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Jeudi 18 avril 2002

**Select committee on
alternative fuel sources**

**Comité spécial des sources
de carburants de remplacement**

Chair: Doug Galt
Clerk: Tonia Grannum

Président : Doug Galt
Greffière : Tonia Grannum

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LEGISLATIVE ASSEMBLY OF ONTARIO

**SELECT COMMITTEE ON
ALTERNATIVE FUEL SOURCES**

Thursday 18 April 2002

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

**COMITÉ SPÉCIAL DES SOURCES
DE CARBURANTS DE REMPLACEMENT**

Jeudi 18 avril 2002

The committee met at 1005 in committee room 1.

REPORTS ON CONFERENCES

The Chair (Mr Doug Galt): I call the select committee to order. Our first order of business is the report of Mr Hastings.

Mr John Hastings (Etobicoke North): I'd like to submit my report entitled *Alternative Energy Supply: Are We Losing the Renewables Race?* It's based on a symposium I attended last November, 2001, to early December, at the International Solar Energy Society in Adelaide, Australia, and that is essentially what the report is based on. In addition, I met with a number of academics at the university-community college level there and with a number of industry players in solar and wind energy. As a consequence, I submit this report for the committee.

I would also like to move a motion to have this committee approve my expenses covering the symposium beyond December 4, 2001, for the multi-level government meetings and academic briefings which I attended in the following two weeks, for which the material has already been submitted to your office, Mr Chairman. In addition, I submitted this report to your office plus all the other attending material, which probably compares with Dr Bountrogianni's or Mr Gilchrist's.

The Chair: I think we should deal with the motion, if you're putting a motion on the table at this point in time.

Mr Hastings: Yes. I have.

The Chair: It was rather long. Do you want to make it precise?

Mr Hastings: I move that the cost of attending the multi-level government meetings and academic briefings from December 4 to about December 16, while I was attending the International Solar Energy Society symposium in Australia, be covered.

The Chair: Do we need a seconder?

Clerk of the Committee (Ms Tonia Grannum): No.

The Chair: Up to December 4 has already been approved by the committee?

Mr Hastings: Yes. You approved it, and I got an advance on it.

The Chair: Comments, discussion? Those in favour? Those opposed? I declare that motion carried.

Continue with your report.

Mr Hastings: I discovered a number of factors in the Australian setting. One factor is that the Commonwealth government in Australia is playing a very activist role in the whole area of renewable energy, particularly with regard to the Australian energy efficiency act that was passed in 2000. That piece of legislation set out for the next number of years what the alternative energy policy regime ought to be and is in Australia.

For example, they have targeted that 9,500 megawatts of power must be developed from alternative energy sources by 2010. That's a significant portion of the Australian total megawatts of power that they require. It is their way of trying to reduce greenhouse emissions as a major policy matter. It's rather ironic in the sense that while the Commonwealth government and the state governments over there are doing that, the Australian government has made its intent very clear that it will not be adopting or ratifying the Kyoto agreement. It's very similar to the American policy position on this where they're going to try to create a parallel policy response on reduction of CO₂.

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What I found in Australia, in terms of renewable energy with particular emphasis on solar, is that they have developed a very sophisticated educational infrastructure. For example, they now have at one of their universities, Murdoch University in Perth, an on-line, Web-based component for education, a bachelor's and master's degree in civil engineering with a renewables component in their program.

They also have a similar education arrangement for accreditation of people who are installing photovoltaics on roofs, whether they be industrial, commercial or residential. They started to create this kind of structure in the mid-90s. They also have a number of very viable companies in the solar energy area in production of photovoltaic panels—third-generation, where you get the energy component down as you try to utilize the advantages of the renewables from the sun.

If you recall, when we were in British Columbia one of the professors there posed a very insightful question: what is the energy ratio input that you're putting into the product versus the energy output, and are they relatively equal? That is one of the issues undergoing debate in Australia.

I'll make my last remark on this: we have a similar attitude here as to whether energy from waste or energy

from wood would be considered clean air in terms of renewable energy certificates in Australia. The Australian Green Party, along with the Australian Democrats, which holds the balance of power in the Australian Senate, have said that any kind of renewable energy that's solar, wind and certain biomass is OK, but when you start chopping down old-growth forest and even using sugar cane waste, there is some debate as to whether that constitutes a renewable. You're going to see a similar debate here in that area. I think it's more acceptable from industrial and sugar cane waste. I attended a facility there where they're turning a sugar cane refinery into using alternative energy, a very interesting and agriculture-based approach that we need to look at here in Canada.

In terms of the overall policy, they're way ahead of us. They have created renewable energy certificates which require, and this committee is looking at it, that electricity providers must provide some of their electricity from green energy. They have opened up their market at the wholesale level but not at the retail level, so you've got a mixture of competition versus public enterprise there. But they're on their way. The RECs have a monetary value in the marketplace and, as you'll see in my report, they have an Office of the Renewable Energy Regulator to make sure the market is working in a fairly orderly way. It's now been going for about 14 months. So they're still emerging, but they're way ahead of us in that regard.

I know that's a federal responsibility, but I would pose the question that maybe beyond the terms of reference of the committee, things we could include in an addendum as to what Ottawa needs to be doing in this area—I know it's somewhat beyond us, but it does have a direct linkage to our policy recommendations in terms of the advancement of renewables.

Thank you very much for your time, Mr Chairman.

The Chair: Thank you for a most interesting and enlightening presentation, and congratulations on this thorough report that you've put together for us.

If I can quickly comment, I was interested in your wood waste reference, that it was from an old forest and that that wood waste was not considered renewable, but if it was from a commercial, active lumbering forest it would be considered as renewable as sugar cane. It's interesting how they have addressed what's renewable and what isn't, the old-growth forest being separated out. I can follow that.

Mr Hastings: It's an ongoing debate. The upper chamber of those two parties, the Greens and the Australian Democrats, holds the balance of power to the Liberal-National coalition in the House of Representatives, and the Australian Labour Party, which seems to generally push for what you'd call wood waste from forests, trees and waste where you have lumbering. But there, they're saying, "Uh-uh," the Australian Greens and the Australian Democrats. Even the sugar cane waste they are reluctant to accept as energy from waste because it's not a clear renewable. You'll have that debate here, I think. We've seen it to some extent with biomass, when

we consider biomass a renewable, because you are using carbon inputs. What are you emitting at the other end? It's a very purist viewpoint of dealing with renewables.

The Chair: Thank you. Questions, comments? Hearing none, we'll move right along.

Mr Hastings: Thank you very much, Mr Chairman. I certainly appreciated the opportunity to learn about a world that's quite a way from us, but in many regards we need to look at a connection, even though it's a Commonwealth country. There are a lot of things the Australians are doing in a number of areas that we could probably adapt to our own North American circumstances.

The Chair: Having seen these three reports that have come forward—and also, I believe Mr Parsons had a report earlier—I just can't help but think of what we have gained from the investment. It's too bad Richard Brennan couldn't be present to observe and see a copy of these reports. It's awfully easy to go off in the press and talk about people travelling, but they're not around to see what we have gained in benefit, information and knowledge because of people travelling. It's just a shame.

Mr Ernie Parsons (Prince Edward-Hastings): I was in Boston for a conference and I faxed some pages to Tonia. I'm wondering if I could just briefly share some of the thoughts with the committee.

The Chair: Sure. I was forgetting about your recent trip. I was thinking previously of the other one to Ottawa. But if you'd like to make some comments on that, by all means.

Mr Parsons: Yes. It was a northeastern energy group in the US that did it and they were focused primarily on buildings. There were a number of things I found very interesting. The first was a rather minor point but—part of alternative fuels, we believed in the committee, was the conservation of energy. They noted, though, that as we are making homes more energy-efficient, we're also making them larger. Since 1985, homes have increased in size by about 25%. Whereas we have achieved savings in the 15% range on energy consumption, the homes are 25% larger, so there is a net gain in energy even though the homes are more efficient. That hadn't struck me before.

A lot of the conference dealt with green schools, the concept of reducing energy costs for schools. Certainly one of their primary recommendations was some simple things such as replacing lighting. They're saying the energy-efficient lighting, if you factor just the savings to a school district, as they call them down there, the payback is too long on putting in the lower-energy-consuming lights. But if you consider the implications of less generation needed and the offsetting of producing generating plants, there can be a payback in four to five years, but it requires the state to input some money into the incentive to go to the cheaper fluorescent lighting. I believe, if I'm recalling rightly, we had a presentation on that during our consultation.

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But what I found the most interesting was that they said the greatest inefficiency in schools is heating empty

rooms. Older schools, by and large, have a thermostat for the building. They have found a great payback on the approach of a liquid that circulates through the building, with an individual heat pump in each classroom—not extracting energy from the outside air, but either extracting energy from this fluid medium or putting energy into the fluid medium. Literally, you will have a classroom in a school on the south side on a day like today that requires air conditioning, so it is drawing energy out of that classroom and putting it in. On the north side of the building, perhaps in the shade, it's requiring heat. Rather than consuming an external source of heat, you transfer the energy from one classroom to another.

A classroom with 30 students in it generates a lot of energy on its own and it becomes quite warm. So they said that your greatest potential for savings lay in individual heating and air conditioning for each room, maximized with schools that have experimented with groundwater as a supply of energy. The medium is circulated down through the groundwater and back up, with some supplementary heat required. But they felt that was the greatest potential, based on their initial cases with it.

Massachusetts has taken a stance on alternative fuels by saying development, whether it be solar cells or any other thing, requires some money. They're focusing on the production of electricity, saying it will cost some money to get these alternative products on line. People who use electricity should pay for these alternative services. So they've levied a charge of 50 cents per household per month and established what they call an energy trust. They have at this stage, I think, some \$170 million in this trust fund. So companies within Massachusetts—they must be within Massachusetts—that wish to produce photovoltaic cells can get a start-up grant or supplementary grant. It is partially looking at producing alternative sources of energy, but it is in some ways related to what John just presented. They don't want to lose the race, and so they will foster the development within Massachusetts with this seed money.

Indications were that it was extremely well received by the public. Fifty cents was seen as a trivial amount. They're now at the point where they're dispensing \$50 million to \$60 million a year to companies wishing to explore—and they're putting grants out for biomass and virtually everything. I found that interesting because it not only helped alternative energy, but it helped industrial growth within that state. It intrigued me. I think it is something we could consider, to encourage homebuilt industry.

The Chair: I think your comments on the classroom schools are intriguing. I don't know what it costs for a mini heat pump per room, but it's an interesting philosophy. We certainly see these large buildings, especially older ones, where the south side is just steaming hot and the north side, as you were saying, needs heat. Intriguing.

Mr Parsons: Yes, I thought it was a great concept.

The Chair: Other comments, questions?

Mr Hastings: Mr Parsons, did you have a chance to visit any schools that had made any of these adjustments?

Mr Parsons: No, I did not.

Mr Hastings: Did they have any models at the conference that would show how they would carry out these energy-saving devices?

Mr Parsons: I'm a little bit embarrassed to say this, but when I came back and shared with people in my community, they pointed out that Picton hospital has that system.

The Chair: How interesting.

Mr Parsons: It's had it for about four years. They have a heat pump in every room, a unit about the size of a window air conditioner located in each room, and it taps into and out of this liquid.

The Chair: What we're hearing, then, is not uncommon. Well, maybe it—

Mr Parsons: It is uncommon.

The Chair: But it's present.

Mr Parsons: The technology exists for it. It's not widely known; it's not widely used in Ontario.

Mr Hastings: Would it be possible to get the architectural plans from the Picton hospital board—

Mr Parsons: I would think so.

Mr Hastings: —or the architect that did the design of the rooms that involved those heat pumps, that we could maybe attach to our material for the committee report?

Mr Parsons: I will pursue that, yes.

Mr Hastings: My second question involves the state energy development fund, I guess, to help companies manufacture products or services.

Mr Parsons: The energy trust, yes.

Mr Hastings: How is that administered? By their industry department or whatever their equivalent is?

Mr Parsons: Yes. Now, they in a sense spun it off. They appointed a board.

Mr Hastings: OK, a separate group.

Mr Parsons: A separate group that receives applications.

Mr Hastings: What is that: 50 cents per household per year or per month?

Mr Parsons: Per month. It's 50 cents per household per month.

Mr Hastings: Do they levy a similar charge on commercial buildings?

Mr Parsons: Yes. The industrial one is larger, but it is still less than \$2 a month. They didn't go for a percentage; it's just a flat 50 cents for a house and a dollar something for—

Mr Hastings: Passed by the state legislature?

Mr Parsons: Yes. The state legislature put it in place.

Mr Steve Gilchrist (Scarborough East): I'm quite impressed at the payback they've already achieved with such an insignificant amount of money assessed to each household. I would suggest to the committee that perhaps we should add a similar recommendation at a similar price tag for a similar purpose. I'm going on the assumption that their lawyers have judged this to be something that is immune to any challenge under the WTO or NAFTA. I was not aware that you still could create those

sorts of subsidies for domestic or indigenous manufacturing, but if that's the case—

Mr Parsons: This is in its third year.

Mr Gilchrist: If that's the case, then I think—and it was one of the questions I left for Mr Richmond, just yesterday, in fairness to him: whether or not Ontario has the ability to target made-in-Ontario manufacturing and to give any kind of incentives or have an institutional bias in favour of products that are manufactured here, or at least assembled here. Subject to that review, I would strongly suggest that we have a section—in fact, we don't really have a section in here that's targeted to economic development. It's spoken to in a myriad of different ways, but we don't expressly come out and have a heading in the draft report in front of us that speaks to the economic benefits of encouraging and instituting alternative fuel policies. So at whatever point you deem appropriate, Mr Chair, as we go through what's left of the report and the recommendations, I would like to see us add an identical provision.

Mr Parsons: Yes. I was impressed. It's not preferential buying; it is funding to develop new technologies.

Mr Gilchrist: But I think, Mr Parsons, if that survives, if you can create a bias for the making, presumably you can create a bias for the buying. In any event, even half that loaf would be—in fact, it would be the half with the greatest employment benefits and therefore, in all likelihood, the highest value-added benefits for the province. So I appreciate that tidbit and I hope we can incorporate that.

Mr Hastings: To supplement what Mr Gilchrist is saying, I think my report touches on economic development potential, and if our terms of reference allow it, we should have a specific section dealing with economic stimulus for the renewables industry.

In addition, it seems to me, talking to the people in Australia, that we need—I don't see it in our terms of reference, but I don't know if we can be creative here and stretch them. You need some kind of an educational infrastructure for the development of a sustainable renewables industry, not just the maintenance and installation of PVs, as an example, or the heat pumps in the classrooms, but you need the supports: the marketing, the administration, the servicing, the sales of those products. And you need to have components in educational programs or in a program at a given institution for the industry. It has to be worked out with them in a way.

We do have industry here in Ontario, companies already in these fields, but they're just not grouped as an

association. Conserva is one of them, up in North York; they put those black sheets of metal on the sides of buildings. Actually, you can see them in Windsor, Ontario, on public housing. Those little companies create some jobs. That's what I got out of the Australian experience, significantly, the development of those supports and the growth as they go into the 21st century.

I don't know if Mr Richmond can accommodate us in that area, but I would like to see a recommendation dealing with a specific educational program—leave it up to the players as to how they develop it—in an engineering faculty or in an economics department and in the trades: electricity, because you've got the net metering issue to be dealt with; it's not that complicated, but some people do need some upgrading. We don't want that to become a barrier. “Well, that can't be done.” You know what we heard from our people at SMUD. So I would like to see a specific educational infrastructure recommendation linked to the economic development stuff in the report, if it's conceivable.

The Chair: Other comments or questions? OK. My last comment is that you might want to share your experience of your trip, education-wise with schools, with the ministry and forward it to them.

Mr Parsons: Do they listen?

The Chair: Sorry?

Mr Parsons: Nothing. That was a smart remark.

The Chair: I know in the democratic process it is frustrating at times when you forward good information and they don't see fit to use it. The ministry may be very aware of it, but it may be something we should be encouraging in school boards; or maybe the corollary to that would be to ask them to forward it to school boards for thinking as a retrofit and building new schools.

Mr Parsons: Certainly.

Mr Hastings: It seems to me, on Mr Gilchrist's point about whether Ontario could have an incentive program like Massachusetts, the question is—I don't know if you posed it—why is it that the EU and its respective member states are able to have programs and incentives that support both market-driven and some government pull-push in their respective renewables industry, and is that not subject to a WTO or EU—the old EEC—challenge as a subsidy?

The Chair: Thank you.

Let's move on to our report, which means we move in camera. Hansard will recognize the fact that we are now moving in camera.

The committee continued in closed session at 1033.

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