or collectively in provincially sponsored programs.

With the introduction of the Green Energy Act, there are a number of changes that are required to other pieces of legislation, including the Ontario Energy Board Act. I would like to suggest to the committee members that they take this opportunity to recommend a further amendment to the OEB Act. Section 73(1) of the act contains a completely unnecessary prohibition for affiliates of municipally owned LDCs to operate water and waste water treatment and distribution systems that are owned by municipalities that do not have shares in the LDC. This arbitrary restriction should be removed at the same time that other sections of the act are being modified to conform to the Green Energy Act.

To conclude, I believe that the intent of the Green Energy Act is in keeping with the vision that LDCs have recently developed through the Electricity Distributors Association. EDA represents every LDC in the province. Development of the vision began 18 months ago and at its core is for LDCs to have the opportunity to help build sustainable communities of the future. This is in complete alignment with the intent of the Green Energy Act.

I would like to commend the government for recognizing the important role LDCs such as PUC Distribution can play in realizing the goals of the Green Energy Act. We have seen a great deal of consultation with stakeholders such as LDCs on the development of the Green Energy Act, and we welcome continued co-operation as we move forward with the implementation phase.

Thank you for this opportunity to speak to the committee.

0950

**The Chair (Mr. David Oraziotti):** Thank you very much for your presentation.

Government members; Mrs. Mitchell.

**Mrs. Carol Mitchell:** Just a quick question: What percentage of municipalities would not have a share in the LDCs?

**Mr. Brian Curran:** There are only a few privately owned companies in Ontario. We're speaking about subsection 73(1)?

**Mrs. Carol Mitchell:** Yes.

**Mr. Brian Curran:** That's a situation where, if we were operating the waste water and water facilities in another municipality, they may not have a share in the LDC. If they don't, then the act prohibits us from operating those facilities. There is a way around that: simply by offering a non-voting share to the municipality. That gets around the legislation. But it's such an arbitrary thing. I don't know why it's there.

**Mrs. Carol Mitchell:** But would most LDCs still have municipal shareholders?

**Mr. Brian Curran:** Yes. The majority of our—

**Mrs. Carol Mitchell:** It's when there's a shared municipal waste water—that was your example.

**Mr. Brian Curran:** No, not shared—

**Mrs. Carol Mitchell:** No, you're providing that service, but they don't have shares within the LDCs, and that's where you want that addressed.

**Mr. Brian Curran:** That's correct.

**The Chair (Mr. David Oraziotti):** Mr. Yakabuski.

**Mr. John Yakabuski:** Thank you for joining us this morning. I have a couple of questions.

It sounds like you have some concerns about the right to connect and the cost that could be incurred with the LDC as a result of that, I guess depending upon the size of the project—but I'll let you expand on that in a moment.

Also, you talked about 30,000 smart meters being installed very soon here in the Soo. You also talked about an awful lot of feedback from the smart meters. Most of the smart meters we hear about are simply time-of-use meters that don't transmit a lot of two-way information. Are you using a different system here for the feedback? Can you tell us what your expectations will be with respect to the user, as to the charges for the smart meters?

**Mr. Brian Curran:** First of all, there is two-way communication with our meters, and I think just about all the meters that are being installed in the province have that feature. We are going to be getting information not only on consumption, but on voltage levels as well. We'll be able to identify tampering that can happen. We will know immediately of outages that occur. A lot of people don't realize that the LDCs will not know if, say, one customer has an outage unless that person calls in to say, "Look, we don't have power." We will know if a circuit goes out because our SCADA system will tell us that, but when it comes to individuals we won't have it. We will now have that, so we'll be able to respond much more quickly. Because we'll have voltage data, we'll have more accurate loading information on circuits, so we'll be able to determine whether or not a circuit may be more heavily loaded than it should be and we'll be able to take some of the load off of that, reduce the losses.

So those are the kinds of things that we can start off right away, because we have a communication platform. As we go further, as the smart grid starts to evolve, I would expect that there will be more devices that we can use for

control within the homes, obviously with the agreement of the consumer.

As for costs, the total cost in capital is estimated at \$6.2 million. We believe that the cost to the consumer is going to be about \$3 per month going forward, but we don't have an exact amount right now.

**Mr. John Yakabuski:** And the right to connect?

**Mr. Brian Curran:** Those costs are really going to be dependent on the size of the connection, as you indicated, and the location within our grid is going to have a fairly major impact in terms of the cost. So it's really going to fluctuate wildly.

**Mr. John Yakabuski:** Thank you.

**The Chair (Mr. David Orazietti):** Mr. Tabuns?

**Mr. Peter Tabuns:** Brian, thank you very much for that presentation. Could you tell us what thinking is going on in your PUC around development of renewable energy generation in the Soo?

**Mr. Brian Curran:** I gave some examples in the presentation about the things that we have been involved in, and we continue to work on a lot of those projects, frankly: district heating, the pulp and paper company. St. Marys Paper is putting together a cogen application. They're very close to the downtown core. There would be a great source of low-grade heat that we could take advantage of and bring district heating to the downtown core of Sault Ste. Marie.

We continue to look at electric thermal storage because we have a very high heating load in the Soo and there's a really good opportunity to take advantage of the smart meters because we can use those units to shift load during the day to the night, when the demand on the provincial grid is low and therefore the costs are low. So we're looking at that, and we've been talking with other LDCs in northeastern Ontario about having a project that would demonstrate the acceptance on a much larger scale than we have done to this point—say, 5,000 units—to see what the economics are going to be.

**Mr. Peter Tabuns:** Do you have a target in mind as to how much self-generation your PUC would want to have?

**Mr. Brian Curran:** No, we don't. Not at this time.

**Mr. Peter Tabuns:** Thank you.

**The Chair (Mr. David Orazietti):** That's the time that we have. Thank you for your presentation, Brian.

**Mr. David Zimmer:** Chair, I'm just concerned for our guests. We're already 15 minutes behind and we're only an hour into it.

**The Chair (Mr. David Orazietti):** There are a couple of cancellations from what I've been informed so that—

**Mr. David Zimmer:** Is it 10 minutes and five minutes for each presenter?

**The Chair (Mr. David Orazietti):** It is, but we'll be fine with the time.

Just for the folks who are with us here today, there is tea and coffee at the side of the room. If you'd like to help yourselves, please go ahead.

Our next presentation is True Grid Power, Paul McKay. I'm not sure if Mr. McKay is here.

Sault Ste. Marie Innovation Centre, William Ivey?

## FIVE NATIONS ENERGY INC.

**The Chair (Mr. David Orazietti):** Five Nations Energy, Ed Chilton?

**Mr. Ed Chilton:** Good morning.

**The Chair (Mr. David Orazietti):** You have 10 minutes for your presentation and about five minutes for questions. For the recording purposes of Hansard, please state your name and you can begin when you like.

**Mr. Ed Chilton:** Good morning, Mr. Chair and committee members. My name is Ed Chilton. I am the project coordinator for Five Nations Energy Inc. I am pleased to be in Sault Ste. Marie to provide you with Five Nations' views on Bill 150.

By way of background, Five Nations is a First Nation-owned electricity transmission company. We are licensed and regulated as a transmitter by the Ontario Energy Board. Our transmission system consists of a high-voltage line running north from Moosonee up the west coast of James Bay for approximately 270 kilometres. The transmission line was built in 2001 and connected the First Nation communities of Fort Albany, Kashechewan and Attawapiskat to the provincial transmission grid.

Prior to the construction of the Five Nations' transmission line, these three First Nation communities were electrically remote, meaning that each community supplied electricity to its homes and buildings from a diesel generator set that powered a small distribution system. Each community's diesel generators and distribution system was isolated from the electrical system in the rest of the province. By connecting to the province's electricity grid, Fort Albany, Kashechewan and Attawapiskat were able to shut down their diesel generators.

I will return to Five Nations Energy in a moment, because it ties in to our comments and recommendations on Bill 150.

### 1000

As you know, two of the key objectives in Bill 150 are to (1) encourage the development of new green energy projects in Ontario; and (2) ensure that First Nations in Ontario participate meaningfully in the development of these new projects. Five Nations Energy fully supports both of these objectives. However, the emphasis of Bill 150 is on achieving these objectives through incentives to develop new, renewable electricity generation projects. Transmission is not a focus of Bill 150. My comments today are focused on how we might use electricity transmission to achieve these same two objectives.

For the most part, transmission is viewed as something that facilitates bringing on new generation. Transmission is viewed as the means to an end, the end being new, renewable generation projects. In this context, the focus of the government and the Ontario Energy Board with respect to transmission has been on ensuring that there is a streamlined approvals process for new transmission lines and that electricity transmission companies have the appropriate financial incentives to build these new lines to reach new sources of renewable power.

While it is important to streamline transmission line approvals and facilitate investment in lines that connect renewable generators, my comments today focus on electricity transmission and the opportunities in northern Ontario for new transmission projects to in and of themselves further the objectives set out in Bill 150.

There are currently over 29 First Nations communities in northern Ontario that are electrically remote, meaning they are not connected to the transmission system. These 29 communities are in the same position as Fort Albany, Kashechewan and Attawapiskat before the Five Nations Energy transmission project. Connecting these 29 communities to the provincial grid, based on a model similar to that used in the Five Nations Energy project, could provide substantial economic and environmental benefits to the north and fulfill Bill 150's objectives with respect to green energy and First Nations participation in Ontario's energy sector.

The Five Nations Energy transmission project was conceived in the mid-1990s by the chiefs of Fort Albany, Kashechewan and Attawapiskat First Nations. The project was developed by the three First Nations, financed through a combination of public and private funds and ultimately brought into service in late 2001.

I would like to outline for you some of the key benefits that have come out of the Five Nations Energy transmission project, which, as I said, could be replicated elsewhere in the north.

First, the environmental benefits: The environmental benefits from the Five Nations' transmission project have been significant. The diesel generators have been shut down in all three communities, eliminating all of the carbon dioxide, air pollution and noise associated with 24-hour operation of the diesel generators. In addition, shutting down the diesel generators means no further risk of the environmental contamination that is inherent in the large-scale transportation and handling of diesel fuel. The communities of Fort Albany, Kashechewan and Attawapiskat all suffer from historic contamination resulting from the handling and transport of diesel fuel into the communities by plane, barge or winter road. This risk has basically been eliminated in Kashechewan, Fort Albany and Attawapiskat. Connecting the 29 other remote First Nations communities to the grid and shutting down the diesel generation would provide similar benefits: reduced air emissions and a substantial reduction in contamination risk.

Second, there have been benefits to the local economy in each of the First Nations. There are a number of significant economic benefits from the First Nations' transmission project. For starters, the price of electricity has dropped for customers in these three communities. Some customers in these communities were paying rates more than four times what similar customers pay in the rest of the province. These customers still pay more than their counterparts in southern Ontario, but the difference has been substantially reduced. That is a welcome benefit in these economically disadvantaged communities.

In addition to lower electricity prices, each of the communities has taken over responsibility for operating its own distribution system, and we have established an apprenticeship training program for electrical lines workers. The result has been the creation of a few jobs in each community in skilled trades and administration of the local power corporations.

Finally, the elimination of diesel generation can create emissions credits for the First Nations as a result of shutting down the diesel generators. We have created such credits in Fort Albany, Kashechewan and Attawapiskat. Similar local economic benefits could be replicated in other First Nations communities in the north.

Third, there are benefits to the Ontario economy generally. By extending the grid 270 km north to Attawapiskat, Five Nations Energy Inc. has opened up the western James Bay to further economic development. A benefit of the Five Nations' transmission line is the ability it offers to expand community businesses, housing and infrastructure, now that a reliable power source is in place and community growth is not limited by the size of the diesel generators.

Shortly after commissioning the five nations' transmission line, we were approached by De Beers to connect their Victor diamond mine to the northernmost tip of the Five Nations' transmission line, which was completed very recently. Extending the provincial transmission grid to connect the other 29 remote First Nations communities would similarly facilitate economic development in the north, which could bring much-needed economic benefits to northern First Nations and the province as a whole.

In addition to facilitating forestry, mining and other potential economic development opportunities, extending the transmission grid to parts of the province that are remote from the grid will enable new renewable generation to be connected to the grid. The communities of Fort Albany, Kashechewan and Attawapiskat are now turning their minds to the potential for wind and hydro power generation in the western James Bay region. This is now possible because the generation can connect to Five Nations Energy's transmission line and feed into the provincial grid. Much of Ontario's potential hydro and wind power resources are in the remote north, on First Nations' traditional lands. Extending the grid to remote First Nations communities will enable this generation to be accessed. In this scenario, transmission can lead to the development of renewable generation previously considered inaccessible.

So as you can see, there are a number of reasons for focusing our provincial resources on the development of transmission in Ontario's remote northern communities and incorporating this more explicitly into Bill 150. While Bill 150, and other government initiatives like the minister's directive to the Ontario Power Authority and the Ontario Energy Board's initiative on enabler lines, has sought to involve First Nations in Ontario's electricity sector, they are focused primarily on facilitating consultation or participation by First Nations. Bill 150

proposes to create funds for First Nations consultation and participation. Bill 150 and the regulations under Bill 150 could, in our view, go further and make explicit that connecting remote communities in the north to the provincial grid be an objective within the government's green energy plans, and that projects aimed at connecting these communities be given access to these funds for the necessary feasibility, design and preconstruction studies.

In the case of Five Nations Energy, I can tell you that the most difficult part of the project was getting that early, predevelopment money to study the feasibility of the project. Once those early studies were completed and a sound financial model for the project was established, money was easier to secure from public sources and private banks. However, because most of our northern First Nations are quite poor, viable projects are often stifled before they can start because the seed funds for early studies cannot be raised. So it is critical that transmission projects and partnerships with First Nations be allocated a portion of the Bill 150 funds.

We have a real opportunity here to open the north to new renewable power, further the green energy objectives of this province and provide real environmental and economic benefits to northern communities. These are possible with First-Nation-led transmission projects in our far north.

Thank you for your time. I'm pleased to answer any of your questions.

1010

**The Acting Chair (Mrs. Linda Jeffrey):** Thank you, Mr. Chilton. The first question goes to Mr. Ouellette.

**Mr. Jerry J. Ouellette:** Thank you, Mr. Chilton, for your presentation. Certainly anything that can be done to help clean up any sites in northern communities—whether it's midline sites through the north or site 19, which I know is a very contentious issue in a lot of aspects.

Further on the wind generation issue that you spoke of, I know that at Fort Severn there sits a turbine that potentially could generate enough electricity for the entire community. However, it's been sitting idle for years. Part of the difficulty is to make sure that the qualified individuals repair these locations and to ensure that there are proper conditions for wind power generation. Do you know if any of the communities have applied to the Ministry of Natural Resources for the funds that are available there to identify potential sites for wind generation in your communities?

**Mr. Ed Chilton:** There are a number of communities that have done that, some in remote areas and some in southern areas already serviced by the transmission grid. I visited the community of Fort Severn back in 1995 on another matter, and I know well about that white elephant that's been sitting there since 1980. The technology has improved substantially in the wind energy business, as you're well aware. As you well know, any large investment in anything, whether it be energy or not, requires a lot of maintenance, and I'm afraid that that unit was not maintained properly. Hence, it didn't serve the purpose it was supposed to.

Getting back to whether some of the First Nations have applied: I am not certain of that. However, they are well aware and more increasingly aware of the opportunities that generation has in their areas. Once again, as per my presentation here, it requires connection to the grid for it to be viable.

**Mr. Jerry J. Ouellette:** Thank you.

**The Chair (Mr. David Oraziotti):** Thank you. Mr. Tabuns.

**Mr. Peter Tabuns:** Mr. Chilton, thanks for the presentation. It was very useful and opens a number of doors and windows. In the assessment by First Nations of the potential that they see on the western side of James Bay, is there a formal process under way now, with those First Nations actually looking to consultants to quantify the potential for renewable energy generation?

**Mr. Ed Chilton:** What has been identified in entry into power supply by the OPA and by other studies done in the province, specifically by the Ontario Waterpower Association and others, is that the development of the Albany River has large potential. It's only recently that the leaders in the communities themselves have started to look at these opportunities.

We act as advisers because we are involved. When I say "we," I mean Five Nations Energy. We have a CEO who has joined our team and was employed by Ontario Power Generation for many years, so he's well versed in hydroelectric generation etc. We are acting as advisers to kind of lead them forward, but I think what is required here is capacity building for those communities in order for them to make the proper decisions to move forward, at what scale, the timing of such projects and that. It is very important to have these people, members and the community leaders, understand what are the undertakings, where they fit exactly in the electricity here in this province, all the benefits that could come out of there and the impacts, naturally, that are associated with hydroelectric generation.

**Mr. Peter Tabuns:** Thank you.

**The Chair (Mr. David Oraziotti):** Ms. Broten.

**Ms. Laurel C. Broten:** Thank you very much. The Five Nations Energy project is such a great success story, and it's a pleasure to have you here today.

I want to focus, in the short time I have, on the access to predevelopment funds and just ask, if I can, in the case of Five Nations Energy, what were the sources of those early funds, and are there models that are being used elsewhere that can help us figure out how you provide access to early development funds but ensure at the same time that those dollars are used wisely and that they result in projects to the best percentage that they can?

**Mr. Ed Chilton:** When Five Nations Energy started out, there were no programs in place to be able to access. We went out, because it was an entirely different business model in the electricity sector and there were no other transmission lines actually being built in the province around that same time, and we had a lot of challenges in trying to access predevelopment dollars. We were able to provide a business plan to Aboriginal Business Canada,

which I believe is funded by Industry Canada. We obtained some funds there. We were working with Indian and Northern Affairs Canada, which was a unique process where they came up with 50% of the dollars required for a feasibility study and work plan and the communities themselves actually provided 50% also.

As we moved forward, it was more like we had the tribal council working with us, and at one point Five Nations Energy owed them something in the order of \$400,000. But by this time we could see the light at the end of the tunnel, and so the council itself went out on a limb and when we did get our project financed finally, we repaid the First Nations and the tribal council etc. But accessing funds, we were also able to tap into the northern Ontario heritage fund, which historically provides loans for economic development in the different sectors here in northern Ontario. About a year or so ago, I read in the Northern Ontario Business magazine that Science North was the first business corporation to repay NOHFC for loans that they received while they were developing the centre. Five Nations Energy being regulated the same as other transmitters in this province, we looked upon acquiring this loan as specifically a loan. Whereas other businesses and corporations apply for that loan to be forgiven, we decided that we were going to pay back that loan to NOHFC to replenish that fund so others could tap into it.

**The Chair (Mr. David Oraziotti):** Mr. Chilton, I'm going to ask you to wrap up. You have about 30 seconds.

**Mr. Ed Chilton:** When I was talking earlier about developmental dollars, I see that more with NOHFC, where you are actually being able to access development funds for whatever fund the province puts together and then, upon the rates application being approved from the Ontario Energy Board, you work to repay that fund back. That's just my suggestion, my opinion.

**Ms. Laurel C. Broten:** Thank you very much.

**The Chair (Mr. David Oraziotti):** Thank you very much, Mr. Chilton, for your presentation today, and thanks for being here.

#### UPPER LAKES ENVIRONMENTAL RESEARCH NETWORK

**The Chair (Mr. David Oraziotti):** Our next presentation is ULERN, Upper Lakes Environmental Research Network, David DeYoe, executive director.

Good morning, David. Thanks for being here today. You have 10 minutes for your presentation and five minutes for questions. Just for the purposes of the recording Hansard, state your name, and you can begin when you like.

**1020**

**Dr. David DeYoe:** Thanks, David. My name is David DeYoe. Currently, I'm the executive director of the Upper Lakes Environmental Research Network and president of Bio-Trend Systems Inc.

ULERN does support the principles and points proposed by the green energy alliance as expressed in Bill

150. As an environmental research organization, we have advocated environmental sustainability and sensibility since our inception in 1997, and we recognize the importance of the Green Energy and Green Economy Act in helping move toward that end.

ULERN has an MOU with OSEA, the Ontario Sustainable Energy Association, in providing educational services to rural communities in northern Ontario. We started this alliance about a year ago and we've now given four workshops covering energy conservation, renewable energy options and green buildings in four different rural communities in northern Ontario. In several of those communities, we have followed up with capacity building, essentially, where we go into the community, we work with the community to develop a renewable energy task team, and then we work with that team to develop a renewable energy framework strategy for the future for that community or network of communities in that region.

We've also just recently finished up our second series of adult education programs here in Sault Ste. Marie at Sault College, where we've given three courses: one on renewable energy conservation, one on energy alternatives, and one on green buildings and retrofitting. In those three courses, which total about 30 hours, what we do is, to address an earlier concern we had, we teach people how to go online and do their own energy audit. We currently use programs that come out of the US, because at this point those are quite comprehensive and do a very good, thorough job of providing a person with, essentially, the information they need to determine whether or not they need to pay for an energy audit. But at least they get the information and they understand what's in an energy audit and how it applies to them and to their home or their small business. We also do a site analysis exercise where people learn why it's important to do a site analysis for things like geothermal earth energy or solar, so they recognize the types of issues that Laurence presented earlier.

Those are the types of things that we're working on right now in workshops and in adult education courses at the college so that people can get up to speed to better understand what it is they're dealing with, because the knowledge out there is really pretty low.

This has proved to be extremely helpful in terms of working with rural communities directly to help them develop a renewable energy strategy for their community, and it's through this process over the last couple of months that we've actually come up with some of the points that we'll be making today.

First of all, we want to keep our eye on the ball: focus on the environment and reduce CO<sub>2</sub> emissions and other greenhouse gas sources.

We want to focus on conservation first, plugging the leaks—and I must admit that the types of programs that are in place right now are extremely helpful and provide people with a great opportunity to recoup some of their investment in energy conservation manoeuvres.

We want to reward efficiency and reduced electricity consumption and the inefficient use of fossil fuels, and then subsidize accordingly.

I'll be giving some examples of how Europe has gone through some of the trials and tribulations in the past.

We want to develop an electricity generation strategy that promotes conservation, for every dollar conserved saves \$3 to \$5 in the cost of generation systems; co-operation—employ community power models that promote integrated, distributed systems; due diligence—support high-efficiency, high net energy, low greenhouse gas emissions systems; and finally, forethought—be aware of the gold rush situations that send everyone scurrying toward one alternative, potentially with little planning or due diligence.

Finally, technology and innovation come in many forms. Keep an open mind and recognize there are no silver bullets. In fact, there are no brass bullets, for that matter.

What we're going to look at here is energy transfer efficiency. What we're dealing with is, in Europe, over the last 25 years, they've been experts in developing and delivering renewable energy options. In that regard what they have found, and what's been found over there, is that heat-only systems, like pellet or wood, solar heat, earth energy or some combination, particularly in smaller situations, provide efficiencies up to and exceeding 90%.

When we go into cogeneration, where we actually produce electricity but also use all the heat, preferably in some distributed heating system, then we can get 60% to 80% efficiency.

However, when electricity only is used and produced by wood, and where we do not collect the heat, the efficiency of energy use goes clear down to 10% to 25%, based on current technology.

So wood for electricity without use of heat is the most inefficient approach. Use the heat, for example, in distributed heating systems. If you use that electricity generated by wood for low-energy home, business or institutional heating, it just adds insult to injury.

Pellet stoves and furnaces require white pellets; industry can use brown. We need to be careful not to undermine a community's opportunity for local, efficient space and water heating with pellets by supporting inefficient electricity-only options far removed from the community.

A couple of examples: There are just two things I want you to look at on this graph. This is a graph on "Measuring Efficiency: Net Energy Yield." What it's measuring is essentially the energy required to produce the fuel, minus the energy that is extracted from that fuel. If we look at these different situations—ethanol from grain, biodiesel from rapeseed—compared to short-rotation forestry with willow or poplar or some other biomass, then essentially we're dealing with somewhere between seven and 10 times lower efficiency in terms of net energy yield. As we go forward, what we need to remember is to measure net energy production and its capacity.

The next one is a little bit more telling. On the left side, we have "% Energy Loss in Converting Biomass." We convert biomass to pellets, we convert it to biofuels, and we convert it to electricity. When we convert to pellets,

this is the amount of energy we actually lose in that technological process. When we convert to biofuels, we lose this much energy. When we convert to electricity, we lose this much energy.

Now, this is not so much an issue except when it comes to subsidies. Right now, subsidizing per megawatt, in Canadian dollars—and this is a European example—that's the subsidy we provide to pellets. And remember, those are the most efficient, exceeding 90%, in terms of pellet furnaces and pellet stoves. Biofuels: That's the subsidy, and look at the efficiency. In electricity, that's the subsidy, and look at the efficiency.

Europe has essentially gotten way out of balance in terms of what they're willing to subsidize relative to the energy efficiency of the systems that they're actually employing. So this is essentially something we need to keep aware of: Measure net energy, and make sure our subsidies are aligned with the most efficient, effective systems.

This particular slide here is looking at conservation in a way that the Green Energy Act has not looked at it so far—at least not comprehensively. What we have here is an example of a 30-megawatt community. This might be a community like Kapuskasing or Hearst using 30 megawatts for their community. If that community takes advantage of current plug-the-leak options through energy conservation, they can conserve 10% to 30% of the electricity consumed just by using those "keep the heat inside the house" methodologies—insulation and a variety of other types of things. However, if they use solar heat, pellet furnaces or earth energy to provide space and hot water heat inside their homes or businesses, they can conserve another 70% of electricity, because space and water heat in northern Ontario account for 60% to 80% of the actual electricity use in an all-electric home. Or people can also conserve by not using fossil fuels like natural gas or number two fuel oil, so you're either saving electricity or saving by not using fossil fuels.

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The community also has an option for new production through solar, wind and other renewable energy options within the community. So the total picture for the community's output can increase by not only conserving a substantial amount of energy. They use a lot less electrical energy, and by saving, what they now do is they buy themselves time to do upgrades to the grid, they buy themselves time to now market their community to other businesses that are looking for low-cost energy production within the community, and they buy themselves time to design a renewable energy strategy for new production of electricity that fits within the context of their community or regional strategy.

Compensation: Right now, we have compensation for that 20%, and we have compensation for that new production down on the right side in the red; however, we do not have compensation for space and water heating as it relates to providing incentives for use of solar heat, geothermal or pellet furnaces and installing those technologies to capture those efficiencies. So this was one

particular point that I wanted to bring out to you, because I know that the Green Energy Act is very strong on energy conservation, and yet this is a point that's not really looked at as closely as it might be. And one of the reasons, I think, is that it's very difficult to determine how I would compensate somebody for saving as much or more electricity than they actually produce. One's easy to count; one is more difficult.

In closing, develop a compensation package for use of heat-only systems to displace electricity or fossil fuel use. It should be equivalent to comparable options for electricity generation. It would stimulate growth in wood pellets, solar heat and earth energy markets.

Reconsider the use of wood solely for electricity production or insist on use of heat in distributed heating systems or some other alternative within the community.

Ensure communities and local business can benefit directly from pellet production facilities which use local or regional woodsheds before the pellets are shipped elsewhere.

Finally, use net energy calculations for energy efficiency evaluation, and ensure that subsidies promote energy-efficient systems. Our actions are being observed.

That's my presentation, David.

**The Chair (Mr. David Oraziotti):** Thanks very much. Mr. Tabuns, you're first up.

**Mr. Peter Tabuns:** First of all, thanks for the presentation. That whole area of green thermal energy is one that hasn't been touched on in the bill in the way that I would like it to be touched on. Have you given any further thought to exactly how an amendment would be shaped that would carry through and give credit for solar thermal?

**Dr. David DeYoe:** In terms of the details, no. Like I said, it's a difficult issue because it's not something that has been done before, but I think there are a couple of ways to do it. Earlier, Brian Curran talked about more advanced metering systems, or at least two meters, and if you had that type of thing, then you'd be able to essentially identify your baseline and then identify the amount of electricity you're using after you compensate for space and hot water heat through various types of mechanisms. Then you'd have that difference, that somebody would be able to say, "Okay, here's exactly how much electricity I've saved. I could have produced that amount of electricity but I saved it." So what does that mean from a compensation perspective?

**Mr. Peter Tabuns:** Are you aware of any jurisdiction that's actually taken this in hand and put together a program?

**Dr. David DeYoe:** No, I'm not. Actually, I didn't even become aware of it myself until I started teaching the courses, and then it jumped right out at me because I've got two wood stoves at home and I'm saving all this electricity and I can't get compensated for it.

**Mr. Peter Tabuns:** Okay. Thank you.

**The Chair (Mr. David Oraziotti):** Ms. Broten?

**Ms. Laurel C. Broten:** Just picking up with respect to these areas which you suggest we need to foray into, is

there one of them—I mean, would you highlight solar heating or geothermal?—that is easier for us to take this first step in? You suggest we need to tread into an area where others have not gone yet.

**Dr. David DeYoe:** The easiest steps and the ones that have the most impact on reduced electricity use would be solar heat, solar thermal and wood pellet furnaces or stoves. Right now in Canada we have primarily wood pellet stoves. We haven't really started importing the furnaces yet, which would work just like your oil-heat stove or your gas furnace. Essentially, the pellets come out and instead of delivering the oil, you deliver the pellets; they last for most of the winter and they're fed automatically into the pellet furnace. Those do not require substantial additional electricity to run anything, whereas the geothermal or the earth energy requires some electricity to run the heat pump; although, depending on your location, you may not be able to do solar, so geothermal is another option, or pellets.

**Ms. Laurel C. Broten:** Is there a possibility that the incentivizing of the pellet systems, in contrast to home heating oil—that that mechanism lies elsewhere, not in our Green Energy Act, potentially, but in other forms of incentives as you look to carbon pricing and helping folks get off fossil fuel?

**Dr. David DeYoe:** That's an excellent point because what it enables us to do is use different mechanisms to incent these different approaches apart from the Green Energy Act, and carbon counting, I'm assuming, once that comes into effect. But that's an excellent way to do it.

**Ms. Laurel C. Broten:** Thanks very much.

**The Chair (Mr. David Oraziotti):** Mr. Yakabuski?

**Mr. John Yakabuski:** I know these furnaces have been in use in Europe for years but, just to your point, why would we import them? We should be making them here, for starters. I think it's a part of the energy use and the heating component of it that we haven't taken advantage of.

On the generation side, I'm very interested in the biomass as well, because I come from a forestry-related area, which is a challenged industry, as you know, in this day and age. Any help that they can receive would be beneficial, particularly if they can be part of the solution as well. On the generation side of it, they're paying various rates for feed-in tariffs; for biomass it's 12.2 cents versus some of the other technologies that are being paid somewhat higher and some much higher. In your opinion, do you think, given the costs involved in procurement, extraction and transportation etc., that that's a figure that is realistic with respect to the ability to generate electricity from biomass?

**Dr. David DeYoe:** Where that's realistic is if the biomass is coming from mill waste, where the mill waste is basically free, and the biomass is being used in that mill for heating purposes. So they produce the electricity but they also use all the heat, which makes the system efficient; okay? Once that mill waste is gone, which is pretty much close to being gone now, then we have to go out to the bush to get the fuel. It either comes from slash

or mortality from fire, insects and disease. It comes from a variety of other sources.

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**Mr. John Yakabuski:** Of course, the pellets have to be manufactured.

**Dr. David DeYoe:** Then the pellets have to be made. And to do that, we'd probably be looking at, based on the folks who I've talked to, something closer to 17 cents a kilowatt hour as opposed to 12.2 to make it economically viable. That's really because of the transportation costs and the costs that go into civil/cultural remediation of the sites from which the wood is taken, that type of thing. That's what most people seem to feel is a reasonable level. I know Bill Ivey was going to speak to that earlier today, but he was sick.

**The Chair (Mr. David Oraziotti):** Thanks very much. That's the time.

**Mr. John Yakabuski:** Thanks very much. We appreciate your presentation.

#### FIRST NATIONS ENERGY ALLIANCE

**The Chair (Mr. David Oraziotti):** Our next presentation is First Nations Energy Alliance, Byron LeClair. Good morning, Mr. LeClair. Welcome to the Standing Committee on General Government. You have 10 minutes for your presentation, and five minutes will be left for questions. Please state your name for the purposes of the recording Hansard, and you can begin when you like.

**Mr. Byron LeClair:** I'm Byron LeClair. I'm the director of economic development for the Pic River First Nation.

Thank you, Mr. Chair and committee members, for the opportunity to speak to the proposed legislation this morning. Again, my name is Byron LeClair. I am from the Pic River First Nation, which is a small First Nation located beside the town of Marathon along the north shore of Lake Superior. We've been involved in the renewable energy field since 1987 as proponents to generating projects. Thus far, we have three operational sites producing 43 megawatts of renewable electricity, which transform many northern communities such as Manitowadge by changing their electrical profile and offsetting their current reliance on coal-generating projects. We have plans to build another 130 megawatts of renewable electricity, which represents \$400 million worth of investment over the next five years. This has given us a unique perspective as an industry player, first of all as a generator, but more importantly as a First Nation community.

I'm here presenting on behalf of the First Nations Energy Alliance, which is an association of like-minded First Nations that want to enhance First Nation ownership in renewable electricity through capacity-building and shared expertise.

Generally speaking, we welcome the initiative of the Ministry of Energy and Infrastructure to review the current energy law and policy and to look at ways to promote the

ongoing development of renewable energy projects in Ontario. The First Nations Energy Alliance was formed for the purpose of supporting First Nations engaged in renewable energy opportunities and to become successful proponents of energy projects. Our review of Bill 150 was focused on understanding how these changes proposed in Bill 150 could enable First Nations to participate in renewable electricity development for the future prosperity of our communities.

The focus of our presentation is on two main points. The first point: How does the GEA address coordination with the Ministry of Natural Resources and the Ministry of the Environment on a go-forward basis, and how can we build upon the GEA to further prosperous reconciliation with aboriginal communities and the future use and development of our lands and resources?

We are encouraged by the concept of a single renewable energy permit and by the establishment of the Renewable Energy Facilitation Office. At the same time, however, we have concerns about understanding how the GEA will fit within the overall intergovernmental framework of the provincial government. How will the REFO help me, as a developer, to address issues within the MNR site release policy? How will the MNR or MOE respond to requests made by the REFO? What powers will the REFO have to problem-solve? What mechanisms will be put in place by the REFO to ensure that aboriginal proponent barriers are addressed in a timely manner and how will the REFO obtain information about barriers? Will the REFO have a budget to engage aboriginal proponents?

Bill 150 is the perfect opportunity to crystallize First Nations and Metis involvement in the ownership of renewable energy projects. Bill 150 could provide an opportunity for First Nations and Metis to be more involved—proactive and not reactive—in the evolution of renewable energy development in Ontario. First Nations are very much impacted by the policies of the Ministry of Natural Resources in connection with site release for water and wind, and are also affected by the parks regime, Lands for Life and northern growth plans. It is not clear how the REFO being housed under MEI could substantively address our concerns with MNR, which are related to site control and development within parks. The GEA proposes that the REFO would facilitate. Our sense is that this role needs to be strengthened and must tackle both provincial and federal facilitation in order to have a real impact.

To address intergovernmental coordination, we recommend the establishment of a deputy ministers' committee on renewable energy development, with technical but not political representation from First Nations and Metis communities. This committee would be distinct from any particular ministry and would have the formal involvement of First Nations and Metis. The committee could be struck immediately and would focus on MNR site release policies, environmental approvals and the REP process and appeals development.

First Nations play an important role in the stewardship of our lands. The GEA needs to take another leap forward

and tackle intergovernmental coordination, while at the same time forge a new relationship with First Nations in the spirit of reconciliation. We ask that the standing committee not miss this opportunity to allow First Nations and Metis to take a central role in law and policy development in respect of our lands and sustainable use thereof.

Specific amendments that we considered: Under the Green Energy Act itself, in section 35 of the Constitution Act, the interpretative subsection 1(2) of the GEA states, "This act shall be interpreted in a manner that is consistent with section 35 of the Constitution Act, 1982 and with the duty to consult aboriginal peoples." This section should be amended to read, "and with the duty to consult and accommodate, where required, aboriginal people whose existing or asserted aboriginal or treaty rights may be affected by this act." Further, we request that this interpretative section be included in each of the acts that are proposed to be amended by the GEA for consistency and clarity.

Next is the Renewable Energy Facilitation Office. The objects of the REFO set out in section 10(2) should be amended to include the furtherance of projects on First Nations lands. We also believe that the act should provide more guidance to the REFO on what "facilitation" means.

We recommend that subsection (1) be amended to say, "to facilitate the development of renewable energy projects including, but not limited to, making recommendations to the minister regarding priorities for overcoming barriers to advance development of renewable energy projects and such other matters as may be prescribed by the regulations."

We recommend that subsection (2) be amended to say, "To work with the proponents of renewable energy projects, other ministries and other governments to foster the development of renewable energy projects across Ontario and to assist proponents with satisfying the requirements of associated approvals processes and procedures, both provincial and federal including, but not limited to, providing proponents with information in respect to the interactions of local communities, and the undertaking of annual reviews to identify and chart the progress of the removal of barriers to the development of renewable energy projects that benefit all of Ontario."

Under the Electricity Act, schedule B, the integrated power system plan: Amend subsection 25.30(2) of the Electricity Act, which deals with the IPSP to broaden the goals and to provide more flexibility for the matters that can be addressed by the Ontario Power Authority and reviewed by the Ontario Energy Board pursuant to the ministerial directive.

The IPSP is a planning document that is integral to the successful implementation of provincial policy objectives related to the adequacy and reliability of electricity and supply from renewable electricity sources. The government sets the policy objectives, the Ontario Power Authority drafts the plan and the OEB reviews the plan to ensure that it complies with the directives issued by the

minister pursuant to section 25.30(2) and is economically prudent and cost-effective.

When Minister Smitherman issued the September 17, 2009 IPSP directive to the Ontario Power Authority, the minister asked the Ontario Power Authority to revisit the IPSP with a view of setting new targets in renewable electricity, among other things. The directive also directed the Ontario Power Authority to conduct enhanced consultation with aboriginal people and "to consider the principle of aboriginal partnership in generation and transmission." We later heard from counsel of the Ontario Power Authority that, in their opinion, the ministerial directive as it related to aboriginal partnerships was not a matter for the OEB to have addressed in its review.

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For this reason, we recommend that section 25.30(2) be amended to provide more flexibility to the ministerial directives in connection with the IPSP. This can be achieved by simply adding the following section: "such other matters as may be prescribed by the regulations." Accordingly, we request a consequential regulation to be put in place that permits the minister to issue IPSP directives related to consultation and growth plans with First Nations and Metis.

Aboriginal participation: The new, proposed section 25.32 contemplates that the minister may direct the Ontario Power Authority to establish programs to promote aboriginal participation. We recommend that section 25.32 be amended as follows: "The minister shall"—instead of "may"—"direct the Ontario Power Authority to establish measures to facilitate the ownership"—instead of "participation"—"of aboriginal peoples in the development of renewable energy generation facilities, transmission systems and distribution systems, and such measures shall include programs or funding for, or associated with, the goals relating to the aboriginal ownership in the development of such facilities or systems."

We are supportive of the addition of section 25.32. However, without consequential amendments to the IPSP review section, there will be no public process to address the ongoing development and review of the aboriginal participation programs that the Ontario Power Authority may be directed to undertake.

With respect to the feed-in tariff program, the new proposed section 25.35 regarding ministerial directives on the FIT programs contemplates such directives that would have goals related to the participation of aboriginal peoples. We're not comfortable with the term "participation," as it is unclear what the intent and the goals are. Therefore, we would prefer the term "ownership" in its place.

Under the Environmental Protection Act, schedule G, we would like assurances that the appeals process under the EA will include a right to appeal on the basis of existing or asserted aboriginal rights and treaty rights. Accordingly, we request that section 142.1, grounds for appeal, be amended to include appeal rights on the basis of an existing or asserted aboriginal or treaty right.

Under the Ministry of Natural Resources: Under the existing Provincial Parks and Conservation Reserves Act, the act contemplates certain exceptions for existing hydro sites and for use by communities that are not connected to the IESO grid. We request that the exception be broadened to permit hydro sites that benefit First Nations communities. First Nations need to be able to have access to these sites for the sustainability of their communities—

**The Chair (Mr. David Oraziotti):** Excuse me, Mr. LeClair, I don't know if you're going to get through all of this, but if you can wrap up. We're over the time.

**Mr. Byron LeClair:** I apologize.

**The Chair (Mr. David Oraziotti):** If you can conclude your presentation in 30 seconds, then we'll have some time for questions.

**Mr. Byron LeClair:** I'll move on to my summary of the presentation.

**The Chair (Mr. David Oraziotti):** Perfect. Thank you.

**Mr. Byron LeClair:** Our recommendations, again, are as follows:

The First Nation and Metis involvement must be part of the development of the renewable energy permit and appeals process. Much remains to be decided and formalized under the new permitting process. The FNEA is an example of an organization that can take a lead role in this area.

The REFO must have a clear mandate to formalize a working relationship with First Nations and Metis through the creation of a First Nation advisory panel.

The objects of the REFO set out in section 10 of the Green Energy Act need to be improved so that it is clear what "facilitation" means.

To address intergovernmental coordination, we recommend the establishment of a deputy minister's committee.

We request that the interpretative section on section 35 of the Constitution be amended to include references to accommodation and to clarify that the duty is triggered in a case where an existing or asserted right may be affected.

We request that the environmental appeal process include the right to appeal on the basis of an asserted aboriginal or treaty right.

Aboriginal participation: Ownership must be the goal, not participation.

The IPSP review jurisdiction of the Ontario Energy Board, set out in section 25.30 of the Electricity Act, should also be broadened if the minister requires additional review to take place under the IPSP.

The current exception in subsection 19(2) of the parks act needs to be expanded to provide First Nations the opportunity to develop projects that will benefit First Nations and not simply to supply the First Nation.

I apologize for going over.

**The Chair (Mr. David Oraziotti):** Thank you very much for wrapping that up and for your presentation. Ms. Broten.

**Ms. Laurel C. Broten:** If I can, I want to just get some clarification from you with respect to the MNR provincial parks, the 19(2) provision with respect to benefiting First Nations. In your conclusion, in "i" you suggest that the

current 19(2) is not a viable option and is not used by any First Nations. What would be the percentage of First Nations that would seek to have the benefit within the entire community? If you can just clarify the size of this issue for me; I'm just trying to figure out if it's 10 sites, 100 sites—how many communities.

**Mr. Byron LeClair:** I know of a partnership of communities that has applied for development rights to some 358 megawatts, based upon this restriction. If this restriction were removed, 1,000 megawatts of development potential would be realized. It's an artificial restriction.

The other point that I want to make is that, as a society, we've made a value judgment to develop one of our resources for the purposes of generating electricity. The environmental impact for developing and constructing a one-megawatt station is the same as for a 10-megawatts station and is the same for a 25-megawatts station. You're going to have a dam in the river; you're going to have civil works there; you're going to have turbines there. Those impacts are going to be there. It makes no sense to scale down the size of the development for the purposes of meeting this type of restriction. The community should be free and clear to produce electricity for their own needs and sell, where possible, the excess electricity back into the grid.

**Ms. Laurel C. Broten:** Thanks very much.

**The Chair (Mr. David Oraziotti):** Mr. Yakabuski.

**Mr. John Yakabuski:** Thank you very much, Mr. LeClair, for joining us this morning—a very interesting and thorough presentation.

We appreciate the fact that you've actually made a lot of suggested amendments as well as recommendations. It's sometimes difficult for us to garner out of a message what people are actually asking for.

One of the things you talked about—I think it juxtaposes a little bit with Mr. Chilton's presentation earlier—was the number of First Nations that have no connection to the grid and are currently producing power by diesel generators, for which of course all of that diesel fuel has to be transported up there many times in the winter months, because they're not even accessible other than by plane during the summer months.

Is this part of what your hope would be, that you'd be able to make some of these First Nations more self-sufficient with respect to having that power produced there? What is the expected tie-in? There would be significant grid implications, I would think—I'm not familiar with each location, but we do know that many of them are very, very remote—with respect to the expectation of that being tied in to the bigger grid.

**Mr. Byron LeClair:** The Ontario Power Authority, through the IPSP, is planning to extract resources from the traditional territories of many remote communities. They're going to come in and they're going to dam up major river systems, all for the purposes of supplying power to Toronto.

What we proposed at the First Nations Energy Alliance is that in the planning process, in consideration of that,

there should be the opportunity to consider low-voltage lines in conjunction with the major transmission upgrades that need to be done, to do two things: First of all, extend the grid to supply those communities there, but open up development opportunities within the traditional lands of those communities. I think there's really an opportunity to do two things here at once.

My expertise is along the North Shore of Lake Superior, so I'm not necessarily familiar with a lot of the issues that are germane to remote communities. But the First Nations Energy Alliance has members that are affected by the remote factor. Many of our members come from the remote north, and we work with them to try to address the extension of the enabler lines, the extension of any opportunity to—transmission itself is a way of just delivering the product to the market. That's what we're trying to solve.

**Mr. John Yakabuski:** Thank you very much.

**The Chair (Mr. David Oraziotti):** Mr. Tabuns.

**Mr. Peter Tabuns:** Mr. LeClair, thank you for the presentation and your recommendations.

The amendment to the section related to the Constitution—interesting: yes, not just consultation but accommodation “where required.” As you read the existing wording in the act, it doesn't reflect the Supreme Court judgments. Is that correct?

**Mr. Byron LeClair:** That's correct.

**Mr. Peter Tabuns:** Okay. And the existing or asserted rights: How much does that change the field in terms of potential projects that would be affected?

**Mr. Byron LeClair:** It's a legal reality. It's part of the legal framework of Canada that the right does not have to be proved; it just simply has to be asserted in order for the duty to consult and accommodate—before those obligations are triggered. So simply putting that into the legislation defies the reality that we're living in right now.

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**Mr. Peter Tabuns:** Thank you.

**The Chair (Mr. David Oraziotti):** Thank you very much for your presentation. That's the time.

Our next presentation: I'm not sure if Douglas Cunningham is here. I don't believe so.

#### SUSTAINABLE ENERGY RESOURCE GROUP CO-OPERATIVE INC.

**The Chair (Mr. David Oraziotti):** We're going to go to the next presentation, then: SERG Co-operative, Mr. Goedhard, president and chairman.

Good morning and welcome to the Standing Committee on General Government. You have 10 minutes for your presentation, five minutes for questions. Just state your name for the purposes of our recording Hansard before you begin, and you can start when you like.

**Mr. Danny Goedhard:** Good morning and thank you for having me here. My name is Danny Goedhard. I'm president and founding chairman of the Sustainable Energy Resource Group Co-operative Inc., or SERG Co-op Inc. for short.

First, I'd like to state that SERG Co-op is proud to hold the opportunity to speak in front of the Ontario Green Energy Act standing committee on behalf of its membership and for the people in and surrounding the communities of Schreiber and Terrace Bay who believe in community power. SERG recognizes this historical step that Ontario is taking in order to ecopolitically propel our green energy and green economic sector into a world-class status.

Schreiber and Terrace Bay community background: In 2005, Schreiber, Terrace Bay and surrounding area, holding a combined population of over 4,500, felt the first blow of the forestry sector's downturn as the community's major employer, an American pulp and paper company, closed its doors, leaving 600 employees out of work. The communities fell into a state of shock and went to the people looking for suggestions on how to rebuild and safeguard the municipalities against economic instability. A community adjustment partnership program ensued, made up of committees of individuals who were ready to help turn their towns around. That year we were honoured with a visit by the Premier, who spoke in support of small towns and about how the province would look into a two-tiered energy pricing mechanism that would aid the north's industry and forestry sector, without making any public promise.

Since then, the pulp mill was bought by a Canadian company and reopened, backed by the province through incentives. This saved our local economy from disastrous consequences, but only for a short period of time. The global economic crisis crippled the forest industry in 2008, sending the new owner of the Terrace Bay pulp mill into bankruptcy protection. Our communities are now at the mercy of the province and are in need of incentives to help us redevelop and reshape our future into a more sustainable and resilient one.

What SERG's community wind power project is trying to accomplish: SERG Co-op Inc., a non-profit co-operative, is developing a 10-megawatt wind farm that would generate in excess of \$4 million annually. It is our hope that the project will allow the community to see at least 50% of that income stay within the community to further develop our energy distribution infrastructure and create the needed jobs that will buffer the predicted blow to our economy. Of the 50% ownership, a fund will be created to seed other community projects in desperate need of start-up funding. With the remaining 50% stake, we are looking to create a for-profit limited liability partnership between the private sector and a for-profit community power investment co-op, giving the public a local investment opportunity. The project, if successful, will give the communities in and surrounding Schreiber and Terrace Bay the ability to control their energy pricing. This will not only allow for growth in the small business sector, but also entice growth of a new renewable energy manufacturing sector, breeding diversity and resiliency back into our communities.

All these accomplishments will be achievable through the proposed Ontario Green Energy Act, Bill 150, if the following recommendations are also incorporated:

First, shallow connection costs for renewable energy generation to the grid. From a community power perspective, it is a make-or-break situation that communities have lingering over their projects' feasibility. It is required that all deep-connection and enabler-line costs be spread over all customers as a whole in order to ensure the financial burden does not fall on local energy distributors. The following amendments to Bill 150, as stated by the Toronto Renewable Energy Co-operative, would ensure growth in the community power sector—and I have the quote below that I'll let you guys read. SERG Co-op fully supports this revision to Bill 150.

The second point, and most vital point in our eyes, is the creation of a fund and/or support funds to existing entities for the capacity building and development funding of the community power sector. SERG, being based in a rural and financially depressed area of the province, sees a barrier to our community wind power project which needs to be addressed in order to uphold our community commitment of a minimum 50% ownership in our project. SERG feels that in order to allow a level playing field for development, community power will need enabling funds in the following areas.

Soft loans and grants: Community power projects require early-stage funding to cover the soft cost of project development work in regard to a pre-feasibility grant structure, a capacity-building grant structure, a feasibility loan structure, and project development loan structure.

Capitalization loans: To speak briefly on that, eligible community power projects require simplified access to low-cost debt, as that enables them to retain control and ownership of projects.

Capacity-building: The community power projects require simplified access to financial, technical, social, legal and organizational templates and practices associated with the facilitation and development of locally owned, community-based renewable energy and conservation projects. There are several organizations—the Ontario Sustainable Energy Association, Green Communities Canada, the First Nations Energy Alliance, the Toronto Renewable Energy Co-operative, Farmers for Economic Opportunity, AgriEnergy Producers' Association of Ontario, the Ontario Federation of Agriculture, the Ontario Co-operative Association etc.—that have developed resources and expertise in this regard who need to be sufficiently resourced to expand their efforts.

SERG, to conclude, would like to emphasize the need for an enabling loan which would ensure the community's 50% ownership in their project. When it comes to the down payment needed by community power to proceed with the acquisition of a development loan, the community power developer will need to come up with over 20% for the down payment of such a loan. It is by request that we ask for a fund to be established that allows projects devised from a non-profit community-developed grassroots structure to be graced with an enabling loan that

would alleviate the pressures of acquiring large percentages of capital if the group involved showed due diligence in acquiring a sufficient amount of community support, partnership and investment in their project. Whether the fund is established through a provincial funding mechanism, or funds specifically for enabling community power development are passed through currently established funders like the community power fund, which have strict guidelines that define community power, I leave up to the committee to decide. These funds are deemed critical for the success of our project and other community power projects throughout the province.

**The Chair (Mr. David Oraziotti):** Thank you very much for your presentation.

Mr. Ouellette is first with questions.

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**Mr. Jerry J. Ouellette:** Thank you for your presentation.

Earlier on, we heard from Five Nations Energy about how they had received a substantial amount of funds from the NOHFC in order to move their project forward. Two things: One, have you made application through the NOHFC to see if there are funds available, in the same fashion that Five Nations Energy received funds? Secondly, if and when this project moves forward, how do you visualize that helping the forestry sector that has been so decimated in your communities?

**Mr. Danny Goedhard:** To the first question, we have not as of yet gone after NOHFC for funding, but we will, I'm sure. What I was talking about is, for the capital costs that it's going to take to develop the project, we are looking toward small enabling grants that would help bring up our percentage of vested interest to move the project to development stage, but upon acquiring all the necessary studies, through the feasibility study—in order to go for the loan at the bank, we'll need a certain percentage of that as a down payment for the major loan for the turbines and infrastructure to be put in place. That, specifically, is what we're looking at. We do understand that available grants are stackable to a certain percentage, but with a community of that low a population, investment would be little to put toward that.

Your second question?

**Mr. Jerry J. Ouellette:** Regarding the impact on the forestry sector.

**Mr. Danny Goedhard:** Right now what we're looking at is trying to build enough infrastructure projects to keep the people in town. These are infrastructure projects that could probably be put into place within a year or so. But as far as protecting the forestry sector, there's not much that we can do.

**The Chair (Mr. David Oraziotti):** Mr. Tabuns.

**Mr. Peter Tabuns:** Thanks very much for the presentation and the ideas that you've got in here. Have you been talking with other communities in the northwest about similar projects?

**Mr. Danny Goedhard:** Similar projects are being developed via wind power. In Schreiber, they have also adopted a project through private development. Private

development—what it does is, over 80% of the project funds that are generated through that project will be leaving our community and benefiting people in Hamilton, or investors through that private development corporation. So what we are trying to do is stop the outflow of monies from our community and have it rotate within, to generate the necessary funding so that we don't have to always look to you guys to keep ourselves going.

In other areas like Dorion—the Dorion project and surrounding areas—there has not, that I know of, been any portion for community power where the community has a vested interest in it. So I think to the North Shore of Lake Superior we are practically alone, aside from SREC—who'll be speaking next—who has about the same mandate.

**The Chair (Mr. David Oraziotti):** Ms. Broten.

**Ms. Laurel C. Broten:** How important was it, and is it, for a community such as yours—in particular, perhaps those who are in a bit younger generation—to see the game plan that you established through the community adjustment program, and the vision for some green opportunity and green jobs and economic development, reflected now in government steps that are supportive of those initiatives? Has it created a different sense of optimism in the community?

**Mr. Danny Goedhard:** As far as the community adjustment program went, it brought up some definite points that should be addressed to further develop our communities. It was a great chance for people of the community to get involved, but it was also basically a consulting process where it was left up to council and the mayor to push the programs forward—to what extent: I have no idea where those projects have gone. It did gain a lot of community enthusiasm, and through it SERG Co-op Inc. gained the needed support from community champions to move this project forward, and it was seen by the community as being a cornerstone in the development of a new sustainable economy for our communities.

**Ms. Laurel C. Broten:** Thanks very much.

**The Chair (Mr. David Oraziotti):** That's all the time for questions. Thank you very much for your presentation.

#### SUPERIOR RENEWABLE ENERGY COOPERATIVE

**The Chair (Mr. David Oraziotti):** The next presenter is Superior Renewable Energy Cooperative. Mr. Roberto Garcia, good morning and welcome to the standing committee. You have 10 minutes for your presentation and five minutes for questions. Just state your name for the purposes of the recording Hansard, and you can begin when you like.

**Mr. Roberto Garcia:** Okay. My name is Roberto Garcia. I'm an adviser and consultant to the Superior Renewable Energy Cooperative, or SREC for short. I'd like to start off by thanking you, Mr. Chair and the rest of the committee, for allowing SREC to come and present today on Bill 150. We'd also like to congratulate the provincial government on its commitment to making On-

tario a world leader in sustainable energy through Bill 150, the Green Energy and Green Economy Act. In our view, if the bill passes and is accompanied by regulations and directions that fully implement its potential, any case for non-renewable fuels will steadily decline.

SREC is a renewable energy co-operative committed to developing a sustainable energy plan for Thunder Bay, a wind power co-operative for the district and a vibrant green energy economy for the northwest. As a leader of Ontario's community power sector and a founding member of the Ontario Sustainable Energy Association, SREC has had first-hand experience with the barriers and lack of incentives to community-based renewable energy investment. SREC has been working for over five years to overcome these barriers and develop local energy projects despite the lack of adequate financial incentives. For this reason, we're particularly encouraged by three features of the bill as it's currently drafted.

The first one relates to pricing renewable power. The feed-in tariff program that the bill enables and the proposed rules we've seen come out of the OPA—we see this FIT program as a significant improvement from the previous process of a request for proposals, or RFPs, because we felt that this process effectively precluded community power groups such as ours from obtaining power purchase agreements. It's also a welcome improvement from the Renewable Energy Standard Offer Program, or RESOP, that, despite its improved pricing for certain technologies, was still not an equitable approach to renewable power procurement, in our view.

We feel that Bill 150, as it's drafted, still fails to recognize what has basically been established through empirical research: that feed-in tariffs have been found to be the most efficient and most cost-effective method for procuring renewable energy. SREC recommends that Bill 150 be amended so that the feed-in tariff mechanism is the primary mechanism for procuring power from renewable sources. Also, while SREC is encouraged that a community wind tariff of 14.4 cents for every kilowatt hour in the OPA's proposed rules for the FIT program, we suggest that a better approach would be to amend Bill 150 to list natural resource intensity as a permissible basis for price differentiation. Adjusting the kilowatt hour tariff according to the intensity of the wind would help to limit unnecessary profits at the windiest sites. It would also ease the development pressures in these areas and allow for a broader geographic distribution of wind power installations.

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This is particularly important to Superior Renewable Energy Cooperative because, unlike private sector wind developers, we are only interested in investing in the Thunder Bay district's wind potential. We must work with the level of resource intensity that we have in our district. SREC's economic feasibility studies into a community wind farm, assuming the 11 cents in the RESOP contract, showed that it wouldn't have been economically viable at that price. Thus, our community wind project was effectively stalled on paper. While the proposed

community rate of 14.5 cents is definitely an improvement, we would prefer to simply be paid a price for our energy that would make our project reasonably profitable given our local wind regime; in other words, a tariff that's differentiated by resource intensity.

The next point that we're very encouraged by is around interconnection and related costs.

The absence of a guaranteed grid interconnection and the prohibitive costs of obtaining a grid interconnection have for a long time stifled our progress toward building a community wind power project in the Thunder Bay district. So we're very pleased to see that Bill 150 would guarantee renewable energy generators a connection to the electric grid.

SREC recommends that the costs of connecting renewable energy generation to the grid, apart from the shallow connection costs that are in the control of, and should be borne by, the project developer, be incurred to the benefit of society as a whole. Accordingly, it is not appropriate to visit these costs on the particular generator or a particular distributor's customers.

We feel that the bill should therefore be amended to clarify that deep connection and enabler line costs—basically those that are beyond the on-site or shallow connection costs—are borne by all Ontario electricity customers, not simply those of our area's local distributor. In our case, it's Thunder Bay Hydro.

We feel that transitioning Ontario to sustainable energy systems that draw on renewable sources is something that benefits all Ontarians. So it's only fair that the costs associated with bringing new, renewable generation online should accordingly be borne collectively by all Ontario electricity customers.

The third point that we find very encouraging is the removal of barriers to community-based development, including the proposed amendments to the Co-operative Corporations Act, that specifically recognize renewable energy co-operatives like SREC.

There's work yet to be done to build the capacity of Ontario's community power sector, and we feel that Bill 150 should be amended to provide an ongoing funding mechanism to enable communities, First Nations, farmers and municipalities to develop their own successful green energy projects. We recommend that the province establish a comprehensive financing program to fund one or more entities to accelerate the development of eligible community power projects. Specific measures basically would include loans and grants for community power projects requiring early-stage funding to cover the initial project development work. These could be grants for pre-feasibility studies, grants for organizational capacity building, loans for economic feasibility studies and loans for other project development work.

What would also be valuable would be capitalization loans for eligible community power projects. Basically, these projects require simplified access to low-cost debt that would enable them to retain a majority equity stake; in other words, ownership of the project. You heard about that from the earlier presenter.

You also heard from the earlier presenter that the community power sector requires resources to build the financial, technical, social, legal and organizational templates and practices associated with the facilitation and development of locally owned, community-based renewable energy and conservation projects.

There are several organizations that we heard from earlier that have already developed these resources and expertise. We need to continue to empower them and fund them accordingly. Thank you again for this opportunity.

**The Chair (Mr. David Oraziotti):** Thank you very much for your presentation. Mr. Tabuns, questions?

**Mr. Peter Tabuns:** Thanks very much for the presentation you've provided. I certainly think developing a renewable energy co-op around Thunder Bay makes a lot of sense.

One of the things that I'd like you to clarify: Some of the best regimes in Ontario are around Lake Superior. Can you tell me why you were looking at difficulty being economically viable with the prices that have been offered in an area where I would think the wind regime would be very generous?

**Mr. Roberto Garcia:** I think that Superior Renewable Energy Cooperative was initially looking at developing an onshore project because for a long while, there had been a moratorium on offshore wind, so they basically excluded that possibility. A lot of the onshore land that was close to those high-speed wind regimes was not available to them because it was either private or it was municipally owned, and they didn't have access to it. So they were basically looking at sites that had lower wind speeds. Basically, the sites that were available to them didn't have wind speeds that made 11 cents worthwhile.

**Mr. Peter Tabuns:** The second question: Is there research being done in the area on the potential for large-scale development of community-based wind co-operatives?

**Mr. Roberto Garcia:** Absolutely. If you look at the European examples—this is probably the most famous example: In Copenhagen harbour there's a 20-megawatt wind farm, so 10 wind turbines, that's owned as a joint venture between the Copenhagen local utility and a co-operative of local citizens. I know of an example in Quebec where a landowner co-operative submitted a bid to Hydro-Québec for a 50-megawatt wind farm recently in their request-for-proposal process. It's definitely possible to build large-scale wind on a co-operative basis or a community basis. They don't necessarily have to be small projects if the community is comfortable with larger-scale projects.

**The Chair (Mr. David Oraziotti):** Thank you, that's time. Ms. Broten?

**Ms. Laurel C. Broten:** How did you balance a move to natural resource intensity with the goal of seeing the most green energy produced that we can, incentivizing projects that are good projects and that make sense and, as you were saying, finding the right locations and really seeing us move our generation to green energy? There would be some who argue that putting in place a natural

resource intensity system pulls us in the opposite direction in some ways.

**Mr. Roberto Garcia:** Right. I can understand how, intuitively, you would see it that way. I think on the high wind speed end, we don't want to overcompensate projects in high wind speed areas. So for example, at the 14-cent tariff, if it's in a very high wind speed area and they may make a reasonable profit with 13 or 12 cents, then we shouldn't be overcompensating them with 14. That's not fair to the ratepayer and it means windfall profits for the developer in that area.

I think if we have a flat tariff for wind power and just say, "Okay, if you can develop at 14 cents, go ahead and develop at 14 cents," what we're going to see is a sort of gold rush to the high wind speed areas, right? That's why we need tariffs differentiated by wind speed, so that it's reasonably profitable to do it in a high wind speed area but also reasonably profitable to do it in a medium wind speed area. Those high wind speed areas don't feel that development pressure in their area because it's the highest profit margin area. That leads to a lot of the social friction that we hear about in communities and in the media.

I think one last point—if we have a flat tariff for wind speed in general, again, it means that everyone is incentivized to go to the high wind speed areas, and that feeds into the typical criticism of wind power: "Well, what happens when the wind doesn't blow?" That's assuming that wind power is only being developed in one area—in the high wind speed area. We need to distribute and flatten out wind power development so that if the wind is not blowing in one part of the province, it is blowing in the other part of the province—maybe not as strongly, but it still is, and we're balancing out the grid that way.

**The Chair (Mr. David Oraziotti):** Thank you, that's time. Mr. Yakabuski?

**Mr. John Yakabuski:** Thank you very much, Mr. Garcia, for joining us today. I want to talk to you a little bit, because you talked about varying the costs to the customer base. You talked about Denmark, and the experience in Denmark and Germany is significantly higher electricity prices. If you take the all-in cost in Denmark, it's at least three times what we're paying, and in Germany it's more than twice what we're paying today. Even if you take the fact that people use less per home in Germany, well they don't live in the kinds of homes that we live in. My wife was born there, so I know a little bit about the average need in a home.

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How high do you feel that we should be willing to go? And how high can the consumer go with respect to the price of power here in Ontario? Because there seems to be no question, in spite of what the minister says: It only stands to reason that if you're generating more and more megawatts at a higher and higher price, the average price of power has to go up in the province. Where do you think the level of tolerance is for the consumer here in Ontario, and our ability to continue to operate effectively as a goods-producing economy?

**Mr. Roberto Garcia:** First of all, I don't know what the upper level or the tolerance is in terms of Ontario consumers, but I think it's important to recognize that we don't pay the true cost of power now, that there are a lot of social and environmental costs that are not reflected in our electricity bill but that we still pay, as taxpayers, through our health system or through environmental cleanup and things like this. One way or another we're paying for energy, and one way or another, energy prices are going to go up in the future. We're running out of oil and we're running out of natural gas and the other non-renewable fuels, so one way or another it's going to increase. I think we have to act now. I think it's more economically prudent to act now than in the future.

**Mr. John Yakabuski:** My colleague has a quick question.

**Mr. Jerry J. Ouellette:** Just a quick question, and this is mostly geared towards the government on this bill. Previous governments did not allow offshore development because the presentations that came forward would tie up the sites with no commitment to move offshore development forward. If offshore development were to move forward, what commitments would companies have to give to make sure that they use those sites, as opposed to tying them up until higher power prices come forward?

**Mr. Roberto Garcia:** I honestly don't know the answer to that question. I'm sorry.

**The Chair (Mr. David Oraziotti):** Thank you. That's the time for your presentation.

**Mr. Roberto Garcia:** Thank you all.

#### ONTARIO SOCIETY OF PROFESSIONAL ENGINEERS

**The Chair (Mr. David Oraziotti):** We're going to move up a presentation from this afternoon, the Ontario Society of Professional Engineers. I believe Angela Shama, CEO, is here.

Good morning, and welcome to the standing committee. You have 10 minutes for your presentation, five minutes for questions from members. If you could just state your name for the purposes of the recording Hansard, you can begin when you like.

**Ms. Angela Shama:** Thank you very much. I'm Angela Shama.

The Ontario Society of Professional Engineers, which I'll refer to as OSPE in the rest of the presentation, is the voice of Ontario's 70,000 professional engineers. As a member services and advocacy body, we support the professional and economic interests of engineers in Ontario.

I'm pleased to have this opportunity to appear before the Standing Committee on General Government to make you aware of the engineers' perspective on the important initiatives proposed in the Green Energy and Green Economy Act. We support the two-pronged approach taken in this bill: namely, creating new, sustainable sources of energy and promoting energy conservation. Overall, we support the reduction of greenhouse gas

emissions and want the success of Ontario's new green economy to be measured on the basis of emissions reductions across the full process chain.

In reviewing Bill 150, OSPE's energy and infrastructure task force identified four themes of particular interest to the engineering profession. These are summarized in a letter distributed to our membership today and are also available on our website. We touch on four themes important not only to engineers but to all who will be affected by the proposed legislation: anticipated economic growth, electrical distribution challenges, governance implications and the role of the engineering profession. We will host a forum on April 28 talking about governance issues of the act specifically. Instead of spending time today on economic growth and distribution challenges topics, I encourage you to visit our website to read the letter and attend our forum on April 28.

I'll use my limited time today to highlight what we see as crucial to the success of the act; namely, the role of the engineering profession, energy costs, research and innovation, and governance implications.

**The role of the engineering profession:** First, professional engineers need to be involved every step of the way in considering the greening of Ontario's energy and economy. The public safety demands it. As engineers, we take our commitment to public safety seriously. Electrical generating companies have traditionally used professional engineers in the design, operation and maintenance of their facilities, thereby complying with the public safety provisions of the Professional Engineers Act. The proposed bill opens energy generation to individuals who are neither trained nor accountable under the Professional Engineers Act. OSPE requests that the bill be revised to ensure the provisions of the Professional Engineers Act apply to all green energy production and utilization projects that have the potential to affect public health and safety.

**Weighing the costs and benefits:** We believe that more research is needed to assess the anticipated rate of return on investment. With the implementation of the Green Energy and Green Economy Act, Minister Smitherman expects that energy costs will increase by 1% a year. We also know that hundreds of millions of dollars will need to be invested in energy infrastructure to support renewable energy generation. However, what is still unclear is the extent to which these factors will translate into economic growth. We suggest a detailed analysis is necessary to know if the 1% increase in overall energy production costs will generate more than that return in economic benefit, job creation and reduced health impacts.

**Supporting research and innovation:** Next, we are concerned that the bill, if enacted, may not maximize development and commercialization opportunities for Ontario-based companies. Solar and wind energy technology and materials production will likely be imported from countries where the production capability is already established. In the case of wind power, purchases of 600-megawatt capacity or more tend to cross the necessary threshold of attracting local domestic

production. Quebec has been successful in this regard. Its 1,000-megawatt wind power capacity procurements, with minimum domestic content rules, have led to the establishment of wind turbine component manufacturing facilities. The Ontario government has not made this same level of commitment and is urged to do so, to facilitate the commercialization of new Ontario-created innovations.

**For governance implications with regard to the Renewable Energy Facilitation Office:** Energy planning in Ontario is complex, as there are many bodies with overlapping mandates. OSPE is concerned that the Green Energy and Green Economy Act and, in particular, the proposed Renewable Energy Facilitation Office, may add to this complexity. The powers invested in the proposed Renewable Energy Facilitation Office are of concern to OSPE. An independent appeals process for ratepayer groups who feel disadvantaged by a decision from the Renewable Energy Facilitation Office must be built into the bill. Asking these entities to appeal to the office that disadvantaged them in the first place is contrary to good business practice. An effective, independent appeals process, in the interest of fairness, should, we suggest, be administered by the Ontario Energy Board.

**Central planning:** Ontario needs a strong, centralized planning authority to oversee the province's electrical energy planning and monitoring needs. This has recently been the role of the OPA. With the Green Energy and Green Economy Act, the need for a single arm's-length, centralized grid-planning authority is even more important.

We request that the bill be revised to clearly designate the OPA with the responsibility of setting priorities for adding new green generating capacity to reflect its supply plan; clearly designate the Ontario Energy Board to administer an appeals process of decisions made by the Renewable Energy Facilitation Office; and clearly identify and provide an extended mandate to all forms of green energy production and utilization, not just electrical generation.

OSPE supports the spirit in which Bill 150 was drafted. Maximizing energy efficiency is paramount for reducing our environmental footprint, and accelerating the integration of renewable sources of energy to Ontario's electricity grid will help meet the energy demands of our growing population. However, such growth should not be at the expense of the environment, electrical distribution challenges, or good governance in the energy sector.

Ontario needs to explore renewable energy options and, in our view, must do so in the context of full life-cycle greenhouse gas reductions.

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Ontario needs to devise a research and innovation strategy to ensure that Ontario-based companies reap the full benefits of renewable energy development.

Ontario needs an arms-length centralized planning authority with limited interference from the ministry to oversee the electricity grid and set energy priorities. A well-supported energy board to protect consumers and prospective energy generators alike is also necessary.

Finally, the public needs assurances that suitably qualified professionals are overseeing the grid transformation process.

Thank you very much for allowing us the opportunity to present to the committee today. If there are questions, I'll do my best to answer them. If I'm not able to do so, I'll be happy to bring answers back to you.

**The Chair (Mr. David Oraziotti):** Thank you very much for your presentation today. Ms. Broten, government members are up if they have questions. Mr. Zimmer?

**Mr. David Zimmer:** Thank you, Ms. Shama. It's nice to see you.

**Ms. Angela Shama:** It's nice to see you.

**Mr. David Zimmer:** I understand that OSPE met with Minister Smitherman's staff on October 6, 2008, and there was a conversation about the role that Ontario's engineers could play in the effective communication—

**Ms. Angela Shama:** That's correct.

**Mr. David Zimmer:**—piece as we move forward on this energy initiative. What were some of the outcomes of that discussion from OSPE's point of view?

**Ms. Angela Shama:** I don't believe we've moved very far down that road at this point in time, but we have also met with senior staff from the Ministry of Research and Innovation and we have been discussing with them also how to play a bigger role on behalf of government in the areas of communication, out to the general public and to engineers in general in Ontario.

I think as you know, we're well positioned to be able to do that. We do have access to all the engineers in the province and have communications vehicles available on a regular basis. We also did something similar for the Ministry of the Environment with the energy conservation brochure.

**Mr. David Zimmer:** It might be useful to my colleagues in this committee—could you just take a second and distinguish between OSPE, the Ontario Society of Professional Engineers, and PEO, Professional Engineers Ontario?

**Ms. Angela Shama:** Certainly. Thank you. That's a good question. The Ontario Society of Professional Engineers is the advocacy and member services and benefits organization for professional engineers in the province of Ontario, thereby we represent the voice of Ontario's 70,000 licensed engineers. PEO, Professional Engineers Ontario, is the licensing, regulatory body for engineers. They do the licensing and disciplining of professional engineers and they administer the Professional Engineers Act.

In 2000, the Attorney General separated the two functions. Where we used to be together, since the year 2000 we have been two stand-alone organizations, but working closely together in partnership especially on issues such as this. This becomes more of an advocacy type of function, whereas PEO is clearly interested the regulatory function.

I do understand that you have a presentation this afternoon from the local PEO chapter, which we think, of

course, is great—to be able to present as many views as possible on behalf of the engineers.

**The Chair (Mr. David Oraziotti):** Thank you for those comments. They're very helpful. Mr. Yakabuski.

**Mr. John Yakabuski:** Thank you very much, Angela, for coming today. You touched on a couple of things and I want to bring that to the committee as well. With respect to the job cost-benefits analysis, jobs etc., you probably know that recently Rey Juan Carlos University in Madrid did a study that indicated that for every renewable energy job created in Spain, as a result of their moves, 2.2 jobs have been lost, and that each of those jobs in renewable energy has come at a cost of about a million dollars. Is that something the society would be able to comment on or have you done any cost-benefit analyses yourself?

Last week we had London Economics International release a report that would suggest that the cost of power could go up between 30% and 50% under this act. I think that's something that concerns us all. Have you got any comments on that?

**Ms. Angela Shama:** I don't have any detailed numbers for you, but certainly the big concern we have is in for renewable energy in particular, the technology is available outside of Canada, outside of Ontario, and we believe it's very important to provide the economic stimulus within the province. We cited the example of Quebec, where they in fact have—

**Mr. John Yakabuski:** To build new turbines.

**Ms. Angela Shama:**—demanded that there is a minimum 1,000 megawatts that must be local. I think that would go a long way toward addressing the type of concern that has been cited in places like Spain. Germany is big on production and manufacturing. We need to have it in-house. We need to ensure that our technical and other labour is employed in doing this and that the research starts to find a home here in Ontario so that we can stimulate our own economy with it.

**Mr. John Yakabuski:** Excellent. The other—

**The Chair (Mr. David Oraziotti):** Thank you. That's the time. Mr. Tabuns.

**Mr. Peter Tabuns:** Thank you for your presentation today. You talked about the involvement of professional engineers in the whole process of developing renewable energy infrastructure. In my mind, there's no question about that; you have to have that. But for you, what is the threshold in terms of individual projects where we would start talking about the necessity for a professional engineer to be involved?

**Ms. Angela Shama:** I'm not sure there's such a thing as a threshold; rather, ensuring that the public safety is protected at any level of construction, whether that be a small project or a large project. I think it's important to ensure that the oversight is done by professional engineers, that the design and the building include the oversight of professional engineers.

I don't think there's a particular threshold, if you will, that says, "Well, if you're only this big, you don't need professional engineering involvement." These are issues

that affect the public safety and they should all have the involvement of professional engineers.

**Mr. Peter Tabuns:** Could you also speak to Mr. Yakabuski's point? I know that when cars were introduced, there was a huge drop in employment in carriage-making and buggy whip manufacture. Likewise, with the introduction of personal computers, there's—

*Interjection.*

**Mr. Peter Tabuns:** John, I know that. You and I know both read about it in history books. Similarly, with the introduction of personal computers, manufacturing and typewriting dropped off radically. Professional engineers watch technological change. So would you expect that as renewable energy is introduced, other forms of energy production will go into decline?

**Ms. Angela Shama:** One would expect so, provided that we can resolve a number of the other issues that are problematic right now, the grid in particular: There's quite a bit of work that still needs to be done to ensure that these new sources of renewable energy can in fact feed into the electricity grid and do so in a productive manner. I don't think it's an imminent change, I think it's longer-term that we'll see those changes, and the grid is a huge issue for us to resolve.

**Mr. Peter Tabuns:** Okay. Thank you.

**The Chair (Mr. David Oraziotti):** Thank you for your presentation. That's all the time that we have.

**Ms. Angela Shama:** Thank you very much.

#### LUKE MACMICHAEL

**The Chair (Mr. David Oraziotti):** We're going to move on to one additional presenter prior to lunch here, Luke Macmichael; if Luke can come up.

**Mr. Luke Macmichael:** I have a one-page handout.

**The Chair (Mr. David Oraziotti):** Welcome, Luke, to the standing committee, and thanks for being here today. You have 10 minutes for your presentation and five minutes for questions from committee members. If you can just state your name for the purposes of our recording Hansard, and you can begin your presentation when you like. Just press the button on the microphone in front of you and you can go ahead.

**Mr. Luke Macmichael:** Hello. It's great to be here today. My name is Luke Macmichael. I'm just trying to get this computer set up here real quick.

I'm just going to give a brief introduction of who I am. I'm currently the chair of Clean North, a local environmental group. I was the Green Party candidate in the last federal election. Today, I'm just here as an individual representing myself and any others like me. Hopefully, I can make the next 10 minutes kind of a fun reminder of why we're here and the importance of this act and share some of my personal views and ideas on the direction we'd like go.

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It would be great if I could get my presentation to work. That's the fun thing with these computers; they're always

a little bit different. Thank you very much. Hopefully I didn't waste too much time there.

**The Green Energy Act:** It's time to choose our direction. I am, of course, hugely in support of this act; there are a lot of great things in it. I'm just going to do a quick review.

So what's the downside? I've heard some downsides to this act, and I guess one of the big ones is that it's too expensive. It costs too much money. Everything's going to go up. We're going to have to pay higher prices. It's not fair to those old, dirtier energy industries because they need to have jobs, too; all these other things. It might drive out companies because energy prices go up. We might lose industry to other provinces and other countries.

Those are valid points, but then we have to look at the bigger picture here. This is a monumental, changing time, and it's our chance, when you look at the upside of it. Someone has to make a stand. It's time.

What's the upside? We get more green jobs. Sure, we're going to lose, as was said, a lot of the older industries. A lot of things are going change. There's going to be a lot of upheaval, a lot of people resistant to that change, but in the end, we're going to have a better world, more green jobs, a cleaner environment.

How can you put a price on that? How can you put a price on our children having clean air to breathe, not having asthma, not having cancer? These are things that are priceless. How on earth can you say clean energy costs too much when you think of all these other factors, when you actually put them into that? It's amazing to me how anyone can use that argument.

The great part of this act is it has lots of ways of getting everybody involved, from small to big, so that we can all learn about what we need to do. We can all get involved in creating the clean, sustainable world that we all want, that everybody wants. It's just how to get there, and of course avoid this, the end of the world as you know it.

It's always kind of fun when you learn about all of it. People doubt how bad it might actually get with climate change and all the other problems we see, but in the end, we really can't overestimate how bad it could get in the next 10, 20 or 30 years if we lose our polar ice caps, if we lose all these things. We just don't know. We're doing a big biology or laboratory experiment with our world here. If we don't make the right turn now, if we don't choose the right direction now, holy moly—I'm out of power. Excuse me for one second.

That is why we're here. We're here to save our world. We're here to make the energy policies that are going to work for us, that are going to help us create that great future that we all want and do it in clean ways and avoid this.

Some of the big hurdles: We've seen in the past we've got all the politics, corporate control, the people who are rich, who like things the old way, who profit from the old way. They're the ones who make the decisions. Full cost accounting: We need to bring all of these costs in. All the current methods that we use, we need to start accounting for these costs. We know there are costs there; we know

there's pollution; we know there are costs to health care, all these other things. They need to pay for it.

Why have we done this for so long? We've been doing it for the past 100 years, letting people pollute for free, letting people do these things. We need to change. I know it's a worldwide issue here, but we need to start here and we need to make the example. We need to stop these habits of the past, the whole, "I'm entitled to free energy. I'm entitled to these consumption habits that I've been accustomed to." We need to change, and it's hard, but it has to happen.

Three levels of change: individual, technological, political. We're here today to do the political one.

How much time do I have? I lost a lot of it. Just to let me know.

**The Chair (Mr. David Oraziotti):** You have about four minutes.

**Mr. Luke Macmichael:** Four more minutes. Thank you. I'll try my best.

**The Chair (Mr. David Oraziotti):** There are another five minutes for questions.

**Mr. Luke Macmichael:** Thank you.

So individual change, again going really quickly: reduce, reuse, recycle. Two new ones: rethink, resist. We have to conserve, we have to rethink our lifestyles. It doesn't mean we can't enjoy our lives. We can actually enjoy our lives a lot more. I try to be an example of that in my life and I can testify to you that life is so much better when you think about these things, when you think about making a difference. Every decision we make has an effect on everybody else around us. Consume less, live more. Enjoy your family, enjoy your friends, enjoy our nature. There's so much out there to enjoy. Plant a tree, ride a bike, all these other things.

Technological change: I'm a big techie. I work as a computer engineer, actually. I love following all the new changes. There are lots of great things out there. I'm sure you guys are all familiar with a lot of them. I'll share some of my favourites quickly: electrical cars, solar energy, building with recyclable materials that can have a whole system from beginning to end so that we don't need to keep on ripping up our landscape to get more of them. We can reuse; we can recycle. We can recycle the energy.

In the end, all of our energy comes from the sun. The best way, in my opinion, to get it is through various solars. There are lots of different ways. My personal favourite is nanosolar, where they print solar cells by the football-field length. Again, it's still very new technology but lots of potential there for doing it cheaply, for actually making this cheaper than coal. If this works out, it won't even be worth digging the coal up out of the ground because it will be too expensive compared to how cheap we can get this. You're talking a penny a kilowatt in the future. You can build these things by the football field with robots or with whatever, just streamline the process, make the whole process simple and easy to follow. There's no limit to how much energy we can get this way. Sure, it's expensive off the start; sure, it's hard off the start but that's what this

process is all about. It's getting there so we can have this energy in a clean way.

Some other great ones: solar towers. Just mirrors: That's all it is, mirrors focusing the sunlight on to things that can boil water, boil steam, old-fashioned steam turbines. So many great ways to do it. Energy from algae: We can grow algae and use that for biofuels. Again, carbon neutral. It takes energy in, puts energy out. So that's the second kind: technological. This is to support that technology.

Political change: This is what we're all about here, getting people into power who are going to change the system to favour the environment over the short-term thinking of short-term profit or short-term cost. We need to think long term. We need to support these changes. Pollution taxes, full-cost accounting. Please, we need to make this a focus in our lives. We need to be more responsible for these decisions that we make. We need to support these changes.

So how can we succeed? That's all said and done. That was fast.

How can we succeed? One step at a time, living happier, sustainable lives, voluntary simplicity. We can set the example for the future and convert the world one person at a time. Again, this is a presentation I've done for lots of other things. Learn more, get involved. This is what this process is. It's getting involved, spreading the word, spreading the joy. There are so many great things about this process and we can spread it to everybody.

That's it. Thank you for your time. It was great to be here. Questions, comments?

**The Chair (Mr. David Oraziotti):** Thanks, Luke, for your presentation. Mr. Ouellette has questions first.

**Mr. Jerry J. Ouellette:** Thank you for your presentation. As we move forward as a society, we all make decisions and choices. We see BlackBerries being utilized as we're sitting here. The batteries that are used in them have to find an equal opposite reaction that's going to be taken care of. We all make choices as a society, when we're deciding what's in our best interests—whether it's the seniors I'm going to see tonight who are finding it difficult to live in their own homes on the fixed income they have—as we move forward, and where the cost balance is. As a whole, society has to make those decisions in the best interests overall. Certainly, if we'd made earlier choices in life as to how and which technologies we'd move forward, we might be in a different situation. However, when I listened to the presentation by Tim Ball, from BC, on certain aspects, which I would hope you would know, we certainly hear different perspectives come forward.

**1200**

A question I would have would be, what would your positions be on, for example, the utilization of nuclear, as 200 nuclear plants worldwide come online, and low-flow generation?

**Mr. Luke Macmichael:** I used to be a massive supporter of nuclear, growing up. In school, I always wanted to be a nuclear engineer. But the more I learned about the

possible negative effects—I know it may be a chance, but the chances of them blowing up, or the chances of having problems, or the chances of cancer caused from the mining or from the other things—and while I know a lot of it is unproven, still, is that chance really worth it when we've got all these other options like solar, or wind, to some extent, geothermal, tide energy, when we've got these other things that don't have those chances of going critically wrong? When you're talking nuclear explosions, you really can't put a factor on that. If they had to actually pay the insurance for those costs, and they weren't insured by the government, they would never go forward. There's no way anyone would ever insure a multi-trillion dollar disaster like that. You just can't.

In my mind, you could spend \$50 billion putting solar panels on every roof. Streamline that. It would be just as cheap as, if not multi-multi-multi cheaper than, doing this the nuclear power way. There are plenty of other, better ways out there to do this than nuclear.

**Mr. Jerry J. Ouellette:** Any comments on low-flow generation?

**Mr. Luke Macmichael:** Low-flow generation, yes. There are definitely some good ways. I guess the key is making sure that the area is okay and that the environmental effects of any kind of generation, whether it's low-flow or hydro or anything, are balanced, that you do it in an environmentally sustainable way and that it's going to last.

That's really the key with any kind of energy: You've got to think of all of the costs, all of the potentials, and weigh and balance them all. When you measure all of those costs in there, it becomes pretty clear where the options really should be, especially when you think long-term.

**The Chair (Mr. David Oraziotti):** Thanks. Mr. Tabuns.

**Mr. Peter Tabuns:** Luke, I just wanted to thank you for the presentation. I actually don't have any questions. You were pretty thorough.

**Mr. Luke Macmichael:** Thank you. I had one more point to make, actually, that I missed in the presentation, just some brief suggestions. I'm sorry—just two seconds.

**The Chair (Mr. David Oraziotti):** We're going to do the—

**Mr. Luke Macmichael:** Do the questions first. Okay; thank you. Go ahead.

**The Chair (Mr. David Oraziotti):** Mr. Zimmer.

**Mr. David Zimmer:** So you're a very enthusiastic guy, and very optimistic and confident in everybody to follow along with your lead and the lead expressed in the wording of the act. How would you deal with the naysayers or those who are recalcitrant or don't get the message? How would you bring them around?

**Mr. Luke Macmichael:** That's always a tough issue, because no matter what you say, people kind of believe what they want to believe, and they have their beliefs. It's really hard to get through to them. In the end, you really just have to get them to think, get them to learn. That's what happened to me. I used to be one of those people.

I've only really been in this for maybe the last three years. It was kind of the movie *An Inconvenient Truth* that really did it for me. It just opened my eyes. There's so much out there. The more you learn, the more you realize we need to change.

Put a dome on your city and think, "Where is this pollution going?" Because we live in a dome; our world is a dome. It's not going anywhere. It's not disappearing; it's there. Some of it gets put back into the trees. But in a dome, how are you going to get your energy? You're not going to get it from a dirty coal plant. You're not going to get it from even a nuclear plant, if you have a dome and you don't have anywhere to put that radioactive waste. You're going to get it from the sun. You're going to get it from clean energy. It's a simple question.

But in the end, yes, you really have to just get people to open their eyes and think about it, think about those long-term costs.

**The Chair (Mr. David Oraziotti):** Thank you. That's the time that we have for questions.

**Mr. Luke Macmichael:** Okay. Do you mind if I just have two minutes? One minute? Thirty seconds?

**The Chair (Mr. David Oraziotti):** One minute.

**Mr. Luke Macmichael:** Okay, thanks. These were part of the presentation that—

**The Chair (Mr. David Oraziotti):** We normally don't come back to presentation material once questions begin—

**Mr. Luke Macmichael:** I apologize.

**The Chair (Mr. David Oraziotti):** —but if you want to take a minute, I think the committee will indulge you, and you can wrap up.

**Mr. John Yakabuski:** Lunch isn't ready yet.

**Mr. Luke Macmichael:** I apologize.

There are just two points that I missed, as far as suggestions for making it better. The one that I really like is the stronger tiered pricing, where you have much, much more expensive electricity as you use a lot more. People who have bigger, 5,000-square-foot houses that they may or may not need—I mean, those are the ones who really should be paying the higher costs, whereas the people who are lower- and middle-income and who can't afford the increases would use their basic amount of electricity. We've got to think about those types of people, or the people who can afford more. That really encourages more conservation, because the higher tiers cost a lot more, so you save a lot more off the start by conserving. Tiered pricing, I think, is a really key aspect.

The other part is just true cost accounting, making more of these dirty industries pay for these switches to the clean industries. That's always a political nightmare, I think, to try to get that through, because of these old things, but it really needs to be the focus in making this change.

Those are the last two suggestions and points I wanted to make.

**The Chair (Mr. David Oraziotti):** Thank you, Luke, for your presentation and for being here today.

**Mr. Luke Macmichael:** Thank you very much.

**The Chair (Mr. David Oraziotti):** Committee is in recess until 1:15 p.m.

*The committee recessed from 1205 to 1312.*

**The Chair (Mr. David Oraziotti):** We'll call the committee back to order.

PAUL DAY

**The Chair (Mr. David Oraziotti):** Good afternoon, Mr. Day, and welcome to the Standing Committee on General Government. Thank you as well for agreeing to be here a bit earlier. We appreciate that. You have 10 minutes for your presentation, five minutes for questions from members of the committee. Please state your name for the recording purposes of Hansard and you can begin your presentation when you like.

**Mr. Paul Day:** Thank you, Mr. Chair. Clerk, honourable members, I appreciate the opportunity to share our particular project from Mapleton. You are facing a real daunting task to face this situation. The more I see in the press and from level-headed scientists and leadership, I see a sense of panic and urgency really taking place, and that scares me a little bit because you can't really make good decisions in a panic situation. I think it's my responsibility, by the way, to share this particular project with you folks. Hopefully it can be of some help. I'm going to move right into the presentation right now.

If you'll excuse me, I'm just going to stand and move around a little bit here. Can you gentlemen see it okay there?

It pays to plant trees and turbines in the right places. I'm going to share the Trees for Mapleton project. It's really a project helping farmers adapt to climate change. I noticed in the paper here, I think it referred to the cities that are actually in competition in terms of looking at green projects and that type of thing. We're really looking at the rural area here and we think that it's very important. This is not just a tricky little title here; from our standpoint, it really pays to do this kind of stuff. It pays to be really good environmentally.

We live on a farm our ancestors cut out of the bush 160 years ago. On that farm, actually, we have an option for a wind turbine. We took it out four years ago and have second thoughts today. Maybe like a lot of folks, the first flush of wind energy appeared very good, but when we really got into a lot of details, it lost some of its lustre in favour of what our real resource is in our particular area, and that's food production.

I taught for a few years; I've volunteered in several environmental groups for the past 12. I feel strongly that we must work with natural systems to face climate change.

A little backgrounder here: The world loses a Scotland every year. That's a big chunk of food production land the size of Scotland. Ontario contains 50% of class 1 land. We've lost a million acres of that class 1 land since 1996. It disappears very quickly.

The cash receipts from agriculture and food production are \$8.9 billion, according to the 2006 census. The multiplier effect there, in terms of the impact on the whole

economy: \$29 billion. Should we really be looking after this resource? I think we should. Are we concerned? Yes, we are.

In Mapleton, we have a plan. Basically, it's entitled Trees for Mapleton. It stands on the shoulders of several projects that have gone before this, back about eight or nine years, in which we have strategically planted trees on farmland, helping farmers adapt to climate change—a green infrastructure for durable food production and a healthy community. What we're really saying here, and if we just watch this, folks: It pays to plant a lot of trees on the farm. We're not just talking jargon here. We know how much it pays, we know how many trees, and we know what places on the farm to do this.

Gone with the wind: The average farm loses \$15,000 to \$20,000 a year—that's in crop yields, increased energy—without proper tree protection. Mapleton township, which I'm in, loses \$3 million a year. In the townships across southwestern Ontario, extrapolated from that, it's \$150 million that's blown away in the wind every year. Why? No trees. Benefits to Mapleton: The annual increase in yield is \$1.5 million; energy savings, \$850,000; the cost for road maintenance—there you have it. The annual benefit to our township alone is \$3.1 million if trees are planted strategically.

Nobody works alone. This is our partnership, folks. This is the way it takes place; this is the way it has taken place. We've got great support there. You can see the various partners; I don't have to mention them here. A lot of them you'll recognize. The landowner is the significant one. Ninety per cent of our land is owned privately.

Why did we zero in on this? Because this is the Grand watershed, a great watershed. Tree gradient—tree coverage from dark green to light—means the density of forest cover. You can see the bone-white area in Mapleton. That's why we zeroed in on this township to start with. This is a demonstration.

Mapleton, in the early 1800s, was a tremendous upland wood. This is the Queen's Bush that swept from our area up to Goderich—hardwood forests. This is what it looked like in 1860. My ancestors, like everybody else, had sharp axes. This was progress; they thought they were doing the best thing. They went too far.

This is the current tree cover. It's approximately 10%, the bones of what was left of that forest—but tremendous food production. Some portions have 3.4% tree cover. That's a wind farm project that is tentatively going ahead. What do you see here, folks? Is this appealing? This is a predominant southwestern Ontario landscape. This is an area that the wind farm folks are looking at. To a lot of farmers and you folks, this is class 1 land. You start in there with a big rig, and boy, that's no trees, no obstructions, no nothing. But do you know what they lost last year in value? They lost \$80 to \$100 an acre because there wasn't tree protection for the crops.

1320

This isn't baloney; I've got the example right on the ground on my property, and we proved it. It wasn't great science; it was, "Hey, the grain box is three quarters filled

at this particular point. When you're close to the windbreak, it's full." It's not rocket science to see this stuff.

This is what I'm talking about. Here's my windbreak, 20 years old. The corn right up—I took a shot of that. I rent this, by the way. A Mennonite fellow, a young fellow, observed what was happening here. As he was next to the windbreak, he was getting up to 8% to 10% higher yield. Heat units last year were the significant thing.

Tree cover: in a healthy environment—30%; Wellington county—17%; Mapleton—10%; and some areas are 3% to 4%. This is similar across southwestern Ontario in the great farm belt. It's down to 3.4%. What has happened? Well, here's what we call progress: clear-cutting, drainage and intensive agriculture. Do you know what step was missed here when we cleared the fence bottoms and actually had support for that? We forgot to put appropriate windbreaks around 100-acre fields. We missed a step 50 years ago and we've got to do a lot of catching up.

Now, the latest industrial foray into this particular area is the wind project. This is the southern Ontario region, by the way, and our particular project—you've invested in that. This government has invested in our project through Trillium, through Trees Ontario, and they've helped us out here, but under the understanding that this would be a demo for across southwestern Ontario.

Gord Miller claims there's no support for governments facing climate change. We say trees are the answer. Trees moderate both winter and summer and cut the wind factor. Do you realize that wind dries plants 2.5 times faster than the sun? If you look at beans, corn and that, as the wind sweeps across without any protection, it's sucking the moisture out of them, sandblasting them and basically reducing the productivity.

Here's the Mapleton strategy: Wrap every 100 acres with a windscreen; buffer the waterways for clean water downstream; wrap forest fragments that are left; shelterbelts around farmsteads that will drop your energy requirements by up to 25%—very critical with industrialized farms with poultry, beef and all those types of things—link forest fragments for a healthy environment; and create living snow fences along the roads. We have the data from the States that says if you put \$1 in, your return for that dollar is about a \$17 saving in terms of maintenance on the road, in terms of salt usage—and we haven't even talked about lives at this point, in terms of saving lives from turbulence and that kind of stuff.

**The Chair (Mr. David Oraziotti):** Mr. Day, you have about a minute left.

**Mr. Paul Day:** Okay: five million trees—this is the vision, folks; expected outcomes—I've been over most of them right there; living snow fence benefits—here's a bit of a problem, barriers to planning uptake. We've mostly overcome these in our area, but we've got another one, the industrial wind system. Why do we have that, in terms of industrial wind systems? Because in the contracts they generally want you to curtail or actually sterilize an area in terms of planting trees. They don't want high trees and

they don't want them close to the—and that goes in the contract. What I'm suggesting is it sort of has provided a barrier to what we're doing here: trees in the right places to sustain our food production; wind turbines in the right places to provide clean energy. We have to—there's just a little shot in terms of energy use.

Recommendations: If I can get into that, Trevor—is Trevor there? Nope, he's not there. I've got a package to hand out. Did anybody get my e-mail? I sent e-mails to all of you folks.

**The Chair (Mr. David Oraziotti):** He said that you had asked him to hand that out at the end of your presentation.

**Mr. Paul Day:** Right. I just thought I'd do it right now, if you don't mind, as we look at the recommendations.

**The Chair (Mr. David Oraziotti):** Do you know what? If you can wrap up in 30 seconds, we'll have five minutes for questions and perhaps in some of your responses you might—

**Mr. Paul Day:** That'll be good. So my recommendations are: Set priorities for the landscape. Class 1 land is best reserved for food, sustained by appropriate tree cover, and if we introduce the wind turbines and shoehorn them into intensive agricultural areas, there's a tendency to marginalize the tree planting. We need a more vigorous environmental assessment that takes into account tree cover to pollinate our habitat.

I just want you, when you get the package, to consider a vision, say, 20 years down the way, and payments to landowners for environmental goods and services. That's not a new topic for you. We've received it. The community is already doing it for us. They've embraced this particular project. That's the sustainable landscape we'd like to see, and it doesn't even take into consideration the carbon uptake that we can do with this type of project across southwestern Ontario. Thanks for your time, Mr. Chairman.

**The Chair (Mr. David Oraziotti):** Thank you very much for your presentation. Mr. Tabuns, you're up first.

**Mr. Peter Tabuns:** Thank you for taking the time to pull all that together and to present to us today. When you talk about the money loss, you're talking about reduced crop yields. You're not talking about loss of soil?

**Mr. Paul Day:** I'll tell you, we've lucked out in our area and in some areas; our soil is heavier. We do lose some soil in our area, but it's a heavier soil. In some areas of southwestern Ontario, they're losing it through erosion, that's for sure. But what I'm talking about here is the wind impacting on what's above the ground, the yield, but also the drop in costs of energy for a farmhouse, the barns, all that kind of stuff. So when you pack all that together, there's a real saving for the area.

**Mr. Peter Tabuns:** Okay.

**Mr. Paul Day:** Does that do it?

**Mr. Peter Tabuns:** It does. Thanks, Mr. Day.

**The Chair (Mr. David Oraziotti):** Thank you very much. Ms. Broten.

**Ms. Laurel C. Broten:** I just want to thank Mr. Day for his presentation and then my colleague Carol Mitchell has a question.

You're giving us good advice, Mr. Day, as we move forward on initiatives that are all in the direction of our climate change action plan. We have made significant steps forward with respect to tree planting, investing in tree planting and being part of the UN challenge to plant trees. We're making a huge commitment to get off coal. We need to replace that renewable energy. You're telling us, "Don't do what government essentially does in many instances and silo our mentalities and not recognize the interface between the various strategies." So I appreciate your perspective. Thank you.

**Mr. Paul Day:** I think there's a place for all these things.

**The Chair (Mr. David Oraziotti):** Ms. Mitchell.

**Mrs. Carol Mitchell:** Thank you very much for your presentation. I represent the two counties that are the breadbasket of the province. Our cover is probably 3% and 30% in some townships. My farmers have worked very hard at developing environmental farm plans, but planting trees, they tell me, is something that is maybe third or fourth on the list because of the effect that it has on their agricultural production. This is something that not only our government has been pushing for, tree coverage. We understand it is part of climate change, but what more can we do as a government to encourage our agricultural community to plant more trees?

**Mr. Paul Day:** We face two things in terms of barriers. The farmers haven't picked up on the value that we have suggested here in terms of the value of trees on the farm. They still face the old thing that my ancestors did: The tree was the enemy. The tree is in the way. We've got to clear it and plant our stuff. We didn't realize the positive effects it was having.

Number one, we've got to get the information out to farmers properly, and it isn't in glossy BMPs and that kind of stuff. I think the province spends millions, and we have studies to indicate that the transfer of technical information to farmers is face to face. It's a face-to-face situation. That's why we've hired—the only township in Ontario—a farm forester to go farm to farm, hold meetings, drive and share it wherever you are and deliver the information, and it's working.

1330

**Mrs. Carol Mitchell:** Do you feel that the cap-and-trade will be something that in the agricultural community, once they hear more about it, this will encourage the planting of trees?

**Mr. Paul Day:** I would hope so. If we're looking at five million trees being planted in our township and extrapolate that to the great millions that we can do across southwestern Ontario, it's another great advantage to the farming community.

**The Chair (Mr. David Oraziotti):** Thanks for that. That's the time for questions. Mr. Ouellette.

**Mr. Jerry J. Ouellette:** Thank you for your presentation. A couple of quick things you can add to that,

though. For example, most people don't realize that the average stream requires a minimum of 36% coverage in order to maintain cool or cold-water status. Most of the streams in the area that you're talking about are less than 12%. The other aspects are that the first 15 years of a tree's life are the most carbon-converting years. Those are when they're growing like kids and fighting like everything else to achieve height, and that'll make a big difference for you. When you're talking about utilization for land for environmental purposes, there's a delta project in Manitoba which I would hope you're aware of. You can use that for your file to move that forward. It's an area where it's working very effectively. The last two things are: 80% of all moisture loss out of a tree is through transpiration, which puts moisture into the atmosphere, which is very beneficial as well.

The question is, though, that currently they're looking at utilizing all biomass residuals, which means any left-over parts of a tree that are left in the forest on crown land will be removed to be allowed to be used for cogen purposes. Once you remove that, all the stuff that breaks down to provide the fertilizer for the future of the forest in crown areas will be removed from the forest. Do you have any comments on what the potential impact of the total removal of biomass from the forest would be?

**Mr. Paul Day:** I think you really have to have a balance, and you've brought up an excellent point. We're not faced with that great problem in our small fragments of forest cover that we have there, but that's the regeneration aspect, and basically we need that type of thing left there to a great extent to fertilize and keep things going. It's a great point that you make in terms of the first few years, though, of growing. If I could just extend it for a second, some of the best—when you plant trees in southwestern Ontario, they probably double that type of growth in fertile lands that they would, say, if you've putting them off on a marginal basis, so there's a great uptake in terms of carbon and CO<sub>2</sub> there.

I must say this, folks. We have a bee yard at home. I've lost 30% to 40% of my bees in the last two or three years. These are pollinators, as you well know. Einstein said that if we lose the pollinator, the honey bee, we've got four years to live, because 30%, 40% of our food is based on that. Part of our whole project here is to put pollinator species along the windbreaks so they can pollinate crops properly. So it's a naturalization thing that we're dealing with there too. So let's really be aware of the naturalization aspect of our food production land. We're losing it. Let's keep it and really sustain it.

**The Chair (Mr. David Oraziotti):** Thank you very much, Mr. Day, for your presentation. That's all the time we have for questions. We appreciate your coming in today.

PROFESSIONAL ENGINEERS ONTARIO—  
ALGOMA CHAPTER

**The Chair (Mr. David Oraziotti):** Our next presentation is the Professional Engineers Ontario—Algoma

Chapter. Jeanette Biemann, good afternoon and welcome. You have 10 minutes for your presentation and five minutes for questions from members of the committee. Just state your name for the purposes of the recording Hansard and you can begin your presentation when you like. Just press the button to activate the microphone.

**Ms. Jeanette Biemann:** Great. Good afternoon. I'd like to let you know my name is Jeanette Biemann. I'm a professional engineer in the Algoma chapter and I'm here today on behalf of the Professional Engineers Ontario—Algoma Chapter. I'm going to start by explaining why we feel we're well suited to provide valuable feedback on the Green Energy Act and then I'll get into the points outlined in the handout paper I believe you all have in front of you today.

Professional Engineers of Ontario licenses about 70,000 engineers in the province and authorizes businesses to provide engineering services to the public. Under the Professional Engineers Act, its statutory mandate is to serve and protect the public interest where engineering matters are concerned.

The Green Energy Act has the potential to transform Ontario's energy industry and create a greener future. The Algoma chapter of PEO has about 250 members, many of whom have worked on various aspects of power generation and energy conservation. Sault Ste. Marie in particular and its surrounding areas have seen significant growth in the green energy sector over the past few years, and many of our professional engineers have been vital to the development of these projects. Considering their recent experiences and technical backgrounds, we felt that the input they have provided on the Green Energy Act was worth sharing with you today.

I'm going to go through the 10 discussion points with you now.

(1) Energy as a major industry: It's refreshing to see that energy is being recognized as a major industry. We'd like to make sure that there's a made-in-Ontario solution component to this aspect. We believe it has a strong potential for job creation. We'd like to see Ontario locate sufficient power within Ontario to support its own needs and locate the associated workforce in Ontario.

As a side note, we'd like to comment that in the early 1900s, Henry Ford had this vision when he put the steel, automobile and power generation all on the same site. So it's just keeping in line with that. We'd like to locate it in Ontario.

(2) Community energy: We were slightly concerned that if each community was required—

*Interjection.*

**Ms. Jeanette Biemann:** Let me interject for a second. This is Alvin Olar. He is the chair of the professional engineers Algoma chapter and he's here today with us.

So getting back to number 2, community energy: We were slightly concerned that by having each community doing its own community energy project, it could bog down the local resources. We wanted to ensure that there was the ability for public-private partnerships. This would allow for experts in the industry to work with the

communities to create community-specific plans. This would allow cost-effective projects to be expedited and moved forward with respect to green energy.

(3) Transmission grid: When approving new generating sources, it would be ideal to locate them near existing and growing loads. However, we need to keep in mind that projects such as wind, solar and hydro are better suited in locations where the best generating capacity is available. So when we are thinking of the transmission grid, Ontario will need to ensure that resources and funds are available to upgrade the transmission grid to meet the new generation in northern Ontario to support the loads, which are typically in southern Ontario.

(4) Local engineering expertise: Many professional engineers are already working in Ontario's energy industry. We believe that these local experts are valuable resources to the government on projects such as the Green Energy Act and we'd like to see that they are included in project proposal reviews and implementation teams. This is part of that local content, making sure that engineers are involved in the jobs that are coming forward with the Green Energy Act.

(5) Project planning: When new initiatives come forward, we want to ensure that there's an appropriate amount of time allowed for project planning. Project planning and engineering phases of these projects, if they're set appropriately, will allow for cost-effective designing and ensure that the resources in manufacturing and construction in Ontario are utilized to the best of their ability.

(6) Ontario's industrial competitiveness: Considering that Ontario's industrial competitiveness is a significant driver of prosperity and jobs in Ontario, we'd like to ensure that the electricity rates remain cost-competitive with other areas in North America and Canada. Manitoba and Quebec are important benchmarks to keep in mind when setting the electricity rates. Although the real costs of green energy should be transparent and evaluated when reviewing all new generation projects, only the government is in a position to subsidize the initial higher cost of these energy projects until they become more cost-competitive.

(7) Mixture of generation sources: Although green energy projects are going to become an important mix of the power generation in Ontario, they are only able to do some of the load. Solar and wind are not available on a continuous basis and must be backed up by dispatchable baseload generating power to ensure the reliability of the grid. Cost should also be a consideration. Green energy sources tend to be at a higher cost. Thus, we need to continue to develop low-cost, baseload sources such as hydro and potentially nuclear to set the baseload for the province. One thing to keep in mind is that we're not sure that the true cost of nuclear power has been put forward, and we'd like to see that, and the transparency of all the green energy projects that are being put forward.

**1340**

(8) Natural-gas-based power generation: Natural-gas-based power should be limited to peak-demand generating

capacity and combined heat and power projects. Long-term forecasts of natural gas forecast that there will be significant cost increases to this commodity over the next few years. We want to ensure that this remains limited so that the costly aspects of this generating source are limited.

(9) Streamlined regulations: This is a welcome component of the Green Energy Act. The proposed streamlined approval process and standardized rates will provide a significant improvement to the process. It will make the planning and proposal phases of the projects less costly, thus maximizing profitability of these green energy projects. One concern was how the new energy czar was going to interact with the local utilities and the various associations, so we suggest that an organizational chart be developed to explain this component of the Green Energy Act.

(10) Conservation: Last but not least, we'd like to touch on conservation because it's a win-win situation. You not only limit the need to develop new expensive power generating sources, but you also reduce the cost to the end user. This should be a primary focus of the new act.

Revisions to the Ontario building code to improve energy efficiency are well overdue and will set the first step in energy efficiency throughout the province. Building code revisions will take time and usually only set the minimum thresholds. If Ontario wants to be a leader in energy efficiency, it should reform the way it approaches public infrastructure projects. Life cycle aspects of design decisions should become the cornerstone of all capital planning projects.

One way to achieve this would be for the government to follow suit with what the federal government and many private developers are doing, which is mandating that all new public buildings meet a third-party-verified degree of higher energy efficiency through programs such as LEED, which are already established. This would be a more holistic approach to green buildings in our province. The Ontario government could also modify the funding formulas for new AFP projects. If the private consortiums were required to pay the ongoing energy costs, there would be more of an incentive for them to provide innovative energy solutions.

In conclusion, we'd like to thank you all again for coming here today, and we trust that the input we've provided to you is helpful. We, the PEO Algoma chapter, would like to remain available to you to help the government with the energy act and other issues to do with public interest. We'd like to welcome your questions now.

**The Chair (Mr. David Oraziotti):** Okay, thank you very much, Jeanette and Alvin. Mr. Zimmer?

**Mr. David Zimmer:** Thank you very much. I've listened carefully to your 10 discussion points, so this is a very general question. In which areas does the Green Energy Act, as you understand it, satisfactorily deal with or meet the objectives of your 10 discussion points? Are there any areas where you think the Green Energy Act falls short, in your opinion?

**Ms. Jeanette Biemann:** I'd just like to reinforce that this is a consolidated paper with a number of engineers in

the community, so I'm speaking on behalf of a number of people. I hope I get this satisfactory to our members.

The number one point we saw as a positive aspect. We thought that it was refreshing, and it was great to see the green energy aspects. It's looking at energy as an industry, so we thought that definitely was being met by the Green Energy Act.

I'm just sort of reading through them here. Community energy we thought was a good process. It just needs to be looked at to make sure that we're not going to bog down the communities.

I don't want to go through each one of them here, but on a lot of them, we thought that the Green Energy Act was addressing the concerns. We just wanted to add some input to make sure it goes in the right direction and that all aspects are being looked at.

Sorry, does that answer your question?

**Mr. David Zimmer:** That's fine. So you don't have any burning criticisms of it? Generally, you're happy with it, subject to some fine-tuning?

**Ms. Jeanette Biemann:** We're happy with the intent of the Green Energy Act. There's just some fine-tuning that I think should occur based on the comments we've provided and other presentations today.

**Mr. David Zimmer:** All right. Thank you very much.

**The Chair (Mr. David Oraziotti):** Mr. Ouellette.

**Mr. Jerry J. Ouellette:** Thank you for your presentation. Earlier on, we heard from the OSPE. One of the questions I had was about the jobs and moving forward with an engineering component. I know locally, at the University of Ontario Institute of Technology, they're having graduates who are somewhat expert in this field of green energy, whether they're individuals dealing with wind power, local generation or other aspects. The difficulty I'm finding from the local group is that they are unable to receive a designation from your organization because of their specific expertise. As this field generates new growth and jobs, what sorts of designations can you visualize the province having or these graduating students, who believe that they're environmental engineers with expertise in these areas, being able to have?

**Ms. Jeanette Biemann:** I can't speak on behalf of the Professional Engineers Ontario; we're just the local chapter. However, I do believe—Alvin, maybe you can comment on this as well—that Professional Engineers is a regulating body that's growing and changing. I know in the medical industry this was something that's been of concern as well. Medical engineers are looking to get licensed in their specific designation. In the past, I think professional engineers have regulated engineers: "You're an engineer. You're not a structural engineer; you're a civil engineer. You're an engineer that focuses on that aspect."

**Mr. Jerry J. Ouellette:** Yes. With the new legislation coming forward, there will be some expertise in demand for that, and these individuals are graduating, saying, "We can provide it, but we don't have a designation by your organization. We recognize so."

**Ms. Jeanette Biemann:** Alvin, do you have anything to comment on that?

**Mr. Alvin Olar:** The guideline requirements are already set forth for an engineering profession. There's an educational component generally set as a minimum, a bachelor's degree of applied science or a bachelor's degree of engineering, and then there's a work component associated with that, four years of work experience. Sometimes there are different avenues to satisfy those requirements, but the educational requirements and the work experience requirements have to be there.

The profession now is looking at specialist designations within the profession. That's a program that is evolving, but again, they're designations within the engineering body.

**Mr. Jerry J. Ouellette:** So it will take some time to work through the system in order to find qualifications and how they're going to fulfill them.

**Mr. Alvin Olar:** They have to become an engineer first—that step first.

**The Chair (Mr. David Oraziotti):** Thank you, that's the time for your questions. Mr. Tabuns.

**Mr. Peter Tabuns:** Thank you for the presentation. It was useful information, interesting information. I want to go to this graph that you have showing production of renewable power. Can you tell me the current peak demand for power in the Sault Ste. Marie service area and how much in total megawatts is being met by renewable sources?

**Ms. Jeanette Biemann:** We did take a look at this with a number of engineers in the community. Brian Curran was here on behalf of PUC this morning and he'd be better to speak to the actual on-demand loads, but when we look at the generating capacity of the various systems—because we have hydroelectric, we have wind, we have cogeneration already installed with the other projects that are listed there—we thought if everything was working on schedule, we were pretty near self-sustaining off of renewable energy alone. We didn't want to put the numbers in because again, Brian Curran would be better to speak to what the actual, true capacities are, but we're very near self-sustaining off of our green energy alone.

**Mr. Peter Tabuns:** The impact on the engineering profession in the Soo with these green energy projects going ahead: What impact has it had?

**Ms. Jeanette Biemann:** We see it as a positive. Engineers in the community have been working on these green energy projects to date and it's brought engineering expertise to the region. Brookfield Power has been brought here and there's potential for a solar farm to be brought here. So the engineering job creation is excellent with the new green energy aspects being brought forward.

**Mr. Peter Tabuns:** Thank you.

**The Chair (Mr. David Oraziotti):** Thank you very much. That's the time for your presentation. We appreciate you coming in today.

Our next presenter: Steelworkers Essar Steel Algoma, David Pettalia? I don't think Mr. Pettalia's here.

We're going to take a recess, so I'd ask members to stay in the area. When the individual's here—

*Interjection.*

**The Chair (Mr. David Oraziotti):** Yes, it wouldn't surprise me. We're in recess until our next presenter. Thank you.

*The committee recessed from 1349 to 1352.*

#### UNITED STEELWORKERS, LOCAL 2251

**The Chair (Mr. David Oraziotti):** Okay, if we can resume the committee.

Good afternoon, Mr. Pettalia. Good to see you here today. You have 10 minutes for your presentation and five minutes for questions from committee members. Just state your name for the purposes of the recording Hansard and you can begin your presentation when you like.

**Mr. David Pettalia:** Thank you. My name is David Pettalia. I'm a union coordinator for Local 2251.

Good afternoon. On behalf of the 3,500 active members of the United Steelworkers at Essar Steel Algoma, I would like to thank you for the opportunity to address you today.

A green energy act is necessary and will benefit future generations. It is something that the steelworkers support.

There are issues that must be addressed, such as ensuring that the materials required in manufacturing of renewable green energy, such as wind etc., are supplied by Canadian manufacturers. As an example, Essar Steel Algoma has the capability to make the steel for the wind towers. Promoting the development of wind farms in the north will ensure the employment of steelworkers at Essar, reduce the numbers on layoffs and lessen the economic impact to our community. This is consistent with the objective of the ministry: "(c) advise and make recommendations on growth planning and developing and implementing growth plans in support of strong communities."

Communities in the north have been devastated by the loss of their primary industries. The development of these wind farms in these communities would benefit their local economies. One thing we have in the north is plenty of wind coming off Lake Superior; harnessing it can create and sustain jobs.

A green energy act should ensure that high-energy-consuming industries that are necessary to Ontario's economy, such as steelmaking, continue to improve their energy efficiency and reduce their emissions.

I have seen the emission improvements during my 34 years at Essar Steel Algoma. During the 1970s, the air over Sault Ste. Marie was black with particulates that were dispersed into the air. I grew up in Bayview, less than a half mile away from the coke ovens. The changes are dramatic from those days. Recently, Essar brought online the new baghouse for number 7 blast furnace to further reduce emissions. We continue to invest in improvements that will clean up our environment.

What can we do in the future? We require coke for our iron-making process. Coke oven technology is important.

There is technology out there that has coke as a by-product and electricity as a primary product.

The government is interested in taking coal-fired electrical plants out of the system. Here is an opportunity for the government and industry to work together to create an efficient energy producer and supply the steel industry with a product that they require. The new system is called the Calderon clean coke-making process. This is a closed system that has no emissions.

This is consistent with the objective of the ministry to review energy and infrastructure matters on a continuing basis with regard to both short-term and long-term goals in relation to the energy and infrastructure needs of the province of Ontario. Supporting the investment in cogeneration, as well as wind energy, can reduce our requirements from the grid, thereby freeing up energy for other users.

The Green Energy Act must ensure, as much as possible, that the jobs that exist here today in energy-intensive manufacturing are not lost. The production of our products offshore could be potentially disastrous, as the same environmental standards do not exist in other countries such as China. If this issue is not addressed in the development of the climate change regime, any policy runs a significant risk of not only costing Canadian jobs, but actually exacerbating, instead of mitigating, the problem of global warming.

Greenhouse gas emissions and the resulting climate change are a global problem. A green energy act should make sure that Ontarians are not simply off-loading their emissions and pollution to other countries which do not have strict regulations and commitments to addressing climate change. We should not be contributing to increasing the carbon footprint by shipping everything from overseas.

Steel is an energy-intensive good. At Essar Steel Algoma, our processes have some of the lowest emissions in the world. The same cannot be said of many of our competitors in other countries.

This is consistent with schedule F of the Green Energy Act:

“Reports on greenhouse gas emissions

“58.2(1) The Environmental Commissioner shall report annually to the Speaker of the assembly on the progress of activities in Ontario to reduce emissions of greenhouse gases, and the Speaker shall lay the report before the assembly as soon as reasonably possible.”

In conclusion, there are three points I would like you to consider: The Green Energy Act is good for all Canadians and should include providing jobs for workers in our communities, whether it is making the steel to go into the wind towers or developing wind farms to stimulate the economies of the north; the ministry responsible for the Green Energy Act should partner with high-energy consumer industries to develop cogeneration strategies, both renewable as well as other opportunities, to relieve the pressure on the grid—the emissionless coke oven process is one I’d encourage the government to consider; the

Green Energy Act should ensure that Ontarians are not simply off-loading their emissions to other countries.

Again, I would like to thank you for the opportunity to make this presentation.

**The Chair (Mr. David Oraziotti):** Thank you very much for your presentation. Mr. Yakabuski, questions?

**Mr. John Yakabuski:** Thank you very much, Mr. Pettalia, for joining us today. You touched on a couple of things that I’d like some clarification on.

Steel, obviously, is a very energy-intensive business. Last week, we had the Automotive Parts Manufacturers’ Association appear before the committee to talk about how we could actually reduce the amount of greenhouse gas emissions and, because of reducing the amount of electricity used, if we had made these kinds of investments into the companies that are producing goods, which we need to continue to produce if we’re going to have a successful economy—if we made those kinds of investments in making these companies more energy-efficient, would that be a better investment than billions into producing more energy, as opposed to finding ways to make the current companies more efficient and more competitive worldwide? At the end of the day, if we lose businesses here, just like you say, instead of the carbon emissions coming from companies here—which are paying as much attention as they possibly can, with the technology they have—they will actually be coming from countries that pay little attention to how much carbon they’re emitting. Could you comment on that?

1400

**Mr. David Pettalia:** The issue in regard to continual improvement of emission controls is something that we all have to address on an ongoing basis.

At Essar Algoma, I have seen many changes over the 34 years that I’ve been there. I was a utility dispatcher in my job at Algoma Steel, now Essar. We used the coke oven gases in the iron-making, blast furnace gases, and we used those in our reheating furnaces to heat our steel. So we’ve been at this for a long time. We’ve put in a water treatment plant over the years, and now we’re building a cogeneration plant as part of our process.

All these things are good things and continual improvements that are necessary to make any industry in our neck of the woods viable, because of our concerns for our health and the health of our children. Continuous improvement always has to occur.

When I read the Green Energy Act, one of the concepts in there was that the ministry was going to look at ways for longevity in the system. That’s why I bring to your attention the alternate method of making coke. Coke is a substance that is required. It’s in shortage in North America. If we decided together, industry and the government, to move ahead and produce coke in an emissionless system that would allow energy to be the product, it would help offset the energy costs as well as give us one of our necessary components for making steel. All these things are steps toward continuous improvement.

So, in answer to your question, both are necessary. The population in Canada, in Ontario, is not going to get

smaller. We're going to have to have people come in and build industries to ensure that the proper controls are put in place so that we don't import from offshore.

An example would be the lead fiasco last Christmas or the Christmas before, when we were getting components from China that had lead in them. We got rid of the lead in our system a long time ago because we knew it was damaging to our people. The government took the proper steps to ensure that it was eliminated. When we get things from Third World countries, I'm afraid that we don't have those controls anymore. It's not fairly traded steel when I have to compete by putting in all the environmental controls and China does not.

So those are examples.

**The Chair (Mr. David Oraziotti):** Thank you, Mr. Pettalia. That's the time for Mr. Yakabuski's question. Mr. Tabuns, any questions?

**Mr. Peter Tabuns:** David, thanks for the presentation—some very useful points here. Could you tell us where that emissionless coke manufacturing or producing process is commercially in use right now?

**Mr. David Pettalia:** My understanding is that Bethlehem Steel went into partnership with Calderon Energy to make a battery. In light of the short time I had to prepare, I couldn't find all that information, but I know that Bethlehem Steel was one of the partners involved in that project.

**Mr. Peter Tabuns:** Could you just tell us a bit about the cogeneration facility that's going in at Essar? What's going to be the source of the heat and—no, that's enough. What's going to be the source of the heat?

**Mr. David Pettalia:** There are going to be a couple of sources. They are going to divert blast furnace gas as well

as coke oven gas to boilers to generate steam, as well as natural gas.

**Mr. Peter Tabuns:** Okay. Thank you.

**The Chair (Mr. David Oraziotti):** Thank you, Mr. Tabuns. Ms. Broten?

**Ms. Laurel C. Broten:** Thanks very much for your presentation. I understand that the cogen facility that's currently under construction is a great example of the type of progress that can be made when progressive initiatives are undertaken by a company such as Essar. I believe I'm right that there are about 200 construction jobs right now, building that cogeneration unit. Is that right?

**Mr. David Pettalia:** I could not tell you for sure how many jobs that entails.

**Ms. Laurel C. Broten:** Okay. Well, we're seeing jobs in building a cogen unit. I understand the figures are about a 50% reduction in reliance on the provincial grid once it's up and running, so it's self-sustaining within the facility. Third, an important point for the folks you represent, steelworkers, is that it helps make your product more competitive in the marketplace because it reduces your costs.

So it seems like there's a really good model here to look at as to how we can move forward to the pathway that we all want to get to on the green energy front. I appreciate that. Thank you.

**Mr. David Pettalia:** Thank you.

**The Chair (Mr. David Oraziotti):** That's the time for presentation. Thank you very much.

Everyone, that's the presentations for today. Committee is adjourned until tomorrow at 9 a.m. in London, Ontario.

*The committee adjourned at 1406.*





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