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Mardi 25 novembre 2014

**Standing Committee on
Estimates**

Ministry of Energy

**Comité permanent des
budgets des dépenses**

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LEGISLATIVE ASSEMBLY OF ONTARIO

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

STANDING COMMITTEE ON
ESTIMATESCOMITÉ PERMANENT DES
BUDGETS DES DÉPENSES

Tuesday 25 November 2014

Mardi 25 novembre 2014

The committee met at 0900 in room 151.

MINISTRY OF ENERGY

The Chair (Ms. Cindy Forster): Good morning, members. We're here to resume consideration of estimates of the Ministry of Energy. There are two hours and 48 minutes remaining.

But before we resume the consideration of the estimates of the Ministry of Energy, if there are any inquiries from the previous meeting that the ministry or the minister has responses to, perhaps the information can be distributed by the Clerk at the beginning in order to assist members with any further questions. Are there any items, Minister?

Hon. Bob Chiarelli: Not that I'm aware of.

The Chair (Ms. Cindy Forster): Okay. When the committee adjourned last week, the third party, Mr. Tabuns, had five minutes remaining in its 20-minute rotation, so I turn the floor over to you.

Mr. Peter Tabuns: Thank you, Chair. Good morning, Minister.

Hon. Bob Chiarelli: Good morning.

Mr. Peter Tabuns: Last week, I had asked you about the Electricity Distributors Association proposal with regard to local distribution companies and Hydro One in particular, and you referenced that the material was available on the Web. Maybe my search skills are poor, but I couldn't find it. Could we have that site or that link so that we can read their proposal?

Hon. Bob Chiarelli: I can't recall saying it was on any particular site. I had indicated that it was public, that they had released it. It was commented on in the media. I don't know. Perhaps you can clarify that, Deputy?

Mr. Serge Imbrogno: I'm not sure if they've posted it on their website, but we can talk to the EDA to provide that material—

Hon. Bob Chiarelli: I'll ask the staff before the session ends this afternoon—there was a proposal from the Electricity Distributors Association with respect to a concept of acquiring Hydro One distribution. There was also a response from the ministry, myself. If we can have those two letters made available to the committee—if we can do that. Thank you.

Mr. Peter Tabuns: I appreciate that, Minister, because when you were speaking previously, you had said that you'd received correspondence and you responded to them.

Hon. Bob Chiarelli: Yes.

Mr. Peter Tabuns: So if we could have that today, that would be great. I have to say that I haven't been able to find any detail in not the deepest Google search the world has ever seen, but you know, a few passes through and I couldn't find anything.

Hon. Bob Chiarelli: Yes, okay.

Mr. Peter Tabuns: So that would help tremendously.

Then the other question—where I left off last week, and the Chair correctly said, “You're out of time”—the OEB and the Energy East pipeline: Did you make a request to the OEB or give them a direction to examine the Energy East pipeline and its implications for Ontario?

Hon. Bob Chiarelli: Yes. As minister, I used a section of the Ontario Energy Board Act, which is similar to the process of a federal or provincial government doing a reference to the Supreme Court. Well, this is like a reference. We basically directed them under a section of the Ontario Energy Board Act to do public consultations with respect to the Energy East process. They actually undertook to do that and they had very, very significant consultations province-wide. Now that the application has actually been filed, they're going to open it up again so that people can respond to the specifics of the application that are there.

It was very broadly participated in across the province. They are basically going to provide a report to the ministry which will inform our intervention at the National Energy Board hearing. As you're aware, this is a federal area of responsibility, and the status of Ontario, Quebec or any other province is simply that we can make interventions. We can be a presenter at the actual hearing. We can present written documents and we have an opportunity to participate in the hearing. We have no decision-making process at all in that.

Mr. Peter Tabuns: And you recognize that the National Energy Board isn't charged with actually looking at the environmental implications of any particular project? Much of that power has been stripped away by the federal government in the last few years.

Hon. Bob Chiarelli: We are being very attentive to all of the submissions that we have received from our stakeholders. They're across the whole sector: environmental, labour, First Nations etc. And—

Mr. Peter Tabuns: No, I accept that, but—

The Chair (Ms. Cindy Forster): One minute.

Hon. Bob Chiarelli: You may be aware that there was a joint cabinet meeting—

Mr. Peter Tabuns: No, I'm well aware of that.

Hon. Bob Chiarelli: —and joint statements were made by the two Premiers that—

Mr. Peter Tabuns: And you're aware the NEB doesn't look at the environmental implications of it?

Hon. Bob Chiarelli: Climate change will be taken into account in our engagement.

Mr. Peter Tabuns: And will the NEB do that?

Hon. Bob Chiarelli: Sorry?

Mr. Peter Tabuns: Will the NEB take into account climate change implications?

Hon. Bob Chiarelli: I can't predict what they're going to do, but I can predict that they're going to try to eliminate it because that's the policy that they've created.

Mr. Peter Tabuns: Eliminate it as an issue?

Hon. Bob Chiarelli: They have created that. It's an issue now, quite frankly.

The Chair (Ms. Cindy Forster): Mr. Tabuns, you have 30 seconds to wrap up, and then we're moving on.

Mr. Peter Tabuns: I look forward to getting the information on the EDA this afternoon. Thank you.

The Chair (Ms. Cindy Forster): Thank you. Government members? Mr. Delaney.

Mr. Bob Delaney: Thank you very much, Chair. Minister, I'm going to start off this morning with a clarification question. Last Friday, at the Pickering nuclear station, while one of the reactors had been shut down for planned maintenance, there were some staff working on it when a leak of heavy water occurred when a valve was opened. Would you like to update the committee on that incident and the events arising from it?

Hon. Bob Chiarelli: Yes, we'll do that. The protocol is that OPG is required under those circumstances to notify the Canadian Nuclear Safety Commission and the local municipalities, and they have done so. But I do have with me the chief nuclear officer of Ontario Power Generation responsible for the nuclear plants, Darlington and Pickering, Paul Pasquet. He's here, and I really think it's important that he have an opportunity to explain the circumstances around that incident and the outcome. So I'd ask Paul to come forward.

Mr. Paul Pasquet: Thank you. Good morning. My name is Paul Pasquet. As indicated, I'm the chief nuclear officer for Ontario Power Generation. I'll just give you a little bit of background. I have 34 years of operating experience at both Pickering and Darlington, basically involved in operations and maintenance of that facility. It's good to have an opportunity to come and clarify what in fact transpired last week.

First off, I just want to clarify a couple of things. I'll give you a brief synopsis of what transpired and then provide a little bit of clarification so that we're clear on what transpired.

The first thing I'd like to state is that at no time were the public or the employees at risk during the course of this occurrence. The plant, in fact, is designed to be able to accommodate the occurrence that occurred on Friday. As you indicated, unit 7 was shut down. The heat transport system was cold. The reactor was in what we refer to

as a "guaranteed shutdown state," which basically means that the reactor can't operate. Specifically, the plant was in a maintenance shutdown to carry out a series of planned maintenance, and has been shut down for approximately a month and a half.

As you indicated, the operating staff basically noticed that some heavy water was being lost out of the system pipework. Now, you referred to a valve being opened. Specifically what happened was that the valve had been removed for maintenance. So, physically, they were in the process of replacing a valve and the water that came out of the system came out through that valve that had been removed for replacement. The operating staff did notice the loss of heavy water inventory. They appropriately responded. Actions were taken to isolate the leak and clean up the water.

In the course of that, the shift manager, who is the individual who's accountable for the safe operation of the unit at any given time, decided that in order to account for staff, he would call an alert. The alert was carried out, staff were accounted for, and then, subsequently, in order to get a little bit of additional support—because there happened to be a lot of activity going on that particular day at the plant—he then basically declared a station emergency. What that allows the shift manager to do is to get the full suite of resources of the station to come and support him, both in responding to this issue and also to get resources to do notifications etc. The alert was declared. People basically came to site. The leak was promptly isolated, and the water was then subsequently cleaned up.

0910

The reactor building itself is designed to accommodate water coming out of the pipework. At no time did any of that heavy water leave the reactor building. It was all contained within the reactor building, and it is, in fact, designed to do that. So, as I say, the leak was cleaned up and subsequently there was a stand-down from the emergency that was declared.

We do make a series of notifications. We notify promptly the Canadian Nuclear Safety Commission, which is the nuclear regulator. We notified the Ministry of Energy. We notified the community, the mayor, the regional chair. We notified, as part of the protocols for this particular issue, DEMO and EMO. So extensive notifications were made on the night that this occurred.

I just want to reiterate that at no time were the public or the staff at risk in response to this. In fact, the operating staff did a very good job of responding to this particular issue.

Mr. Bob Delaney: I understand that the volume of heavy water that leaked was fairly small.

Mr. Paul Pasquet: So to put it in perspective, it was on the order of about five to 10 mega-grams. The mega-gram—if you'd like to put it in perspective, for every mega-gram, it consists of about four drums. So about five mega-grams was leaked. If you multiply four times fives, it's about 20 drums worth of heavy water, which was contained. As I say, it was contained within a room with-

in the reactor building, and none of that water escaped from the reactor building.

Mr. Bob Delaney: Okay.

Hon. Bob Chiarelli: If I can ask a question: From the nuclear safety commission's point of view, what do they deem the status of this at this point?

Mr. Paul Pasquet: Thank you. In fact, the Canadian Nuclear Safety Commission has reviewed the actions that took place, and basically they were satisfied that safety was not compromised. In fact, if you go on to their website, you can actually see the comment that was made with regard to the appropriateness of the action that was taken.

Mr. Bob Delaney: Okay. I have to say that in all the years I've served on estimates, that's the first time I've ever heard a minister ask a question in estimates.

Mr. Bob Delaney: I think Ms. McGarry has—

Mr. John Yakabuski: Somebody's got to be the first.

Mr. Bob Delaney: Just for you, John. Just for you.

Hon. Bob Chiarelli: I'm happy to create a few more firsts, if I have the opportunity.

Mr. Bob Delaney: I think Ms. McGarry has a question.

The Chair (Ms. Cindy Forster): Ms. McGarry?

Mrs. Kathryn McGarry: Good morning, Minister, and thank you for the opportunity to be able to discuss these important issues for Ontarians.

Phasing out coal generation in Ontario is what I think, and what many think, is one of our government's biggest achievements. I have to say that even in my own riding, there were some who doubted that our government could actually meet the 2014 date to achieve the closure of all the coal-fired generation plants. I heard a fair bit about it going door-to-door in this past spring.

I'm very proud of that, because I think that—as a nurse, I think, and we all think, that one of the biggest benefits of closing the coal-fired generation plants was to our health care system. I think many have sort of missed the point that when you have really dirty air, it costs us all big time.

I can sort of go back through the three decades that I've been nursing and recall on smog days in the summer, where there was that yellow haze around, that the emerg departments, and indeed, then, the intensive care units and our hospital wards, were full of patients with lung health issues. Lung health issues cost our health care system a huge amount.

It's interesting that as we've been phasing these out, I've been working not only in the emerg and the intensive care unit, but concurrently held a job in home care. So I could note, in the last few summers with way fewer smog days, we had far fewer admissions, not only to the emergency department but to home care, because when a smog day would occur, we emerg nurses would say, "Oh, we're going to get that influx today," and we would. We would have patient after patient into the emerg department with shortness of breath, and some of them needed to be admitted. Some of them needed an all-day treatment in emerg before they were sent home. It wasn't just

adults. These were our children, too, with asthma and breathing issues, pneumonias. It just seemed to be that on those smog days, caused a lot because of our coal-generated plants, that would affect their health immensely. So we're looking at a \$4-billion saving in health care costs that I see already happening because of that.

When we're looking at the benefit to all of us for phasing out coal generation, some of the critics have been saying that this phase-out was only achieved with the expanded use of nuclear and gas-fired generation sources. They also claimed that Ontario's investment in renewable energy sources has not contributed to getting the province off coal.

And one other aside: I have a nurse friend who lives in Kincardine, and she can actually see the top of about three or four of the windmills in Ripley. In her area, there are quite a few who don't want the windmills nearby. But she tells them, as an emerg nurse in the Kincardine hospital, that she sees the windmills as clean energy sources that are actually keeping patients out of the emergency department. So she's very pro looking at the issue of clean air versus dirty air.

Constituents in my riding are still asking me occasionally whether it is true that the renewable energy sources have contributed to getting our province off coal or not.

Hon. Bob Chiarelli: First of all, for those who are paying attention, they would know that renewable energy is a worldwide phenomenon. Every continent and most significantly advanced economies are engaging in renewable energy—and sub-jurisdictions as well. For example, some members of the opposition might not be aware of the fact that, at this point in time, Alberta is generating more wind energy than Ontario. That's oil-and-gas country. That's oil-and-gas country, and you might ask the question, "Why are they doing it?" But you're right: This is a matter of health, and clean energy relates directly to health care and also to environmental costs.

Certainly Ontario is committed to investing in a clean, modern, and reliable electricity system that reduces greenhouse gas emissions and provides cleaner air for this and future generations of Ontarians. To date, Ontario has more than 18,500 megawatts of renewable energy on line, or announced, which includes more than 9,000 megawatts of hydroelectric capacity and more than 9,500 megawatts of solar, wind and bioenergy capacity.

In 2003, Ontario had 15 megawatts of wind capacity generated by 10 wind turbines. We now have over 2,300 megawatts of clean wind power, generated by over 1,200 wind turbines, enough power to meet the annual needs of more than 600,000 homes. In 2012, more electricity was generated using wind power than coal, for the first time ever. That makes for a cleaner, healthier Ontario.

Ontario has made significant progress in reducing greenhouse gas emissions from the energy sector through actions that include phasing out coal-fired electricity generation and shifting our energy supply to cleaner, non-emitting energy sources.

As indicated in the 2013 long-term energy plan, emissions from Ontario's electricity sector are expected

to remain at historically low levels, largely because of reduced emissions attributable to Ontario phasing out coal-fired electricity generation.

Ten years ago, Ontario relied on dirty coal for 25% of its energy, and the Conservative government of the time was dramatically increasing—they had increased it by, I think, 127% up to that point in time. Ontario is now completely coal-free, and that's like taking seven million cars off Ontario's roads. This is the single biggest climate change initiative in North America. Coal use had accounted for \$4.4 billion per year in health, financial, and environmental costs.

I'm actually going to go off my notes here, and give some personal experience that I had. First of all, when I was mayor of the city of Ottawa, I often got invited—probably two times, three times a month, I would go into grade 5 classes, who do a unit on government. And I usually have a question-and-answer period with them, and very often they're very, very informed on environmental issues. About two years ago, as the just-appointed Minister of Energy, I went into a grade 5 class in my riding and I did my usual talk and got into the Q&A. I guess they're 10- or 11-year-olds who are in grade 5. A young girl in the class asked me a question about air pollution. I answered it by asking a question, because I've been in grade 5 classes enough to know, and I've also spent about eight or nine years coaching my daughter's hockey team—and I'll connect the two dots in a minute.

0920

So I answered the question on pollution by asking a question. I said, "How many students in this class"—and I had my staff person with me and he actually counted—"have asthma and need puffers?" And eight out of 17 kids put up their hand, and a 28- or 29-year-old teacher—that I can guess—put up his hand, all suffering from asthma. That's directly related or very significantly related to the air that we breathe, and that's very, very significant.

Similarly, when I was coaching my daughter's hockey team there were always four or five young girls who needed puffers. My daughter was one of them, incidentally. She has been able to get off of them. But the incidence of children's asthma has been declining over the last four or five years very, very significantly, if you look at just the health care costs of that many students on a per capita basis in grade 5 classes across the province, in terms of medical appointments, puffers and all of that—just that one little element. So the reality is—and it has been calculated by a team of medical doctors on their own volition; they were not requested by the province—that \$4.4 billion per year in health, financial and environmental costs is attributable to coal generation in Ontario. That's on an annual basis. So it's extremely, extremely significant.

Before I use up all our time I do want to ask ADM, not DM, Rick Jennings, to come up and fill in some of the gaps that I've left out here.

The Chair (Ms. Cindy Forster): You have about three minutes left.

Hon. Bob Chiarelli: Thank you.

Mr. Rick Jennings: I think this is fairly thoroughly covered, but I'll just go over some points.

Ontario is the first jurisdiction in North America to eliminate coal as a source of electricity production. Replacing coal-fired electricity generation was, as the minister noted, the single largest climate change initiative undertaken in North America. So the reduction was about 35 megatonnes of greenhouse gas emissions. That's the equivalent of what's generated by seven million cars. It has led to a significant reduction in harmful emissions, cleaner air and a healthier environment.

The first coal-fired electricity generating station was placed into service in the 1960s in Ontario. That's the Lakeview generating station. By 2003, when the government was first putting this policy in place, Ontario was getting one quarter of our electricity from coal-fired generation. At that time Ontario had more than 7,500 megawatts of coal-fired electricity generation from five plants, including 215 megawatts at Atikokan, in northwestern Ontario; nearly 2,000 megawatts at Lambton, near Sarnia; nearly 4,000 megawatts from Nanticoke, on Lake Erie; 310 megawatts from Thunder Bay; and about 1,100 megawatts from Lakeview.

The province steadily moved forward with coal closure with the complete shutdown of Lakeview in 2005, incremental progress at Lambton and Nanticoke from 2010-11, before complete closure in 2013 and 2014 respectively. By the end of 2013, coal represented about 2% of total generation. Just this past April, the last piece of coal was burned at the Thunder Bay generating station. Ontario has successfully completed the closure of coal-fired electricity generation.

The Chair (Ms. Cindy Forster): You have one minute.

Mr. Rick Jennings: Coal-fired electricity has been replaced with a mix of refurbished nuclear, renewables and natural gas-fired generation. Following the refurbishment of two units at Bruce Power, Ontario now has about 13,000 megawatts of nuclear capacity online. Last year, nuclear generated nearly 60% of Ontario's electricity. Additionally, Ontario has over 4,200 megawatts of non-hydro renewable—that's wind, solar and bioenergy—online. That's expected to provide about seven terawatt hours, which is one billion kilowatt hours of energy, in 2014. That's about the power that a city twice the size of London would use in one year.

The 205-megawatt Atikokan Generating Station has already completed its conversion to run on biomass and has been generating electricity to the grid since September of this year. It's the largest completely biomass-fired energy generation facility in North America.

The 150-megawatt unit at Thunder Bay is being converted to run on advanced biomass. That, again, would be the largest operating on that fuel—

The Chair (Ms. Cindy Forster): Mr. Jennings, could you just wrap up?

Mr. Rick Jennings: That's it? Okay. I'd just say that those conversion projects make Ontario a leader, and that

by 2013, more than 85% of the power generated in Ontario came from emission-free sources such as water, nuclear and renewables.

The Chair (Ms. Cindy Forster): Thank you. Mr. Hillier?

Mr. Randy Hillier: Thank you very much, and thanks to the minister for being back here today. I guess now everybody in Ontario will be able to get a lump of coal as a souvenir from the Liberals for Christmas.

Mr. John Yakabuski: I get one every year.

Mr. Randy Hillier: That's right.

I want to again keep my questions brief and concise and would expect the same consideration on the answers.

Minister, I've often heard and you've often characterized Ontario's energy costs as being competitive with our neighbouring jurisdictions and our competitors. Is that a fair statement, that you'd characterize our energy costs as competitive?

Hon. Bob Chiarelli: I indicated that Ontario's energy costs, relative to other provinces, are about the average level.

Mr. Randy Hillier: About average. So "competitive" would be—

Hon. Bob Chiarelli: Yes.

Mr. Randy Hillier: If they're the average cost, or competitive, that tells me that you must have ministry staff or staff throughout the ministry who monitor and evaluate the energy costs and energy policies of our neighbouring jurisdictions. Would that be correct?

Hon. Bob Chiarelli: The National Energy Board does studies of all the provinces' comparative rates projected over 20 years. That information is readily available. Those figures, incidentally, are in my House book, and I refer to them occasionally.

Mr. Randy Hillier: Does your ministry do any independent analysis or evaluation of our neighbouring jurisdictions on their energy rates and policies?

Hon. Bob Chiarelli: I'm going to let the deputy speak to that issue in a moment. I actually prefer to use third-party information because anything that we create in terms of data and information, we kind of anticipate that you will find tainted and non-objective. So we try to do as much third-party validation of our policies as possible, and part of the third-party validation of our energy prices comes from Hydro-Québec. They do an analysis on an ongoing basis on comparative prices.

Mr. Randy Hillier: Okay. Maybe I'll hear from the deputy, then.

Hon. Bob Chiarelli: I'll refer to that to the deputy.

Mr. Serge Imbrogno: The minister is correct. We would rely on Hydro-Québec, which does a survey of provinces and states. We would base our comparative analysis on that. I think the methodology used is always subject to review and I think some would criticize us if we did that analysis. So we do like to depend on something like Hydro-Québec that is seen as independent.

Mr. Randy Hillier: Okay. I can understand why you might consider the administration not objective.

Madam Chair, can I hand out these to the committee members? These are the current rate charts for Manitoba and British Columbia. They are available on their website. I did an independent search to see what the rate charts were in Manitoba and BC.

As that's being delivered, Minister, I'll say to you that the monthly charge in Manitoba for residential electricity consumers is 7.381 cents per kilowatt hour and there is a monthly fee of \$7.28. That's the total, all-in cost in Manitoba.

In BC they have slightly higher rates of just over 10 cents a kilowatt hour but, once again, their basic service charge is \$6.83 per month.

0930

I did a little comparison with a few of my constituents. The United Church in my riding, their bill, all in, including delivery, regulatory charges, debt retirement charge and the clean energy benefit—all in—for a month was \$681.88. That was based on 3,200 kilowatt hours. If that church was in Manitoba their all-in costs would be \$243—one third less. If that church was in BC, it would be \$330—half the price.

I have another one. A gentleman who lives on Umpherson Mill Road: His bill was \$186 for the month for 838 kilowatt hours. If that house was in Manitoba, it would have been \$69.23; the same house in BC, \$91—again, one third and half the price of our competitive rates here in Ontario.

One more, on Baptist Church Sideroad, just down the road from my place: 731 kilowatt hours used in the month; \$155 was their hydro bill here. The same house in Manitoba would have been \$61, and in BC it would have been \$80.80.

Minister, maybe Hydro-Québec's evaluations are not objective; maybe they're tainted. Would you like to comment on why every one of my constituents, if they had the same house in Manitoba, would be paying a third—that's the all-in cost—of what they're paying here? If they were in BC, they would be paying half. To me, that is not competitive, and we're certainly not average.

Could you explain why your market studies, or why your evaluation of NEB's evaluation in Hydro-Québec lead you to believe that our rates are competitive or average?

Hon. Bob Chiarelli: You said the questions would be short, and you expected the answers to be short.

Mr. Randy Hillier: Well, there was a lot of data there.

Hon. Bob Chiarelli: Can I have as much time answering the question as you did asking the question?

Mr. Randy Hillier: Can you explain that?

Hon. Bob Chiarelli: First of all, let's deal with Manitoba. If you look at any of our comparables, or even Quebec's comparables, it will show Manitoba as significantly less expensive than Ontario and also significantly less expensive than all of the other provinces, except maybe Quebec. That's because they have almost 100% hydroelectricity.

We've always acknowledged that when we talk about comparative prices—

Mr. Randy Hillier: Minister, what I was getting at here is the regulatory charges, the debt retirement charge and the delivery charges. Our energy rates are competitive, or they are average, but what has been failed to be communicated to the people in this province is all the additional charges that you do not take into consideration.

Our basic energy costs—as I just said to you, in BC it's 10 cents per kilowatt hour, in Manitoba it's 7 cents per kilowatt hour, so those rates, by and large—Manitoba is cheaper, BC is closer to us, but still their all-in price in BC is half of what it is here because they don't have the delivery charge, they don't have the debt retirement charge, they don't have the regulatory charge; they have one very small service fee each and every month.

Hon. Bob Chiarelli: The comparables that we use are all-in: whatever the total charges are on the bill compared to whatever the total charges on the bill. You compare bottom line to bottom line. When you compare bottom line to bottom line, Manitoba is the lowest or second-lowest in Canada. We recognize that. Quebec is roughly in the same ballpark. All the others are very varied. You talk about the price per kilowatt hour in BC being 10-point-something; the kilowatt hour in Ontario is 12.4—

Mr. Randy Hillier: That's at peak rate?

Hon. Bob Chiarelli: No, their average rate. They average them out, okay?

Mr. Randy Hillier: Yes, okay.

Hon. Bob Chiarelli: If you look at Alberta, it's 14.36 cents, and Ontario is 12.44 cents.

Mr. Randy Hillier: But what we have that they don't have—

Hon. Bob Chiarelli: If you look at Saskatchewan, it's 13.15 cents—

Mr. Randy Hillier: But, Minister, what I'm getting at is the delivery charges—

Hon. Bob Chiarelli: —and Prince Edward Island is 14.87 cents, and Nova Scotia is 15.45 cents. At the end of the day—

Mr. Randy Hillier: Listen, the all-in price is twice as much here as it is in BC. That's what the numbers show: the all-in price. I've just given you a number of examples. I've got thousands more in the office.

Here's this one bill, for Jacques Rubacha. His electricity charges for the month: \$75.64. All other charges: \$96.61 for the month, Minister. That's the all-in price. That's what you've been failing to communicate to the people of Ontario. Is that not correct?

Hon. Bob Chiarelli: No, it's not correct.

Mr. Randy Hillier: It's not correct? You've been—

Hon. Bob Chiarelli: First of all, you had the courtesy to give us these two sheets for current electricity rates in Manitoba and current electricity rates in BC. Then you go to specific examples of specific bills, and you use a series of churches in your riding as examples.

Mr. Randy Hillier: No, one church; two other residents. One of the residents was on—

Hon. Bob Chiarelli: I thought you used several churches that you mentioned.

Mr. Randy Hillier: No, no. It was on the Baptist Church Sideroad; it was a residence.

Hon. Bob Chiarelli: Oh, I see.

Mr. Randy Hillier: They're just some small residences.

Hon. Bob Chiarelli: You didn't tell us what months they were, whether they were in the middle of winter this year or whether they were in the summertime—

Mr. Randy Hillier: It doesn't make any difference, Minister—

Hon. Bob Chiarelli: It makes a lot of difference. It makes a lot of difference, how much—

Mr. Randy Hillier: When you're comparing it to Manitoba or BC?

Hon. Bob Chiarelli: No, what their bill is, actually.

Mr. Randy Hillier: Of course, what their bill is—

Hon. Bob Chiarelli: No, but you used—

Mr. Randy Hillier: —but I'm just saying, if that house was in Manitoba or BC, it doesn't matter what time of year.

Hon. Bob Chiarelli: You were using in the example—

Mr. Randy Hillier: Don't throw red herrings in there.

Hon. Bob Chiarelli: I won't shout, but you can shout if you want.

When you were referring to a number of the bills, you were referring to the total amount at the bottom of the bill.

Mr. Randy Hillier: Yes.

Hon. Bob Chiarelli: I don't know what month that total bill was incurred in—

Mr. Randy Hillier: It makes no difference.

Hon. Bob Chiarelli: It makes a lot of difference.

Mr. Randy Hillier: Not when you're comparing it to another province, Minister. Whatever time of year it is, I'm saying to you, because Manitoba and BC don't have the delivery charges and don't have the debt retirement charges—they don't have the clean energy benefit as well, and I'm including that in there—the bill in BC is half the price, regardless of the time of year, and the bill in Manitoba is a third of the price, regardless of the time of year, because they don't have those additional charges.

It certainly appears, to me, less than forthright. When you say that our prices and our energy policies are average or competitive, that's not being genuine. It's not being completely forthright when the evidence shows very clearly—if you took off the delivery charges and all those other charges, yes, we would have an average price here in this province.

Are all these other charges, Minister, just the way for you to skirt, and confuse the population of this province with this characterization that our energy policies are average?

Hon. Bob Chiarelli: What I'm going to say, I know I will not be able to finish, because you will interrupt me, but I'm going to try, okay?

Mr. Randy Hillier: Try.

Hon. Bob Chiarelli: All right, I'll try. When we took over government in 2003, there was a significant deficit

of electricity generation. We were importing a billion dollars a year of expensive electricity—

Mr. Randy Hillier: Today.

Hon. Bob Chiarelli: No, you said you weren't going to interrupt me.

Mr. Randy Hillier: Today. Today.

Hon. Bob Chiarelli: You said you weren't going to interrupt me. Please let me finish.

It was an unreliable system. Your government was putting generators on the streets of Toronto to try to avoid brownouts and blackouts in the city of Toronto.

We lost the equivalent generation, under your administration, of Niagara running dry. So we had to go from a deficit to a surplus, or an adequate reserve, to manage the system. We had to build a lot of new generation. The new generation—

Mr. Randy Hillier: Could you not do that honestly, though, and tell people?

Hon. Bob Chiarelli: The new generation that we had to build was expanding Niagara, expanding the Lower Mattagami dam. It was building 20 gas plants. It was doing renewables—

Mr. Randy Hillier: Don't forget the windmills.

0940

Hon. Bob Chiarelli: At the same time, we were getting rid of cheap, dirty coal. That put a lot of pressure on prices. We agree with you—

Mr. Randy Hillier: So is that where the delivery charges—

Hon. Bob Chiarelli: We agree with you. To get a clean, reliable system, we had to invest significantly: \$30 billion into the system. That goes on the rate base. We did a number of mitigating factors—and if you would just be patient for just one minute more—the Ontario Clean Energy Benefit; the Ontario Energy and Property Tax Credit saves qualifying individuals up to \$963 per year, with a maximum of \$1,097 for qualifying seniors; the Low-Income Energy Assistance Program; the saveONenergy Home Assistance Program; the Northern Ontario Energy Credit helps families and individuals in northern Ontario by providing tax credits for low- to middle-income families and individuals living in northern Ontario. For a family, including single parents, that amounts to \$214 per year.

Mr. Randy Hillier: So let me—

Hon. Bob Chiarelli: We did—

Mr. Randy Hillier: I get it, so—

Hon. Bob Chiarelli: We did a lot of mitigating programs, including on the business and industrial sector, in a very, very significant way, to make us competitive.

Mr. Randy Hillier: Minister, let me first say that on the business side, I can give you many, many examples, and you know that to be true. With the global adjustment, our energy policies have been onerous and very, very difficult for our businesses to manage in this province, and that's why so many of them have indeed left.

But you're suggesting to me that all these other charges are as a result of you and your government having to build more capacity into the system, where we

know we are using less power in this province now than we were when you came into office. We are using substantially less power. Our demand for power is less, so that doesn't square. That's a fact: We're using less power.

Whether you want to call it as a result of your conservation policies or whether you want to call it the result of a failed energy policy that has driven manufacturers out of this province, my question to you is, why can't you tell the people of this province honestly that they're paying a lot more every month? You may be giving some crumbs to some people with your northern Ontario benefit and other different tax breaks, but you have very significant and distributed pain throughout Ontario and a few people getting some gains out of this.

Why aren't you being truthful with people and doing your own studies of our all-in costs and being forthright with the people of Ontario?

Hon. Bob Chiarelli: Before I turn it over to the deputy, I just want to give you one simple example. Detour Gold says that the IEI program, which they are participating in, is saving \$20 million this year for them while they expand what will be one of the largest gold mines in Canada.

If you want to go to Whitby, Atlantic Packaging—they're creating 80 jobs. They're getting the marginal cost of expansion at 50% of the regular rate. In Pembroke, the MDF paperboard plant is creating 140 new jobs by reopening the paperboard plant, and again, they're getting the energy to run the plant at 50% of the cost. That's in the community represented by your neighbour sitting immediately to your left.

But I want the deputy—

Mr. Randy Hillier: And the church is paying for it.

Hon. Bob Chiarelli: In terms of transparency, I would like the deputy to refer to the long-term energy plan, and the long-term energy plan shows projected very significant increases. Okay?

Mr. Randy Hillier: Mm-hmm.

Hon. Bob Chiarelli: And it shows them levelling off as a result of what we're doing now.

Mr. Randy Hillier: But you are not showing the delivery charge to rate schedules or the regulatory charges. Where else are you burying those costs?

The Chair (Ms. Cindy Forster): Mr. Hillier, you have two minutes left in your rotation.

Mr. Randy Hillier: And really, as you talk about Detour Gold, I can also talk about Xstrata leaving this province, but what we do know: All those little crumbs that you give out to your friends, the United Church is paying for it; the people on Anglican Church Road are paying for it; the people on Umpherson Mill Road are paying for it. They're paying, each and every month, these inflated rates so a few people can get a benefit. Is that not correct? I'll let the deputy minister speak.

Mr. Serge Imbrogno: Just in terms of the long-term energy plan, so—

The Chair (Ms. Cindy Forster): Deputy, you have one minute.

Mr. Serge Imbrogno: Thank you. In terms of the long-term energy plan, figures 7 and 8 provide the all-in costs for both residential and industrial customers going forward over the plan. We tried to be very explicit about what the all-in cost of the plan is for residential and industrial customers. That would include the commodity, the distribution/transmission. All the costs are built in.

When you're comparing Ontario to other jurisdictions, in Ontario's bill we tend to break out in more detail what all the charges are. Other jurisdictions can group them. I think it's important to make sure that when you unbundle the other bill, you take into account that they may have, for example, charges for debt that are built into the commodity cost, whereas in Ontario we've broken that out. It's important to look at methodology when you're comparing across—

Mr. Randy Hillier: Come on, now.

Mr. Serge Imbrogno: No, I'm—

Mr. Randy Hillier: There's the all-in price in BC and Manitoba. Whether they have debt charges built into that cost, who cares? They're still half the price.

Mr. Serge Imbrogno: That's what the comparison is when we're saying, when you look at the Hydro-Québec study, it would look at the all-in price. That's why we are agreeing that you have to compare—

Mr. Randy Hillier: You know what? Maybe I'll ask this.

The Chair (Ms. Cindy Forster): Mr. Hillier, your rotation is over.

Mr. Randy Hillier: Could we have this study that you've—

The Chair (Ms. Cindy Forster): Mr. Hillier, your rotation is over.

Mr. Tabuns, you're on for 20 minutes.

Mr. Peter Tabuns: Thank you, Chair. I appreciate that.

Minister, could we have the operating officer from OPG back? I have some further questions.

Hon. Bob Chiarelli: Just to be clear, and I don't know if one of my members wants to deal with the issue too, I understand OPG is scheduled to come before estimates. If they're strictly OPG-related questions, we're probably not going to answer them here and would defer them to OPG coming here. They're up next, so—

Mr. Peter Tabuns: Well, I did sort of notice when it was the Liberal turn that OPG was brought forward; questions were asked. You opened this particular envelope. I'm just suggesting that we have the same rights as any other party to ask questions.

Hon. Bob Chiarelli: Okay. He will come up.

Mr. Peter Tabuns: He'll come up? That's great.

Welcome back. I appreciate you coming this morning and I appreciate you giving the information you gave earlier. I'm not familiar with all the elements that we're dealing with here.

A mega-gram is a metric tonne: Is that correct?

Mr. Paul Pasquet: A metric tonne.

Mr. Peter Tabuns: Okay. So there are five to 10 tonnes of heavy water that leaked out. Is that correct?

Mr. Paul Pasquet: It was leaked out within the containment structure of the plant.

Mr. Peter Tabuns: No, I understand that, but it leaked out of the pipes it should have been in, into the structure.

Mr. Paul Pasquet: Correct.

Mr. Peter Tabuns: How much heavy water is there in that reactor at any given time?

Mr. Paul Pasquet: There are specifically two heavy water systems. There's a moderator system and there's a heat transport system. Within the moderator system, it's about 300 mega-grams—

Mr. Peter Tabuns: So 300 tonnes.

Mr. Paul Pasquet: Three hundred tonnes. And within the heat transport system, there is, roughly speaking, another 250 to 300 metric tonnes.

Mr. Peter Tabuns: Okay. And is it standard to call a plant emergency for a leak during shutdown?

Mr. Paul Pasquet: In this particular case, because of the activity level that was going on in the facility, the shift manager made a conservative call, which basically said that he required some additional resources. By activating that particular part of the emergency plan, it allowed him to get some additional resources to support that, plus all the other activity that would have to be going on in the facility at that particular time.

Mr. Peter Tabuns: So what additional resources did he require that he got?

Mr. Paul Pasquet: Basically, it would be technical resources, some additional operating resources, some additional oversight, some additional senior management to come and basically be a second-party review of what actions were being taken.

Mr. Peter Tabuns: If I understood what you said earlier, this leak happened when a valve was removed.

Mr. Paul Pasquet: That's correct.

Mr. Peter Tabuns: That's correct. Typically, when I deal with plumbers, they isolate valves that they are going to take out. Why was this valve not isolated?

Mr. Paul Pasquet: This valve was isolated. I don't want to get into a design discussion of this particular facility, but there's a facility to drain pipework, and the pipework will all common up to a particular tank. There was a pump that started leaking to this particular collection tank, and the water basically backed up through the drainpipe into the space where the valve had been removed.

0950

Mr. Peter Tabuns: Okay. And how long did it take for that 10 tonnes to leak out?

Mr. Paul Pasquet: In the course of about an hour to two hours, in that period of time.

Mr. Peter Tabuns: Okay. So at what point in that hour to two hours was it noticed that there was a leak?

Mr. Paul Pasquet: The leak was identified very early because the operational staff have alarms that flag them to something being abnormal. They didn't know specifically what was going on. They had to then dispatch field staff to go and check what was going on in the facility, but given the type of situation, people just don't go wan-

dering into the building in that sort of situation. We need to make sure they're properly briefed. We need to make sure that they're properly protected to go into the environment that they might potentially be dealing with. So basically, those are thoughtful and considered moves when we send people into that type of environment.

Mr. Peter Tabuns: Okay. And just to go back, was this leak in the mediating fluid or in the cooling fluid?

Mr. Paul Pasquet: It's the moderator—

Mr. Peter Tabuns: Sorry. Thank you. The moderating is the lower amount, the 250?

Mr. Paul Pasquet: It's the higher one.

Mr. Peter Tabuns: It's the higher—the moderating. Okay. Thank you.

The reactor was shut down; it wasn't operating. You were doing maintenance.

Mr. Paul Pasquet: That's correct.

Mr. Peter Tabuns: How much water would have to be lost to create a substantial problem?

Mr. Paul Pasquet: Define "substantial problem."

Mr. Peter Tabuns: Where you would be getting worried about the operation of the plant and there being an accident—damage.

Mr. Paul Pasquet: Damage? In that particular configuration, you essentially could lose all of the water out of the moderator system.

Mr. Peter Tabuns: Okay. And what's the protocol for informing the authorities and the public once you've had an emergency call at a nuclear plant?

Mr. Paul Pasquet: The protocols are all procedure-based.

Mr. Peter Tabuns: Yes.

Mr. Paul Pasquet: And so basically, there is a procedure that we follow in order to make notifications and we follow that protocol.

Mr. Peter Tabuns: And at what point is the general public informed that something's going on or has gone on?

Mr. Paul Pasquet: In this particular situation, there's a protocol that the Canadian Nuclear Safety Commission mandates. Where the public is at risk, there's an immediate notification. But where the public is not at risk, then there's next-business-day notifications, and so we followed the next-business-day notification.

Mr. Peter Tabuns: And Saturday wasn't counted as a business day?

Mr. Paul Pasquet: That is correct.

Mr. Peter Tabuns: And you just operated on your own—

Mr. Paul Pasquet: We don't operate on our own. We operate to basically what we've been mandated by the Canadian Nuclear Safety Commission.

Mr. Peter Tabuns: I apologize. My question was imprecise. You followed exactly what the CNSC had told you to do?

Mr. Paul Pasquet: We followed the protocol.

Mr. Peter Tabuns: And at no point did you deviate from following that protocol?

Mr. Paul Pasquet: I know where you're leading the question, but there were substantial notifications that were made: As I indicated, the community was notified; the ministry was notified; the regional chair was notified; Emergency Management Ontario was notified; Durham emergency measures was notified. So there were substantial notifications. It's not as though we're basically keeping a secret within the facility. There were substantial notifications that were made to people outside the facility as to what was going on.

Mr. Peter Tabuns: And how did you inform the community?

Mr. Paul Pasquet: We basically tell the mayor.

Mr. Peter Tabuns: Ah. You wouldn't normally issue a media release or post a notice on your website saying, "Incident occurred. Incident taken care of."

Mr. Paul Pasquet: So there were certain notifications done internally to staff, obviously.

Mr. Peter Tabuns: Yes.

Mr. Paul Pasquet: And then there were notifications that were made Monday morning.

Mr. Peter Tabuns: To the media generally?

Mr. Paul Pasquet: Correct.

Mr. Peter Tabuns: Is there any reason you wouldn't do it on a Saturday?

Mr. Paul Pasquet: I think it's probably fair to say at this point that we followed the protocol. We've already instituted a lessons-learned review of what transpired. We will look to see if there are opportunities to improve and opportunities to change what we're doing. That's something that OPG will undertake as part of lessons learned for this particular event. But as I indicated, we did follow the protocol, and if there's an opportunity to make the protocol more fulsome, more complete, then we're more than happy to undertake that. But at this point in time, we followed the protocol that was laid out.

Mr. Peter Tabuns: I know there have been leaks in the past; things happen with any large machinery. Have you not, in the past, within 24 hours, posted this on your website or put out a media notice about it?

Mr. Paul Pasquet: Where there has been a public safety impact? Yes, we have.

Mr. Peter Tabuns: I can't remember one where anyone has said that the public has been in danger. Normally what you report is that everything's under control and there's no danger.

Mr. Paul Pasquet: I would say that we characterize it as a risk to public safety; shall we characterize it as that? In this particular case, there was no risk to public safety.

Mr. Peter Tabuns: So you normally would wait from a Friday to a Monday to let the public know?

Mr. Paul Pasquet: Correct. As I say, this is one of the things that we'll be reviewing post-follow-up to see if there's an opportunity to do something more—

Mr. Peter Tabuns: Okay. I think those are the questions I have for now. I appreciate the opportunity. I gather that since OPG will be back for estimates at a later point, I'll have a chance—

Hon. Bob Chiarelli: Is there anything in the communications with all of those municipal people, emergency people, that suggested that they could not make it public?

Mr. Paul Pasquet: No. None whatsoever.

Mr. Peter Tabuns: Thank you. I have no further questions.

So going back, a question, Minister: What's the earliest possible signing date for the Bruce nuclear deal?

Hon. Bob Chiarelli: Negotiations are going on in the normal course. In the normal course of that size transaction, there could be variations of two, three, four months, one way or the other. We take it all in the course of discussions and negotiations. I'll ask the deputy if he has anything to add to that.

Mr. Serge Imbrogno: No. There's really not a set month that we're looking to. I think the negotiations will progress and, based on that, it could be sooner or later.

Mr. Peter Tabuns: Are we expecting to see an announcement prior to Christmas on this?

Mr. Serge Imbrogno: Not that I'm aware of, no.

Mr. Peter Tabuns: Have you inquired recently of the OPA?

Mr. Serge Imbrogno: We would get progress reports on how discussions are going, but I don't have any indication that anything is tracking for Christmas or before Christmas.

Mr. Peter Tabuns: Just because you were a bit low there, you have no indication that there will be a—

Mr. Serge Imbrogno: Well, you asked if there was a signing or anything, an announcement before Christmas, and I'm saying no, not that I'm aware of.

Mr. Peter Tabuns: Okay. I'm going to switch tracks and open up some questions on Darlington. How much money will have been spent on the Darlington refurbishment at the end of this fiscal year?

Mr. Serge Imbrogno: I think we can get the number for you. I'm not sure if we track it by fiscal year. It could be by OPG's calendar year and what they've submitted to the OEB. If you give me a little time, I can just track it for you in these notes.

Mr. Peter Tabuns: If you've got it there, yes, please.

Mr. Serge Imbrogno: Sorry. I'm—

Mr. Peter Tabuns: I have a suggestion, Chair. We're going to be coming back this afternoon. If I could ask that the minister and his deputy review and be prepared to answer that question when we resume this afternoon. I have other questions.

Hon. Bob Chiarelli: Okay.

Mr. Peter Tabuns: Thank you. According to OPG's high-confidence estimate, the cost of power from the Darlington rebuild will be 8.9 cents per kilowatt hour. I just want to confirm some of the assumptions. Capital cost projected at \$12.9 billion: Is that correct?

1000

Mr. Serge Imbrogno: I think the cost is \$10 billion, but with inflation and other factors, it would be in that range. But I wasn't sure what price you said—

Mr. Peter Tabuns: Twelve point nine billion dollars.

Mr. Serge Imbrogno: Okay. But the previous number was—

Mr. Peter Tabuns: Eight point nine cents per kilowatt hour.

Mr. Serge Imbrogno: I'm not sure where you get that number.

Mr. Peter Tabuns: What figure are you using?

Mr. Serge Imbrogno: Well, I'm not sure where you got that number. We've talked about—

Mr. Peter Tabuns: I gather my researchers got it from a website connected to OPG.

Mr. Serge Imbrogno: Okay. We can try and verify that, but I haven't seen that number put out.

Mr. Peter Tabuns: Could you verify the number?

Mr. Serge Imbrogno: The 8.9? Yes.

Mr. Peter Tabuns: If there's a different number, we'd like to know it. If we've made an error in our search, we'd like to be made aware of that.

The project will be financed 100% by the government of Ontario. Is that correct?

Mr. Serge Imbrogno: Well, OPG borrows money from the Ontario Electricity Financial Corp. The financial corporation is an agency of the Ministry of Finance.

Mr. Peter Tabuns: Okay. And the rebuilt reactors will have an annual capacity factor of around 82%?

Mr. Serge Imbrogno: I'd have to get back on the exact number, but I would think it would be higher than 82%.

Mr. Peter Tabuns: Okay. I just note that these numbers are from the OEB docket number EB-2013-0321, Undertaking J14.4. If we've misread that, I would appreciate—

Mr. Serge Imbrogno: It could be a range. But we can verify that.

Mr. Peter Tabuns: If you could come back when we return and confirm or correct.

We've had experience before with refurbishments in Ontario going substantially over budget, and you've been talking about the transfer of risk in this. Can you tell us what your mechanism is for transferring risk away from the people and the ratepayers of Ontario to the builders and the contractors?

Mr. Serge Imbrogno: I think we've put in place a number of measures. I think OPG has obviously learned from its past undertakings at Pickering. It's also worked at Point Lepreau to assist New Brunswick in bringing back the Point Lepreau reactor, so they have additional experience there.

In terms of the actual contracting, OPG, to the greatest extent possible when it does contracting with third parties, would build in risk-sharing so that as much of the risk as they can can be passed on to contractors.

We've also unlapped the units. Previously, you would have started one unit refurbishment, and then, halfway through, started another unit in terms of refurbishment. What we've done is, we've said that for the first unit, we will refurbish that unit before we take another unit off-line. So we'll see the progress that OPG makes through that, and the government can make a determination

whether it's worthwhile going through with the remaining units. So I think there were a number of these measures that were built in.

Also, OPG has oversight advisers that they've hired, who report directly to the board. The ministry has an oversight adviser that has access to all of OPG's oversight information and to everything that goes to its board. So we've tried to put in place sufficient oversight up front.

And I think the other major thing that OPG has learned from past refurbishments is the importance of planning and doing all the engineering work up front. So they've put in place the mock reactor at Darlington. It's kind of one of its kind, where they'll be able to test the tools, test staff, so when they actually start the refurbishment they'll be as prepared as possible.

Mr. Peter Tabuns: If I could go back: How are the contracts structured, such that the risk is on the shoulders of contractors and not on the shoulders of the ratepayers?

Mr. Serge Imbrogno: It would be a negotiation with the contractor to say what the risk most appropriately borne by that contractor is. And in a competitive process, you would get the best price. So it is a contracting strategy. Or it could be a—not a cost-plus, but a price for a service, and then above the price the contractor would take the risk. And when you do a competitive process, you would get the best price,

The Chair (Ms. Cindy Forster): Mr. Tabuns, you have two minutes left.

Mr. Peter Tabuns: Thank you. So that I'm clear: These are not cost-plus contracts; that's correct?

Mr. Serge Imbrogno: I think you'd have to look at each of the contracts and what services they're getting. I think OPG would avoid cost-plus-type contracts.

Mr. Peter Tabuns: Are there any cost-plus contracts?

Mr. Serge Imbrogno: Not that I'm aware of. And they're in the discussion/negotiation phases with a lot of the contracts going forward.

Hon. Bob Chiarelli: The concept is, if the contractor is over budget or over time, they have to pay the costs associated with that. That's the general principle. There are some nuances in negotiations, but that's the general concept, as it was with Bruce Power. In the case of Bruce Power, they were responsible for delivering the units, and they were, what, \$2 billion over? And they had to eat it. So the cost of that overage did not come to the province.

Mr. Peter Tabuns: I understand that part of that overage did, in fact, come to the province, did it not?

Hon. Bob Chiarelli: I think there's an issue that's still in discussion or negotiation or arbitration. I'd have to verify that.

Mr. Peter Tabuns: I would appreciate verification of that for this afternoon, because I seem to understand from the Auditor General's report that, in fact, we did have to take a chunk of that.

Hon. Bob Chiarelli: The substantive portion of it was absorbed.

Mr. Peter Tabuns: Okay.

The Chair (Ms. Cindy Forster): Thank you, Mr. Tabuns. Your time is up.

Government members: Ms. Kiwala.

Ms. Sophie Kiwala: One of the central tenets of the Green Energy Act was a push for the creation of a clean energy manufacturing base in Ontario. The aim was to create a regime in which companies would be encouraged to invest in Ontario and to bring new manufacturing facilities here that would help produce the parts for clean energy projects. These new factories would create jobs, help kick-start the manufacturing sector that was struggling through the effects of the global recession at the time and also create an industry with the expertise and experience to offer exports to global markets, at a time when other governments were transitioning to clean energy as a major source of generation. The number of jobs and energy created that you've already cited here today are very encouraging.

My question to you—and this is something that came up repeatedly during the election campaign for me in Kingston and the Islands. People were very encouraged to think about the potential for the manufacturing sector in our community. When the Green Energy Act was implemented, there was a focus on creating a new energy manufacturing sector in the province. How successful has this government been in achieving this goal?

Hon. Bob Chiarelli: Thank you for the question. First of all, right off the top—I know we're short of time—we have created manufacturing facilities here to service the renewable sector. The original intention was to create an industry here that had export potential. Canadian Solar, I think, is a company that has operations in China but is also exporting to China. Siemens has started to export wind turbines to Europe; I think it was Denmark or Sweden. So the green energy strategy has attracted billions in private sector investment and has created and is still creating a new green energy industry in Ontario.

Ontario has 2,700 clean-tech firms and employs 65,000 people in the clean technology sector, generating annual revenues of more than \$8 billion. Since 2009, Ontario's feed-in tariff program has been successful at developing wind, water, solar and bio-source power. The feed-in tariff program and Ontario's clean energy policies have generated billions of dollars in investments and already created more than 42,000 jobs, generating billions in investments. More than 30 companies are currently operating or plan to build solar and wind manufacturing facilities in Ontario.

The feed-in tariff program also assists First Nation and Métis communities in participating in the energy sector, realizing economic development opportunities. Since the start of the FIT program, over 800 megawatts of aboriginal-community-led or -partnered renewable energy projects have secured FIT contracts, with participation from around 60 aboriginal communities.

Renewable energy projects have been creating new high-value jobs and providing economic benefits and opportunities to municipalities and local businesses.

Deputy, I don't know if you have any—

Mr. Serge Imbrogno: I was going to call Kaili Sermat-Harding up to give you a bit more detail on the green energy sector and the jobs created in manufacturing in Ontario.

Ms. Kaili Sermat-Harding: Good morning, and thank you very much for the opportunity to provide a little bit more information. The 2013 long-term energy plan is highly supportive of Ontario's growing renewable energy sector. It clearly lays out plans for procurement of renewables, including a commitment to make 900 megawatts of new capacity available between 2013 and 2018 through the feed-in tariff program, the microFIT programs, and also sets annual targets for the procurement of large renewable energy through the new competitive large renewable procurement process.

The province has over 3,800 megawatts of solar and wind capacity currently under development, which will require locally manufactured equipment. Since 2009, Ontario has had a strong focus on investing, modernizing and rebuilding new, cleaner power for the province, and is proud to be a North American leader in renewable energy.

As the minister mentioned, Ontario's clean energy initiatives have attracted billions of dollars in investments and helped create more than 42,000 clean energy jobs, including renewable energy jobs across Ontario. As mentioned, there are currently over 30 solar and wind manufacturers operating in Ontario, and a number of these companies also manufacture components for external markets.

As the minister mentioned, for instance, earlier this year Siemens shipped wind turbine blades manufactured at its Tillsonburg plant to supply wind projects in Sweden.

In 2013, PowerBlades Inc., a Canadian subsidiary of German wind turbine manufacturer Senvion SE, opened a plant in Welland to produce Senvion wind turbine blades for the North American market.

Canadian Solar, founded in Ontario in 2001, has two manufacturing plants in the province and is one of the world's largest solar module suppliers, with a presence in 19 jurisdictions.

In May 2014, EnerDynamic Hybrid Technologies announced that it was creating more jobs in Welland. The company designs, manufactures and installs lithium battery energy storage systems and has developed a technology that helps to merge wind turbines with solar panels to produce electricity. The company produces products to support smart energy storage systems and also manufactures polycrystalline and monocrystalline solar modules.

In October of this year, Strathcona Solar Initiatives opened a plant in Napanee to manufacture high-quality photovoltaic solar module systems for the European market. The company also has plans to open a facility in Belleville.

The Green Energy Investment Agreement also led to significant investments in Ontario, including four new renewable energy manufacturing facilities. These plants in Toronto, Tillsonburg, London and Windsor are expected to create up to 900 direct jobs through the manufacturing of wind turbines and blades and solar components.

Ontario is a world leader in clean energy technology, innovation and smart grid solutions. As a result, Ontarians are benefiting from a clean, reliable and affordable energy system. According to the Ontario Centres of Excellence, Ontario's growing cluster of energy technology entrepreneurs is developing the products that will drive the jobs of tomorrow. With support from Ontario's Smart Grid Fund, smart grid solutions will help local distribution companies integrate new, promising technologies into Ontario's electricity system that could help operators use grid assets more efficiently, including storage and electric vehicles. Technological innovation from the smart grid could also help bring clean energy to remote communities.

The Chair (Ms. Cindy Forster): Excuse me. You have one minute and then we're going to adjourn for question period.

Ms. Kaili Sermat-Harding: Okay. The Smart Grid Fund helps Ontario businesses compete with advanced technology companies from around the world and has already created more than 600 jobs and supported 11 projects developing innovative technologies. Opportunity also exists for Ontario to be a leader in combined solar storage systems.

Ontario has many elements in place that will allow its renewable energy sector to thrive for the long term, and companies in Ontario with a focus on innovation and automation are well positioned to become world-class in the commercialization of renewable energy products and services.

Ms. Sophie Kiwala: Thank you.

The Chair (Ms. Cindy Forster): Okay. We're going to recess now until this afternoon after routine proceedings.

The committee recessed from 1014 to 1555.

The Chair (Ms. Cindy Forster): Okay, we're ready to resume. The government has 12 minutes left from the 20-minute rotation. Government member: Ms. Wong.

Ms. Soo Wong: Thank you very much.

Interjections.

Ms. Soo Wong: Hey, come on. The committee has started.

Minister, I'm very pleased to be back at estimates. It's not my regular committee.

You recently had the Independent Electricity System Operator, the IESO, and the Ontario Power Authority develop a report exploring the role of interprovincial entities and electricity trading between Ontario and Quebec. Can you share with this committee what are some of the next steps with regard to the findings of this report? Is it feasible and economical in terms of importing additional power from Quebec? If you could share that information with the committee, that would be great.

Hon. Bob Chiarelli: First of all, before I start, Ontario and Quebec have been trading energy since 1926, and it's gradually been increasing. At the present time, there are interties between Ontario and Quebec that will allow for 500 megawatts to be traded in the normal operation of

our systems. We do that with each other the same as we do that with the other members of our network. There's a series of cells or networks across North America where the electricity operators who are connected to each other are legally bound to help each other out, to work together and to manage some kind of a market between themselves. We have a system where we're trading energy, working closely and planning with Manitoba, Michigan, New York, New England and Quebec. That's how the trading takes place.

Our government's long-term energy plan, over and above that 500 megawatts, has committed to pursuing clean import agreements where they're cost-effective and can benefit the system. Ontario, Quebec and Manitoba are already significant electricity trading partners, as I mentioned. The recent IESO and OPA intertie report demonstrates, firstly, the benefits that these partnerships with our neighbours are providing to Ontario in terms of providing flexibility, reliability and reducing costs.

Just some small example: If, for example, we have a major facility that has to go down for maintenance for any reason. Let's say the Niagara facility, that 700 or 800 megawatts—I forget the exact number—if that has to go down for any reason and we need to replace that for one day, two days, three days or even a week, then we rely on our neighbours or we rely on other generation facilities in Ontario to make up that slack. That applies across the whole system, the whole network of those various jurisdictions.

The report identifies opportunities to enhance the benefits of existing interties as well as the technical and cost restraints that limit the amount of power that we could import. That's a very, very important point which we'll get to in a minute or two.

Ontario currently has the capacity to import 500 megawatts from Quebec. However, significant transmission upgrades costing roughly \$2 billion would be required in order to import larger amounts from Quebec. I know that the Conservative member, Mr. Randy Hillier, would be very interested in those facts that I just outlined.

As minister, I'm working with my counterparts in Quebec and Manitoba to explore the opportunities to enhance the benefits of our existing interties, as recommended in the report. Our party has a rational energy policy that has focused on clean energy, conservation and containing costs.

While the intertie report identifies opportunities to expand our import and export agreements, technical and cost constraints mean that imports cannot reliably replace the supply of clean, safe and emissions-free energy that Ontario's nuclear plants provide. That's why our plan for clean, reliable and affordable energy includes refurbishing the nuclear reactors at Darlington and Bruce to ensure we get the most value out of our existing infrastructure.

Again, our government is committed to pursuing opportunities to expand our agreements with Quebec and Manitoba to increase the flexibility and reliability of our electricity system and reduce costs to our Ontario consumers.

First of all, I want to say that in our long-term energy plan, we state very specifically that we are going to explore more imports from Quebec and Manitoba. As a result of the long-term energy plan, the IESO did the intertie report. The intertie report indicates the status of that particular issue. We have 500 megawatts that's available now for the normal regulatory part of our system. There's no further capacity now to bring in more capacity from Quebec. There's not enough room on the interties. There's not enough transmission.

1600

We do have in our capital plan somewhere around \$300 million or \$350 million to expand the transmission in and around the city of Ottawa, which would be able to raise the capacity of importing from Quebec to about 1,000 or 1,100 megawatts, but it would cost that amount of the investment. We would have to accelerate that expenditure if we were going to do it, because it's set to move forward several years from now.

The type and the amount of electricity that we require for the long term or even medium term, what are called firm commitments for import—that means long-term contracts. The intertie report from IESO, and I would encourage every member of the committee to read that, says that it would require a minimum of \$2 billion of investment on the Ontario side to boost the transmission to handle that capacity, to move that forward. It would also require significant infrastructure investment on the Quebec side to make that happen.

In addition to that, the overriding policy in our long-term energy plan and in the intertie report is talking about economically feasible imports, which means the price has to be right. Right now, the price that the province of Quebec is getting for exporting to New York state is higher than what we can generate now in the province of Ontario. In other words, we can generate it higher than the cost of that electricity.

There's a sense out there that there will be very cheap or significantly less of a cost to the import of Quebec electricity. The intertie report says that we would have to invest, just on the Ontario side, over \$2 billion. That would have to be added to the cost. In addition to that, in our meetings with the province of Quebec, Quebec hydro said quite clearly that they want to get an economic price for their power—and there's no special deal for Ontario in terms of long-term power price. Notwithstanding that, we're still at the table with Quebec to try to see if there are ways to get long-term commitments from them at a price that's acceptable.

When asked a direct question, the president of Hydro-Québec said that they cannot guarantee a price cheaper than we can generate it now. At such time as it might be available, when they have made their investments on their side and we've made the investments on our side, it would have to be a competitive price. If they could sell it higher to the US or anywhere else, that's what they would do. So it's very, very difficult, in the short or medium term, to be able to get the price certainty that we need to make significant changes in the direction of our long-term energy plan.

Having said that, at this time—which deputy will be on this one?

Mr. Serge Imbrogno: It could be Rick. Do you want to talk about the swap agreement?

Hon. Bob Chiarelli: Oh, yes. The one thing that we did do, incidentally—first of all, if I can roll the tape back somewhat—

The Chair (Ms. Cindy Forster): You have about two minutes left.

Hon. Bob Chiarelli: Okay. We have a working group between deputies in Quebec and Ontario and three committees. One of those committees deals with energy trading. What are the other two? Sorry.

Mr. Serge Imbrogno: The other one is off-grid communities—

Hon. Bob Chiarelli: Off-grid communities—for example, the remote communities in the north—and the other one is on oil and gas, which includes the Energy East initiative. We have an ongoing working committee on the issue of interprovincial trade to look at how we can enhance medium and long term.

I don't know if Rick has any time left. Do you have 30 seconds you want to put in as a—

Interjection.

Mr. Rick Jennings: I would just say that that was all summarized—

Hon. Bob Chiarelli: Talk fast.

Mr. Rick Jennings: That was all summarized very well, and I don't really have anything else to add.

Mr. Randy Hillier: Surely you have a slogan or a sound bite that you could put in.

Mr. Rick Jennings: No, I would just—

The Chair (Ms. Cindy Forster): You have just one minute left.

Mr. Rick Jennings: As part of what the minister mentioned, the joint cabinet, there was an agreement on a 500-megawatt swap. Because Quebec is a winter peaking jurisdiction and Ontario is summer peaking, we came up with an agreement where we would provide capacity to Quebec between now and 2019, and when we need the power after 2019 in the summer, they would provide us with capacity. That's an agreement that we put in place.

Hon. Bob Chiarelli: At cost.

Mr. Randy Hillier: For five megawatts?

Mr. Serge Imbrogno: Five hundred megawatts. That's equivalent to a Portlands gas plant, that kind of capacity.

Mr. Rick Jennings: And a doubling of operating support as well.

The Chair (Ms. Cindy Forster): Okay. Thank you. We'll move to the official opposition, then. Mr. Hillier.

Mr. Randy Hillier: Minister, earlier this morning, there was a question that I asked about the study that you use for pricing, to evaluate your pricing. You said that you use the Quebec hydro study. I did ask if you could provide that study to the committee and I didn't get an answer. So I was wondering if you could answer that now.

Hon. Bob Chiarelli: I'm going to refer it to the deputy on that issue.

Mr. Serge Imbrogno: A couple of things: On the long-term energy plan, we put out several modules that give more detail on what our assumptions were in the LTEP. On the Hydro-Québec report, that's publicly available.

Mr. Randy Hillier: Okay.

Mr. Serge Imbrogno: So it's not something we'd have exclusively—

Mr. Randy Hillier: No, but maybe you could just provide the link—which one that you're using.

Mr. Serge Imbrogno: We could provide you a link, absolutely.

Mr. Randy Hillier: Okay.

Minister, I'm sure you're familiar with a statutory obligation of IESO and the MDM/R, the Meter Data Management and Repository. Of course, that is the network that transmits all the information from our meters to the IESO, then transfers that data back to the LDCs and then once again, finally, to the consumer. Minister, have there been any audits done on the complete MDM/R network?

Hon. Bob Chiarelli: I believe that the Auditor General has been working on issues related to the smart meters, which would cover the question, but I'm going to ask the deputy—

Mr. Randy Hillier: It's not financial—not the financial. I mean the data management auditing, the data management integrity.

Hon. Bob Chiarelli: I'm going to turn that over to the deputy.

Mr. Serge Imbrogno: The IESO would have hired several consultants—I think the latest one was IBM—to review the MDM/R to provide advice on the data, and also provide advice on going to forward with what improvements we could make to using the data and working with the LDCs as well.

Mr. Randy Hillier: Right. But as far as you know—

Hon. Bob Chiarelli: If I can add to that somewhat, IBM built a new data management centre in Barrie, and it is to, first of all, manage data for entities, whether they're government or large corporations. They are concentrating on three or four particular subject matters.

I had the benefit of visiting the data centre about seven or eight months ago, and it was quite impressive. They have a major initiative—and that facility, incidentally, was supported by funding from the federal government and the provincial government to initiate it. One of their data management projects is actually to mine the data from smart meters and all the different systems that we have in Ontario in order to create new applications and new efficiencies going forward.

Mr. Randy Hillier: But my question is, has there ever been an audit done on the entire system for data integrity?

Mr. Serge Imbrogno: Well, we've worked with the privacy commissioner on privacy matters, if that's what you're asking.

Mr. Randy Hillier: No. The meters are transmitting data to the IESO's MDM/R. The MDM/R then collates that data and transmits it out to the LDCs, who then collate it once again and transmit it back out in the form of a bill to the consumer. I'm just asking, has there been an audit done on the integrity of that data transmission and collection of the system?

Mr. Serge Imbrogno: I believe the IESO would have internal audits in place, systems in place. When you say "audit," we think of the Auditor General doing an audit.

Mr. Randy Hillier: Yes. This would not be a financial audit.

Mr. Serge Imbrogno: I think the IESO would ensure the integrity of the data, the integrity of the system.

Mr. Randy Hillier: Okay, so as far as you're aware—you're not aware if there is or there isn't?

1610

Mr. Serge Imbrogno: Well, I'm aware that the IESO would ensure the integrity of the system. Whether they do what you think of as an audit or they have systems in place to ensure that, that's really what the MDM/R is about.

Mr. Randy Hillier: Yes. The IESO is obligated to have that system under the statutes. I'm just wondering, under those statutes, what is the obligation to ensure the veracity and the integrity of the data?

Mr. Serge Imbrogno: Well, the function of the IESO and MDM/R is to collect that data, to do the due diligence on it, and to collect it so that it can go to the LDCs.

Mr. Randy Hillier: Okay. Well, I'm sure you're aware that the Ombudsman has been investigating many thousands of complaints on incorrect billings etc. It's been high profile; I'm sure you're aware of that. I'll let you know that I spoke with the IESO, and there is no complete auditing process for our data management system. There is none. I'm wondering: Because of this Ombudsman investigation, have you at the Ministry of Energy determined if there needs to be a better auditing process on the data in light of the tens of thousands of complaints on billings?

Mr. Serge Imbrogno: Just to clarify, the Ombudsman is looking at Hydro One.

Mr. Randy Hillier: Yes.

Mr. Serge Imbrogno: Hydro One introduced a new billing system within Hydro One. It is that billing system that's caused a lot of problems for Hydro One, and they're trying to rectify it. So I wouldn't connect that to the IESO MDM/R. I think they're two separate issues. Hydro One is working to rectify that situation.

Mr. Randy Hillier: They could very well be, but does it surprise you or does it concern you when I tell you that there is no auditing process for the complete network for the MDM/R system?

Mr. Serge Imbrogno: I'd have to talk to the IESO, just so that we're talking about the same thing in terms of a complete audit versus what they're obligated—

Mr. Randy Hillier: Well, the audit is this: If a bit or a byte of data gets transmitted from a meter into the IESO system and then it gets relayed over to an LDC, the data

that originated from the meter is the same data that ended up at the LDC. That's what an auditing process does, to make sure that the veracity of the data is indeed correct. In my speaking with the IESO, there's never been, nor is there any requirement for, an audit on the complete data transmission network for smart meters.

Mr. Serge Imbrogno: I'd have to talk to the IESO, just to give you some assurance as to what verification they do, because they're obligated to verify the data.

Mr. Randy Hillier: Well, maybe I'll just—as we know that the Ombudsman is investigating these many errors with smart meters, I'm wondering what independent actions the Ministry of Energy has undertaken to investigate, themselves, in the level of these errors. Have you taken any independent investigation—

Hon. Bob Chiarelli: The Ombudsman is looking into Hydro One's billing issues.

Mr. Randy Hillier: Yes. So you guys have not done any independent investigations on these billing errors?

Hon. Bob Chiarelli: There's no need to do an independent investigation with respect to the billing. Hydro One has already acknowledged that they put in a new system. The billing errors are not related to smart meter information; the billing errors are with respect to the IT system that Hydro One has implemented and that it's in the process of rectifying.

Mr. Randy Hillier: Maybe I'll ask this question: The MDM/R system deals with 70 LDCs throughout the province. All meters transmit to it. Are you aware of any other jurisdiction in North America or Europe that has multiple LDCs transmitting on different platforms through a network into one central system?

Mr. Serge Imbrogno: Off the top of my head, I don't know. I know there are other jurisdictions that have implemented smart meters. Whether they have 70 LDCs, I'm not sure.

Mr. Randy Hillier: Or any combination. I'm just asking because that was a statutory obligation in the legislation, and I'm just wondering what level of investigation the Ministry of Energy did to come up with that determination, that that should be included in the legislation—that there be one centralized depository for all the data.

Mr. Serge Imbrogno: I think the centralized repository is to ensure the veracity of the data. So you collect it from—

Mr. Randy Hillier: But you're not aware of any investigation into other jurisdictions with a similar depository?

Mr. Serge Imbrogno: I think we're aware that other jurisdictions are implementing smart meters. I just don't know exactly how many LDCs they have and what issues they may or may not have.

Mr. Randy Hillier: Maybe I could ask if the ministry has any of that information that they used to evaluate multiple network platforms transmitting into a central system that indicated that that was the right way to go—

Hon. Bob Chiarelli: California has smart meters and they have multiple LDCs.

Mr. Randy Hillier: I'm aware that they do not have a central, MDM/R-like repository for data, that each LDC sends out the data, collects the data and retransmits the data to their own customers, unlike what we have here in Ontario. So if there is something that the Ministry of Energy undertook to determine, that this was a good way of doing it, I think it would be good information for the committee to have, if you have any evaluation. What drove and what gave merit and justified going into this MDM/R system? Would you have that business case or that feasibility study of what determined to go to the MDM/R system?

Mr. Serge Imbrogno: I think that would have been part of the original rollout of the smart meters decision at the time. I think the reality of having 70 LDCs-plus—

Mr. Randy Hillier: But this—

Mr. Serge Imbrogno: Not all LDCs have their own—some of them share their back office functions and the billing systems. We have Hydro One, which is a large player. We have 20 large LDCs that cover 80% of the province. I think there are some unique features, but there is a concentration of consumers in 20 of the largest LDCs as well.

Mr. Randy Hillier: Let me just see if we can get to the end of this one. If the ministry has any study or evaluation that gives rise and credit and justification to include that in the legislation, the MDM/R, would you be able to provide it to the committee, if there is any evaluation?

Mr. Serge Imbrogno: We can review what was made public at the time. I know there were studies. We can look at the IESO website and provide that information to you.

Mr. Randy Hillier: Okay. Minister, on page 7 of your 2014-15 estimates, you'll notice that there's a \$1.9-million allocation for conservation initiatives. If you could explain what that's for. It's under "transfer payments" on page 7 of the 2014-15 estimates.

Hon. Bob Chiarelli: The deputy will find that in the estimates.

Mr. Serge Imbrogno: Sorry, you said page 7?

Mr. Randy Hillier: Page 7 of the 2014-15 estimates. The vote item is 2902-1.

Mr. Serge Imbrogno: I'm looking at this. You might have different—mine is just words on my page 7.

Mr. Randy Hillier: Okay.

1620

Mr. Serge Imbrogno: We can give you some of the programs that—it's on our page 67, just for the record.

Mr. Randy Hillier: Okay, page 67. I'll take a look at it. I'm curious because when you look at the 2013-14 estimates, you see the exact same line item under transfer payments, \$1.9 million, but going through the public accounts, I could not find where that money was expended. I don't have page 67 with me at the moment. Maybe if you can give me a brief summary of what that expenditure is for.

Mr. Serge Imbrogno: Yes, we can give you a sense of some of the programs that were funded through that transfer program.

Mr. Randy Hillier: Okay. So you'll provide—

Mr. Serge Imbrogno: We can give you a bit of a highlight now if you want, or we can provide it—

Mr. Randy Hillier: Sure, if you want to just—

Ms. Kaili Sermat-Harding: One of the programs that is funded by the ministry is the Municipal Energy Plan Program. That was a program that was launched in August 2013. It is designed to provide municipalities with some funding to support the development of community energy plans. The program provides a maximum of \$90,000 for about 50% of eligible costs to municipalities that are interested, as I mentioned, in developing a community energy plan. It is to support some of the activities that relate to that.

Mr. Randy Hillier: And that's for—the maximum is under \$90,000?

Ms. Kaili Sermat-Harding: It's \$90,000, yes.

Mr. Randy Hillier: In our public accounts, we don't report individual line items for payments less than \$120,000, right?

Ms. Kaili Sermat-Harding: This would be for the sum total of the—

Mr. Randy Hillier: Yes. What I'm getting at is, in public accounts, if you stroke a cheque for greater than \$120,000, you indicate what that cheque went for. If the cheque was for \$90,000, it doesn't appear in public accounts. So that \$1.9 million, you're telling me, on that municipal energy program—it's capped at \$90,000?

Ms. Kaili Sermat-Harding: Per municipality.

Mr. Randy Hillier: Per municipality. So nobody would ever see that in the public accounts, then.

Ms. Kaili Sermat-Harding: I suppose not on a per municipality basis, but as a program, it would be part of that funding.

Mr. Randy Hillier: Okay. So not quite open and transparent, but I'm going to leave it at that and turn it over to my colleague from Renfrew-Nipissing-Pembroke.

Mr. John Yakabuski: Okay. How much time do we have left, Madam Chair?

Mr. Randy Hillier: You've got three more—four more minutes.

The Chair (Ms. Cindy Forster): About three minutes.

Mr. John Yakabuski: I like Randy's clock. He says "four."

We're not going to cover much in these four minutes, but—Minister, we've heard you go on and on about community engagement and how there are changes being made that will allow—municipalities that are willing hosts will be the ones that will be host to large-scale wind developments.

I want to talk about the Great Lakes. It was our position some time ago that turbines should never be built in the Great Lakes. Prior to the 2011 election, your government issued a moratorium on wind turbines in Lake Ontario or the Great Lakes to save Brad Duguid's seat. They don't call for them in the long-term energy plan, I don't believe, but is that something that I can get you on

record today as saying, that your government will not build wind turbines in the Great Lakes, ever?

Hon. Bob Chiarelli: Our policy at this time is that we will not proceed with offshore wind projects until enough scientific evidence exists to demonstrate that any future proposals can be developed in a way that is protective of both human health and the environment, and—

Mr. John Yakabuski: You guys had pretty well the same caveat to building wind turbines on land, and we know what that got us. I'm asking for a specific commitment that you will not build offshore wind turbines in the Great Lakes.

Hon. Bob Chiarelli: Our policy at the present time is that we will not proceed with offshore wind projects until enough scientific evidence exists. So our policy is that at the present time—

Mr. John Yakabuski: So you will not commit to it.

Hon. Bob Chiarelli: —there is not enough evidence to satisfy our ministry that we should proceed with offshore wind—

Mr. John Yakabuski: Okay, so you won't commit to a permanent ban on building wind turbines offshore.

Hon. Bob Chiarelli: Yes.

Mr. John Yakabuski: I'm sorry to hear that.

On these wind turbines, most of them are under 20-year contracts, as far as I can understand, or from what the ministry has let us know. At the end of these contracts, many of these turbines are going to be inoperable or nearing the end of their life, or maybe have reached the end of their life.

Who is responsible for the dismantling, removal, decommissioning etc., and all of the costs? I have municipalities that are very, very concerned that they're going to be saddled with some of these costs. The contract is over, the developer flies the coop, and who pays the piper?

The Chair (Ms. Cindy Forster): You have 30 seconds to answer that, Minister.

Hon. Bob Chiarelli: I'll ask the deputy, and we can talk afterwards about some of these things. Go ahead.

Mr. Serge Imbrogno: I think the REA process that developers go through—

Mr. John Yakabuski: The what?

Mr. Serge Imbrogno: The REA process.

Hon. Bob Chiarelli: Environmental assessment.

Mr. Serge Imbrogno: The environmental assessment requires the developers—they're responsible for the wind turbines after the 20-year contract—

Mr. John Yakabuski: Do they put money in an escrow account ahead of time? Because if the guy is bankrupt, how do you get blood out of a stone?

The Chair (Ms. Cindy Forster): Thank you. We're going to move on to Mr. Tabuns.

Mr. Peter Tabuns: With that charming question.

Going back to some requests I made this morning: The EDA proposal for taking over parts of Hydro One's local distribution—you had said that you could provide the committee with copies of their proposal and your response to it. Can those now be tabled?

Hon. Bob Chiarelli: It's going to take a little time to answer that. First of all, you raised the issue relative to the question you asked in the previous meeting, and you said I had indicated that there was information that had been made available, and you referenced the material was—and I referenced—no. You indicated that I had said the material was available on the Web. You said, "Maybe my search skills are poor. I couldn't find it. Could we have that site or that link so that we can read their proposal?"

I said, "I can't recall saying it was on any particular site. I had indicated that it was public, that they had released it. It was commented on in the media. I don't know. Perhaps you can clarify that, Deputy?"

The deputy said, "I'm not sure if they've" ever "posted it on the website, but we can talk to the EDA to provide that material."

Today we did, after our session this morning, look into it. The facts are—I was kind of uncertain and not sure what the facts were. The facts were that the actual proposal represents a 70-page document and that the reference to it being made public was somewhat not entirely correct, because what had happened was, someone released a 70-page document to the Toronto Star, and the Toronto Star had written about it in the media. I did recall that I had written a response to that article, but I never realized that it was a 70-page document.

With respect to the deputy's comment that we can talk to the EDA to provide that material—the EDA, in the person of Teresa Sarkesian, vice-president of policy and government relations, told the ministry people who inquired today that they did not believe—or did not intend it to be a public document. However, they said that they would be very happy to meet with Mr. Tabuns and review the material with him, and certainly they would be prepared also, in that context, to release our response which we made to them. That's the status of that particular issue.

I was vague and I was trying to recall how it was put into the public purview, and that's how it proceeded to move forward.

1630

Mr. Peter Tabuns: Okay. So they haven't sat down with you and reviewed the plan with you. That's correct?

Hon. Bob Chiarelli: To be clear, we meet regularly with a number of stakeholder organizations.

Mr. Peter Tabuns: I would assume so, yes.

Hon. Bob Chiarelli: We did meet with the EDA when they explained this concept at a high level, and I said, "It's a very, very complex issue and we really can't respond to discussions," that it would be incumbent on them, if they were serious, to make a serious offer, and they purported to make a serious offer in the 70-page document which they're happy to sit down and review with you.

Mr. Peter Tabuns: And I'll get in touch with Teresa and talk to her about it.

Hon. Bob Chiarelli: Yes.

Mr. Peter Tabuns: But you don't have it in hand at this point?

Hon. Bob Chiarelli: I have never seen it. Okay? I know that they had provided it, and I was advised on the content, and I provided a response to it.

Mr. Peter Tabuns: In the context of meeting with Teresa Sarkesian of EDA, you would be pleased to share your response to her document. Is that correct?

Hon. Bob Chiarelli: Yes, yes.

Mr. Peter Tabuns: And can I just ask, Deputy: Have you ever reviewed that document yourself?

Mr. Serge Imbrogno: Well, we would have had meetings with the EDA. They would have talked about it generally. They would have shared a draft, and I don't know if that's the final product or—my sense was, they were hiring—

Hon. Bob Chiarelli: That's with the ministry, not with the minister's office.

Mr. Peter Tabuns: No, I understand.

Mr. Serge Imbrogno: Right—that they were hiring additional expertise to firm up their plan. So I'm not sure at what point—whether we had the final or a draft.

Mr. Peter Tabuns: Are you in a position to tell us what the major elements are of their proposal?

Mr. Serge Imbrogno: Well, I think we talked about it at the high level, but I think if you're going to have your meeting with them, then it would probably be better for you to hear from them directly, because it may have changed since they briefed us to where they are now.

Hon. Bob Chiarelli: The high level, I think, I gave to you last week, in that they were looking at a number of LDCs coming together collectively and basically taking over Hydro One distribution. That's it at a high level.

Mr. Peter Tabuns: Okay. I'll sit down with EDA, then.

Hon. Bob Chiarelli: Okay.

Mr. Peter Tabuns: This morning, I asked if you could tell what had been spent on Darlington refurbishment by the end of this fiscal year. Mr. Imbrogno, you were going through your pages. I asked if you would come back in the afternoon. Can you give me the number?

Mr. Serge Imbrogno: Yes. There's an update. As of July 2014, OPG posted an update, so \$1.1 billion has been spent on the definition phase of the work.

Mr. Peter Tabuns: So that's available on their website?

Mr. Serge Imbrogno: Yes. They've posted on their website an update of the Darlington refurb project. We can send you the link if that would help. But there's a lot of detail on where the project is, and it breaks it down by different components.

Mr. Peter Tabuns: Okay. That's useful.

My other question that we were touching on in the morning: The Ontario Energy Board had a submission from OPG stating that the cost of the Darlington refurb was \$12.9 billion; the project would be 100% financed by the government of Ontario; rebuilt reactors would have a capacity factor of 82%. Do you differ from them at all in your assessment?

Mr. Serge Imbrogno: We can confirm the \$10 billion in 2013 dollars. Including capitalized interest and escalation, the project would be \$12.9 billion.

Mr. Peter Tabuns: Okay.

Mr. Serge Imbrogno: In terms of the capacity factor, there are a lot of numbers, but I can refer you to the Darlington refurb business case summary submitted to the OEB on November 14, 2013, and we have page 45 of appendix C. In there, they provide a range. So the median is 88%, the upper is plus 5% and the lower is minus 5%. Those are the numbers: 88% and then plus or minus 5%.

Mr. Peter Tabuns: Thanks. It's useful to get this morning's business out of the way.

Going on, then: the question of overruns and who gets stuck with the bill.

Mr. Serge Imbrogno: We also had an update on the projected price, just because you had mentioned it.

Mr. Peter Tabuns: Yes, please.

Mr. Serge Imbrogno: In the same document, just so you have our reference, it's page 43 of 47. This is under 2.1, levelized unit energy cost. I'm just reading it. The updated analysis also includes 70% to 90% confidence that the LUEC for Darlington refurbishment will be in the range of 7.6 cents per kilowatt hour to 8.1 cents per kilowatt hour in 2013 dollars, and very high confidence that the LUEC will be less than 8.7 cents per kilowatt hour in 2013 dollars.

Mr. Peter Tabuns: If they're wrong, who picks up the tab? If their estimates are wrong, who pays the bill?

Hon. Bob Chiarelli: We addressed that this morning, somewhat, in the sense that we are building negotiated protections and risk management into the contracts between OPG and the contractors. Very significant, if not all, of any cost overruns will be borne by the contractors, moving forward.

Mr. Peter Tabuns: What do you mean by "very significant"?

Hon. Bob Chiarelli: Predominantly most of the cost, as was the case with Bruce.

Mr. Peter Tabuns: Ninety per cent?

Hon. Bob Chiarelli: I wish I could give you an answer to that right now, but those are items that are negotiated in the procurement process. There may some that are 100% and some that are 80%, so you'd have to take an average on that, and it will depend on the nature of the particular contract. I would have to have somebody here from, I guess, OPG to go into more of the detail, or perhaps the deputy can respond to that.

Mr. Serge Imbrogno: I think OPG plans to have their release quality estimate in May, where they would have done all their testing on the mock facility and would have done their negotiations with their contractors. I think at that point we'd have a better sense of the different contracts and the risk sharing with the contractors.

Hon. Bob Chiarelli: One of the biggest risk factors being managed is that I'm sure you're aware, in the long-term energy plan and, in fact, in our cabinet approval, we've indicated that if the budgets are not met within the time periods, then we've created off-ramps where we will have the option not to proceed forward. To the extent that there's any risk in the first unit that is refurbished, a significant portion of the risk will be offset by those

contract provisions, if not all of it. But certainly for the future ones, the risk will be totally managed, because we will not be proceeding.

Mr. Peter Tabuns: Let's say, for a point of argument, that the first reactor comes in, and your judgment is that the overruns were unmanageable; they were disastrous. Am I to conclude, then, that you won't proceed with two, three and four?

Hon. Bob Chiarelli: That's highly likely.

Mr. Peter Tabuns: Where would you make up the loss of power?

Hon. Bob Chiarelli: There will be contingency planning throughout this whole process, as there is right now, for example. In other words, as units come out of service for refurbishment, there is a plan with the IESO in terms of options on how that loss of temporary generation can be accommodated, and there will be longer-term options as well. There are some significant lead times, and there are significant options we can evolve.

Part of the options, actually, could go back to the question of Quebec imports. If we get to a point where they are economically viable for us, we could move in that direction. That's certainly one option that the existing committee dealing with energy trades could be dealing with on an ongoing basis.

Mr. Peter Tabuns: Are you placing options on Quebec power futures now, so that you've got a buffer just in case?

Hon. Bob Chiarelli: No, they're not in a position to provide concrete options for us.

Mr. Peter Tabuns: Are you trying to negotiate such options so that you actually have an alternative? This is a very substantial question.

Hon. Bob Chiarelli: The deputy is on the deputies' working group that is overseeing that particular committee, and I'll ask him to respond.

Mr. Peter Tabuns: That would be great.

Mr. Serge Imbrogno: We have the intertie report, which gives us a sense of what we can do now and what we need to invest in Ontario in order to expand that. Quebec has the same issues about what they have online now and what they're planning for the future. I think with our capacity swap, that's the initial discussion. We are working with them on trying to price out, if we want to do a larger, firm deal, what the parameters are around that timing cost. So I think it's something that we are developing and working on with them.

1640

As the minister said, we do have time. We update our long-term energy plan every three years; we do annual energy reporting. So we have options.

In addition to the Quebec option, we also have OPG's Lambton and Nanticoke plants that could be converted. We have non-utility generator contracts that come off, that can also be renegotiated. We have more demand-response, more conservation. So I think we have a lot of options that we keep in play—

Interjection.

Mr. Peter Tabuns: Please.

Mr. Serge Imbrogno: And then as we approach the period, we can lock those in if we need to. Quebec imports is an option that we're looking at.

Mr. Peter Tabuns: How much time do I have left?

The Chair (Ms. Cindy Forster): You have about five minutes.

Mr. Peter Tabuns: In fact, you're now actively looking for options that would allow you, if the numbers were no longer working, to abandon refurbishments two, three and four, if the first didn't go well. If you want to have a credible threat to a contractor or to a project manager, you have to be able to say, "I can leave you behind."

Mr. Serge Imbrogno: I think it's just part of our energy planning that we always look for options going forward, whether it's nuclear or whether it's other plants. So it's just part of our energy planning.

Hon. Bob Chiarelli: Part of the planning, incidentally, is the issue of clean energy. As you're aware, a significant number of gas plants we have now have emissions associated with them.

Mr. Peter Tabuns: Oh, I'm well aware.

Hon. Bob Chiarelli: Sometimes they're at 30%, 40% or 50% capacity. We can always crank those up, but compared to nuclear, you've don't have as clean a system. We have limited capacity for hydroelectric.

So for the clean element, which is very, very important to environmentalists and the public, you have renewables that you can move to; you don't have a large amount of hydroelectric you can move to; or you can move to gas.

Mr. Peter Tabuns: Minister, I appreciate the elucidation, but I want to go on to another question in my limited time.

I understand all of this concern about overruns. My understanding is that the first phase, the campus plan, was budgeted at \$552 million, and the current forecast is it's coming in at \$824 million. That was in the Burns & McDonnell and Modus Strategic Solutions report.

Why do we have such a large overrun, roughly 50% to 60%?

Hon. Bob Chiarelli: That's one element of the budget.

Mr. Peter Tabuns: No, I understand that.

Hon. Bob Chiarelli: There's a whole series of elements, and the whole series of elements puts us under budget—

Mr. Peter Tabuns: For now.

Hon. Bob Chiarelli: Perhaps you can deal with that particular item, Deputy.

Mr. Serge Imbrogno: Yes, I think those are non-core items.

Mr. Peter Tabuns: That's correct.

Mr. Serge Imbrogno: Yes. I think part of it is there were some regulatory changes that were put in place. OPG started construction under one set of scenarios, and I think the CNSC firmed up on some of the regulatory requirements, so it caused OPG to have to make some changes. I think that was part of it. But as the minister

said, the overall budget is still within that \$10-billion range.

Mr. Peter Tabuns: Yes, it isn't so much—I understand the scale of the budget according to the consultants' report. The overrun of 250 million or 300 million bucks is handled within your contingency.

But the idea that you would have—and I've gone through these hearings with previous ministers and have always been told, "We've learned our lesson about how to control costs," and the first component of this comes in at 50% to 60% over budget. Who was not watching?

Hon. Bob Chiarelli: I have to take exception to the first component of it. The project is coming in under budget. The project, at this point, is coming in under budget. There's a number of elements to the budget, and one of those elements is over budget. Others are under or at budget. When you take them all into account, they're below the amount that was supposed to be sent at that time period in the budget.

Mr. Peter Tabuns: Then I would appreciate you presenting those figures.

Hon. Bob Chiarelli: They are public. They're at the Ontario Energy Board. They're public figures.

Mr. Peter Tabuns: So why did this component go off? Why did this one go off so sharply?

Hon. Bob Chiarelli: I think the deputy just explained it.

Mr. Peter Tabuns: If you're saying that the scope was revised because of Canadian Nuclear Safety Commission requirements, why should—

Mr. Serge Imbrogno: I think that was one of the components. I think there were some performance issues with some of the contractors. I think OPG has changed contractors since. I think there's a variety of reasons for that—

Mr. Peter Tabuns: Who absorbed those overruns? Which entity?

The Chair (Ms. Cindy Forster): You have one minute left.

Mr. Peter Tabuns: Was it the contractor or the ratepayers?

Mr. Serge Imbrogno: Again, I'd have to check with OPG about how that contract was structured and what penalties were built in to the contract.

Mr. Peter Tabuns: I would appreciate it if you would make a commitment to provide that information to this committee.

Mr. Serge Imbrogno: I don't know if it's available publicly, because it's OPG contracting—

Mr. Peter Tabuns: Either we're absorbing it or the contractors are. I've just heard today that the contractors are going to be absorbing most of it, that we've protected ourselves.

Mr. Serge Imbrogno: We've asked OPG to put on their website updates on refurbishment. The last one is July 2014. It provides all the updates to go through, all the issues.

Mr. Peter Tabuns: And that will tell us who had to eat that 300 million bucks?

Mr. Serge Imbrogno: It will give you an understanding of what the issue is and how they have corrected it, moving forward.

Mr. Peter Tabuns: But will it also say whether the contractor had to absorb that, or the public?

Mr. Serge Imbrogno: I don't know if it's that explicit about how the contract was structured.

Mr. Peter Tabuns: Then—

The Chair (Ms. Cindy Forster): Thank you, Mr. Tabuns. Your time is up.

Government member: Mr. Ballard.

Mr. Chris Ballard: Thank you very much. I don't have to tell you that this is a very complex file. I've appreciated listening to the questions and listening to the answers from yourself and staff, and, just as a consumer, trying to wrap my mind around the difficulties that the government faces, your ministry faces, in ensuring that we have a solid and reliable supply of power.

I wanted to make a comment, though. This morning, when we left off, there was some talk about the closing of coal-burning plants. I just wanted to lead off with a quick comment.

I grew up in a small town about 45 minutes north of Toronto, on top of the Oak Ridges moraine. In the morning, we would look south at this yellow haze hanging over Toronto. My father, climbing into his car, would say, "I've got to go to Toronto and breathe that guck all day long. Thank heavens, it's not up here." Well, by the time I was 25 or 26, it was up to beautiful King township. In fact, we could look north and it was north of Lake Simcoe.

But since that time, a number of things have changed. First, I don't drive to Toronto. Most likely, I'm on the GO train heading south. Second, we've got rid of those coal plants.

Now I live equidistant away, on top of the Oak Ridges moraine, in Aurora, and when I look south, I do not see that yellow guck. For that, I know a lot of parents are quite thankful, because their children aren't suffering from the asthma that you've mentioned. I've talked to parents, and they've told me that. I think one of the greatest achievements is getting rid of that awful coal. That's the comment I wanted to make, that I've lived and seen that first-hand, from the awful clouds of yellow to clear blue skies over Toronto.

One area that I've been interested in for a number of years—I've had the opportunity to work with First Nations and aboriginal business development groups—not in Ontario; the Northwest Territories and the Yukon. There are some similarities between First Nation organizations, aboriginal organizations, looking for business opportunities. Oftentimes their communities are located in remote areas where it's really difficult to start a business and employ local people.

I know that the 2013 long-term energy plan—when it was being discussed, there was a lot of consultation, a lot of discussion, with aboriginal communities. Personally, I think it's absolutely critical to involve our aboriginal communities not only in meaningful consultation pro-

cesses but in processes that result in something concrete—in this case, good investment and job creation within their areas.

I'm wondering—the first question is your sense, in the government sense, of how best to involve First Nation communities in Ontario's energy sector. Can you give us your thoughts on that and what this government is doing?

1650

Hon. Bob Chiarelli: I'd be very pleased to do so, and I certainly appreciate and concur with your comments.

I'm going to deal with some of the programs and some of the numbers and statistics vis-à-vis renewable energy. We think, in terms of aboriginal participation or First Nation participation in the energy sector, almost everybody thinks in terms of renewable energy projects, but the reality is, it's much broader than renewable energy projects.

The Lower Mattagami, for example, which is a very significant expansion of a hydroelectric facility north of Cochrane, Ontario: I had the pleasure to visit that particular facility and its \$2.6-billion expansion, part of our investments to make our system reliable and from deficit to surplus. That's one of the projects. I happened to be there at the same time as one of the First Nation chiefs. He was extremely proud. I remember standing beside a railing and he was waving to one of the First Nation workers who was operating a crane at about 100 feet up in the air. He said, "We have about 500 or 600 people working on this project," First Nations, "who have been trained and are earning an income from it." That's not renewable energy in the same sense as wind and solar, which we hear a lot about. That's a tremendous investment.

The east-west tie, which is a new transmission system that is presently under way in northern Ontario: It's a very significant transmission line. One of the requirements of that particular proposal is to engage aboriginal or First Nation communities in equity participation. That's very significant. It was done on a competitive basis. We're looking forward to First Nations having equity participation in that very significant project. It's probably an \$800-million project, in that ballpark.

In total, 65 First Nation and Métis communities are involved in wind, solar and hydroelectric projects across the province. They are participating in more than 500 projects representing over 1,500 megawatts of clean energy capacity. The Aboriginal Renewable Energy Fund is helping to eliminate barriers and encourage partnerships and participation in renewable energy projects by First Nation and Métis communities. The Aboriginal Energy Partnerships Program, or AEPP, is designed to eliminate barriers to encourage partnerships in renewable energy. That's the same paragraph.

Seventy-seven proposed renewable energy projects representing 49 communities have been approved for funding under the Aboriginal Renewable Energy Fund, totalling over \$7.8 million committed. Ontario's Aboriginal Community Energy Plans, or ACEPs, are supporting First Nation and Métis communities to understand and

plan for their electricity needs and opportunities. We will continue to provide opportunities and support programs to encourage First Nation and Métis community involvement in Ontario's clean energy economy. The Aboriginal Loan Guarantee Program, or ALGP, supports First Nation and Métis communities' equity participation in renewable energy and transmission projects by providing a guarantee for up to 75% of the equity.

Our government believes our First Nation and Métis communities have an important role to play in Ontario's energy future. Really, I think the verb here is probably in the wrong tense. It makes it sound like it's in the future only: "important role to play." They are playing a very important role and will continue to play an important role in Ontario's energy future.

We have taken significant steps to encourage and facilitate aboriginal participation in the energy sector, including the Aboriginal Energy Partnerships Program, the Aboriginal Loan Guarantee Program and the Aboriginal Community Energy Plan Program. We have also provided assistance to all FIT hydroelectric project developers by extending the commercial operation deadline and reducing upfront connection costs in order to assist First Nation communities. Our government will continue to provide support for First Nation and Métis involvement in our clean energy economy.

I'm just wondering if Deputy Kaili has anything to add to that.

Mr. Serge Imbrogo: I think Michael Reid might have a few additional items to add.

Mr. Michael Reid: Thank you, Minister, and thank you for the question.

As the minister has already said, aboriginal participation in the energy sector has been a key pillar of the government's approach to energy planning over the past little while, as the province has moved to bring on new energy supply.

In terms of maybe a little bit of stage-setting for the development of a number of the programs the minister referenced: As the province was working to bring on new supply, we heard from aboriginal leaders and aboriginal communities that they were extremely interested in participating in these new renewable developments as well as transmission, as the minister has mentioned. But oftentimes these communities just didn't have the resources or the expertise to take advantage of these opportunities.

So, for quite some time the province engaged with aboriginal leaders and communities to begin to get their ideas about the sorts of tools that would help them take advantage of these opportunities. This was through the development of the Green Energy and Green Economy Act, for example—there were a lot of these discussions—as well as through the development of both the 2010 long-term energy plan and the 2013 long-term energy plan. As a result of all those conversations, there really was a suite of tools that are intended to all work together to help communities move from an initial idea to an actual equity investment in a renewable-generation or transmission project.

It's probably worth unpacking a few more of these programs, again, just to give a sense of how they all work together.

The minister has mentioned the Aboriginal Renewable Energy Fund, for example. That really was intended to help communities work through all the initial due diligence on a project, as well as the engineering and approvals work that are required to bring a project to reality, and to really help communities lead projects or become active partners with developers in these projects. For a large project, for example, up to \$500,000 per community is available to help them sort through all those types of issues.

The Aboriginal Community Energy Plan is a program that is really designed to allow a community to begin to figure out exactly what sort of opportunities are available to them and what sort of opportunities they may be interested in participating in. This particular program makes \$90,000 available to communities, with an extra \$5,000 for remote, off-grid communities to begin to do all of that planning in terms of—it might be a conservation program they're particularly interested in, or it might be a generation project. But it allows communities to really understand what best meets their own particular needs and to develop those opportunities.

The minister also mentioned the Aboriginal Loan Guarantee Program. This is a program that was developed by the Ontario Financing Authority, which is an agency of the Ministry of Finance. That program was developed largely because aboriginal communities told the province that, when it comes to investing in projects, they just don't have a lot of capital lying around. And in some cases, particularly with First Nation communities, pledging collateral just isn't possible as well, given some legislative barriers. So this loan guarantee program was created. Essentially, if a project meets the due diligence that the Ontario Financing Authority goes through, it will back a commercial loan to aboriginal communities to take an equity stake in projects.

This has been an extremely successful program. We've heard from communities that it has worked very well for them. In fact, it was launched in 2009 and its envelope has been increased twice since that launch in 2009. Right now it's a \$650-million loan guarantee program.

I'd mention the feed-in tariff program as well. When it was designed, there were a number of mechanisms that were part of that particular procurement, again designed to assist aboriginal communities participating in that particular program. So, for example, applicants that have aboriginal partners can receive what is called a price adder on the standard price for technologies. Again, a little bit like the Aboriginal Loan Guarantee Program, the rationale behind this price adder is that there are extra costs that First Nation or Métis communities incur for structural reasons that this price adder is intended to help offset and get to the table to talk with proponents to put in place partnerships. As well, as the FIT program evolved, it moved a little bit to a priority point model as

well that, again, provided the development community with some incentives to sit down with aboriginal communities and work through commercial partnerships.

1700

The minister has outlined some of the key facts and statistics, but we do think that in the energy sector the success of the suite of tools is fairly unprecedented. As the minister mentioned, it's roughly 60 communities, and that's both First Nation and Métis communities, that are involved in renewable projects across the province—about 500 projects, 1,500 megawatts. Of that, about 800 megawatts is associated with the feed-in tariff program, and there are about another 700 megawatts associated with other types of contracts and procurements, including, as the minister mentioned, the Lower Mattagami partnership with Ontario Power Generation.

In terms of the Aboriginal Renewable Energy Fund, 75 projects in 49 different communities, again, that has been money that has been, I think, incredibly effective and spread across a very, very wide range of communities.

In terms of the Aboriginal Loan Guarantee Program, I think to date a total of about \$130 million in loan guarantees have been approved by the province, and that will add about 500 megawatts of renewable capacity to the grid.

We are continuing to speak with First Nation and Métis communities about this suite of tools and are always interested in hearing ideas about how this suite of tools could be made better.

One example of this is the creation of the Aboriginal Transmission Fund. As the minister mentioned, there are aboriginal partnerships with transmission projects: the east-west tie, as well as with Hydro One and the Bruce-to-Milton line. This Aboriginal Transmission Fund, which should be launched shortly, is intended to do the same thing as we've already talked about on the generation side with transmission. So it's intended to help communities both do due diligence on projects—is it a project they want to get involved in?—to truly understand and get third-party or independent advice from what a developer may be sitting down and walking them through, and this Aboriginal Transmission Fund, say combined with something like the Aboriginal Loan Guarantee Program, we hope or expect will bring about more transmission opportunities for communities in the future.

So, again, with the suite of tools and the ongoing discussions in the future, we believe that supporting aboriginal community involvement will continue to be a part of energy development moving forward.

The Chair (Ms. Cindy Forster): You have about three minutes left.

Mr. Chris Ballard: Do I? Okay. Can I just follow up, then? I think it's heartening to hear about the work that this government is doing with aboriginal communities and business, and so much of it is focused is on capacity development. Yes, it's great that on the provincial level we get more electrical generation out of these projects, but from a First Nation perspective, we get the capacity.

We get, as the minister was alluding to, people who know how to drive a crane, and that means future employment, people who get to work in management, office administration, all of those sorts of opportunities that I suspect a lot of people living especially in remote areas wouldn't get to have. So it's very heartening to hear that we have that type of program under way.

One of the things that does concern me especially about remote First Nation communities that are off-grid is that they have to generate their electricity through dirty, expensive diesel generators. I'm wondering what we're doing to address the concern, to address the problem of connecting to the grid as many of those First Nation communities as possible.

Hon. Bob Chiarelli: There's not a lot of time, so I'll try to speak very quickly.

The OPA has a draft north-of-Dryden plan, which is about a \$2.3-billion initiative to build new transmission in the northwest part of the province. That would include significant lines such as a line to Pickle Lake to help supply the mining industry with electricity, but most importantly, the plan anticipates connecting remote First Nation communities with transmission. The OPA's analysis shows that up to 21 of 25 remote First Nation communities in northwestern Ontario are economical to connect to the provincial electricity grid, and we have been in discussions with the federal government. They will save a tremendous amount, multi-millions of dollars, by not having to supply diesel to these communities, and we're asking them to invest 50% of the savings with us to help us pay for that transmission to First Nation communities. It's a real project. It's going to happen in the foreseeable future. We're just trying to connect the dots with the federal government to make that happen. We're working very, very closely with First Nation communities.

ADM, did you want to add any comment to that?

The Chair (Ms. Cindy Forster): You have 30 seconds.

Mr. Michael Reid: I guess just a quick comment, then. As the minister has indicated, with 21 of the 25 communities, we think there's a business case to hook them up with transmission; with the other four communities, the minister has also asked the OPA to look at alternatives there to reduce diesel use, whether that's local renewables, micro grids, those types of solutions. The OPA should be providing us with an indication of what the art of the possible is in those other four communities as well, so it truly is a remote package in that in all communities, hopefully there will be a plan in place to help displace diesel usage.

Mr. Chris Ballard: Very good. Thank you.

The Chair (Ms. Cindy Forster): Official opposition: Mr. Yakabuski, you have seven minutes.

Mr. John Yakabuski: Seven minutes? Boy, we should be able to change the world in that time.

I just want to go back and pick up where I left off on the costs associated with the end of contracts and the decommissioning of wind turbines. We've heard many, many times the concerns of municipalities, and I know

Deputy Imbrogno said that's part of the contract, that the proponent is responsible for those costs. Is that written in all of the contracts, that the proponent is responsible for all of those costs?

Hon. Bob Chiarelli: I'd like to partially respond to that and then turn it over to the deputy. The non-utility generators, the NUGs, as you're aware of—these are 20-year-old contracts that were made approximately 20 years ago. There's a significant number of them that are coming to the conclusion of the 20-year contract. We proactively are negotiating with them at a reduced price of power for them to be able to continue. We have successfully negotiated etc., so it's highly likely that a significant number of the renewable projects, particularly wind, as they come to the end, would be negotiating at a lower price to give us a good deal on power.

The other issue I'm turning over to the deputy.

Mr. John Yakabuski: Okay, but I'm going to add something to it. So you're talking about contracts that are coming up for renewal now or reaching the end of their term. What about all new contracts?

Hon. Bob Chiarelli: That's what I'm saying, that 20 years from now, there is likely going to be the same policy to negotiate renewables with the generators at a lower cost.

Mr. John Yakabuski: Fair enough. But if the project is non-operational, if it has reached the end of its life, who is going to be responsible for the decommissioning and all of the costs associated with it?

Hon. Bob Chiarelli: I'm turning that over to the deputy, and I won't actually interrupt him for a third time.

Mr. Serge Imbrogno: I think the renewable energy approval process requires the developer to be responsible for that cost.

Mr. John Yakabuski: So you're clarifying that. That's good.

Now, suppose that developer is broke, is out of business. What have they done in advance to put money into an account to protect the ratepayer, or if that developer is bankrupt and out of business, does that now become our responsibility?

Mr. Serge Imbrogno: I would think that contract would still have value. I would suggest another developer, another commercial operator, would take over that contract.

Mr. John Yakabuski: They're not going to take it over if the turbines aren't working anymore, if they're dead, they're defunct. Who's going to buy junk: Sanford and Son? You got a deal with them?

Mr. Serge Imbrogno: Actually, the scrappage value of these turbines is fairly—

Mr. John Yakabuski: Yes, but there are still going to be a lot of expenses involved. Usually people take scrap for the cost of taking it down. That's not a contractor; that's not a new developer; that's a junk man taking it down.

1710

Okay, I think I get the drift here. We don't have protection if something goes sideways and these guys go out

of business. We're going to be stuck with the bill one way or another. Maybe we can negotiate with another guy and give the store away, but most likely, one way or another, the ratepayers are going to be stuck with that bill.

I want to ask a question about another: Wesleyville. I've driven by that place so many, many times. It has been mothballed since maybe 1980, maybe even 1979, I'm not sure, but going back a long, long time. It was never operational—1,500 acres of property. Why would that not have been disposed of? And if not disposed of, would that not have been a reasonable location to build the gas plant that you're building in Napanee, much closer to the needs of Oakville, which it's replacing? Don't try and answer all those questions at once.

First of all, what are you doing with these excess properties? You're trying to raise money, sell assets and get out of debt, which is more debt than all the provinces combined here in Canada, so why are you not considering a place like Wesleyville?

Mr. Serge Imbrogno: That's an OPG site. I'm not sure of the transmission capacity at that site, whether you'd have to upgrade it enough to—

Mr. John Yakabuski: OPG can be given directives; they have been in the past.

Mr. Serge Imbrogno: The government is moving on selling some of OPG's real estate assets, so its head office—

Mr. John Yakabuski: It has been there for over 40 years. It's taking a while.

Mr. Serge Imbrogno: I think OPG is always active in looking at whether it needs to maintain, keep or sell. We've also allowed OPG into large renewable procurement, so it's possible that they may have that site or other sites at OPG—

Mr. John Yakabuski: You built 20 gas plants.

Mr. Serge Imbrogno: —for putting renewables.

Mr. John Yakabuski: You're very proud of it. The minister keeps talking about it. Have you not found that there might have been a use for that site? If you're not going to sell it, there might have been a use for that property that we continue to own and pay for. There must be staff there 24/7, security or otherwise. It's an OPG site. I don't think they've just walked away from it. Where's the common sense there?

Hon. Bob Chiarelli: The OPG have raised issues of existing non-operable facilities. As the deputy has indicated, a number of them are being maintained for future potential use. You heard us talking about the fact that we are foreseeing, as units that are being refurbished come out of commission, we're going to have a lag. Part of that gap could be for additional gas plants—

Mr. John Yakabuski: There's no generational capacity at Wesleyville. They never did install the turbines. It's a shell.

The Chair (Ms. Cindy Forster): One minute—

Hon. Bob Chiarelli: No, but I'm saying that it's a site that could potentially be used. I don't know what the plan is at OPG for that particular one, but—

Mr. John Yakabuski: If it's a site that could be used, why haven't we done it now?

Hon. Bob Chiarelli: —they're certainly being encouraged at this particular point in time to update their real estate portfolio. That's in the process right now, at my request. We're dealing with those issues.

Mr. John Yakabuski: Okay. How much time?

The Chair (Ms. Cindy Forster): Thirty seconds.

Mr. John Yakabuski: Minister, this is the end of it for me. Thank you very much for your time.

Hon. Bob Chiarelli: Can I use the next 20 seconds?

Mr. Randy Hillier: No. We'll give it to the NDP.

The Chair (Ms. Cindy Forster): Mr. Tabuns.

Hon. Bob Chiarelli: What's significant here is that—

Mr. Peter Tabuns: Mr. Chiarelli, you're eating into my time, I'm afraid.

Hon. Bob Chiarelli: He interrupts you as much as he interrupts me, so that makes us both equal.

Mr. Peter Tabuns: And you're interrupting me, Minister.

Mr. John Yakabuski: I'm going to talk—

Mr. Peter Tabuns: Yak, your time is over.

Minister, can you tell us a bit about the financing of Darlington? Is there a mix of debt and equity financing? Is it entirely a debt-financed project?

Hon. Bob Chiarelli: Deputy?

Mr. Serge Imbrogno: It would be financed through the OEFC, so it would be a debt-financed project, but OPG would have, through the OEB, a debt equity return. But the financing would be through the OEFC.

Mr. Peter Tabuns: Okay. How much is debt-financed and how much is equity?

Mr. Serge Imbrogno: I think through the OEB, they're regulated 55%-45%, if I remember correctly.

Mr. Peter Tabuns: Fifty-five per cent debt, 45% equity, or the reverse?

Mr. Serge Imbrogno: I think in that order.

Mr. Peter Tabuns: Fifty-five per cent equity?

Mr. Serge Imbrogno: On average.

Mr. Peter Tabuns: What's the projected return on equity?

Mr. Serge Imbrogno: It's an OEB return. I'll get you the exact number, but it's in the 9% range.

Mr. Peter Tabuns: Okay. If you could get us the exact number, I would appreciate that.

In your assessment of going forward with Bruce and going forward with Darlington, did you look at the potential for using energy conservation to provide part of that load?

Hon. Bob Chiarelli: Energy conservation is directed towards every type of load. It reduces our requirement, and then we have options in terms of what we reduce moving forward. It might be likely that we'd want to reduce gas more than anything else because it has emissions as opposed to others.

Mr. Peter Tabuns: The OPA did a study in the first decade of this century showing that it was economically viable to provide about 23% of Ontario's demand

through energy conservation. Are you expecting to go to that 23%?

Hon. Bob Chiarelli: I think our new conservation policy that we're putting in place with the LDCs is doubling the amount of conservation that we had. Perhaps you can be more specific.

Mr. Peter Tabuns: How much of our load will then be met through conservation?

Mr. Serge Imbrogno: I'd probably just refer to the long-term energy plan. I think it's all outlined, what we think conservation would be in terms of capacity. Obviously, we work with the OPA in drafting the plan.

Mr. Peter Tabuns: Yes.

Mr. Serge Imbrogno: Just in terms of the 2013 terawatt-hour production, our estimate is that—it might not be on the same scale that you're looking at, but 5% of all our capacity in terms of production is made up of conservation in 2013.

Mr. Peter Tabuns: Did you look at ramping up to 20% of our total load through conservation?

Mr. Serge Imbrogno: We are ramping up. We're investing \$2.2 billion over the next six years in conservation.

Mr. Peter Tabuns: And that will take you to 10%?

Mr. Serge Imbrogno: I'm going to go to the end result of that, in 2032. In 2013, it was 5%; by 2032, we're projecting it to be 16% of the total—a three-fold increase.

Mr. Peter Tabuns: What's the cost of conservation, and what's the cost of refurbished nuclear power?

Mr. Serge Imbrogno: We also have a slide, page 22, of the long-term energy plan that gives a LUEC for each of the types of generation. We do have energy efficiency at the lowest cost. We would use all that economic power or conservation first, and then we have a range for refurbishment, which is between \$60 and less than the \$80-\$90 range.

Mr. Peter Tabuns: Why wouldn't we max out the conservation and reduce the need for refurbishment or building new generation?

Mr. Serge Imbrogno: I think that's how we've done our planning. We would forecast what we think our demand is without conservation and then we would include all the economic conservation first, bringing down the demand, and then we would build up our supply to meet that demand. We do all the economic conservation first and then we add supply to meet that lower demand threshold.

Mr. Peter Tabuns: So you're saying that all this economic is 16%?

Mr. Serge Imbrogno: Based on our assumptions that we use in the long-term energy plan. We've also said that if we can do more conservation that's economic, then we'll do that. We'll have demand-response—we have other initiatives going forward to ensure we get as much conservation as possible.

The Chair (Ms. Cindy Forster): Two minutes, Mr. Tabuns.

Mr. Peter Tabuns: Was it ever taken into account that there would be the potential for reducing generation by going further in conservation?

Mr. Serge Imbrogno: Absolutely. In the plan, we've called it "plan flexibility," so instead of committing resources today we've left that gap. If we get more conservation then we don't need to add those additional resources. Instead of committing resources today, we'll monitor, and when we do the next launch of an energy plan we'll be closer to decide whether we've actually done more conservation that reduces our need to add additional supply.

Mr. Peter Tabuns: Setting conservation aside for the moment, how much of a threat to your long-term energy plan is increased abandonment of the grid by different sectors? The Ontario Federation of Agriculture, for instance, wants to get off electricity as much as it possibly can. It's been calling for investment in natural gas to displace electrical demand. Other industries have left Ontario because of the price of electricity. Have you done an assessment of the threat to the stability of your pricing projections because of grid abandonment?

1720

Hon. Bob Chiarelli: You're touching on a very important point—

The Chair (Ms. Cindy Forster): You have 30 seconds, Minister.

Hon. Bob Chiarelli: —which we have taken into account, and that, basically, is flexibility. The IESO now is doing annual reporting, which will show demand, supply, load and all those issues, so that we can start adjusting. We're reviewing the long-term energy plan every three years. Because of technology, the advent of better conservation etc., we're going to stay very, very flexible.

So your question is a good point. It's going to be answered through IESO annual reporting and through the update of the long-term energy plan. We'll probably be starting the review of the long-term energy plan within 12 or 14 months from now.

The Chair (Ms. Cindy Forster): Thank you.

Hon. Bob Chiarelli: So we'll have that debate.

Mr. John Yakabuski: The government has no more questions—

The Chair (Ms. Cindy Forster): Government member, you have seven minutes. Do you have a question, Ms. Wong?

Ms. Soo Wong: Seven minutes, so I would appreciate no more interruptions from the opposition party.

Minister, this Saturday, November 29, is recognized as Shop the Neighbourhood, a program to support local businesses. This has now turned into a national program. I know it started here locally, in the city of Toronto. It's now gone across Ottawa, Vancouver and elsewhere.

I heard recently that your ministry has developed—first, as a government, we have the rate mitigation program to support industrial consumers; now I hear there's a five-point plan to support small businesses. Can you share with us this afternoon in your response about this

five-point small business energy savings plan that you announced this spring? How would it offer to support small businesses in my riding of Scarborough–Agincourt?

Hon. Bob Chiarelli: Thank you. That's a very good question. The LDCs across the province are very, very actively now working with the small business sector. In April of this year, we announced a new five-point small business energy savings plan designed to help mitigate electricity rate increases for small businesses by offering enhanced conservation programs. There are over 380,000 small businesses with fewer than 100 employees in Ontario, representing about 98% of businesses in the province. Medium-sized businesses, 100 to 499 employees, represent just under 2% of businesses.

The five points of the plan are:

—firstly, marketing the saveONenergy for business conservation program to promote the cost-saving benefits of conservation to business;

—enhancing the saveONenergy for business conservation program;

—promoting the use of roving energy managers—I think it's important for people to understand just how important that third element is. The LDCs across the province, the utilities, have technical people who actually go into a small business for one week, two weeks, three weeks, four weeks, whatever it is. They do a full assessment. They assist the business to apply for conservation programs, for funding and other financial assistance so they could put a comprehensive program together. The roving energy managers aspect of it is proving to be extremely popular;

—making on-bill financing available to small businesses beginning in 2015 to help with the upfront costs of energy conservation projects. This is not unique. This is a best practice of three or four other jurisdictions, which we are adopting;

—finally, ensuring that long-term, stable funding for small business initiatives continues to be available.

This initiative is helping small businesses manage electricity costs and save money by offering enhanced conservation programs. For example, Giant Tiger is already saving \$300,000 a year from their participation in the pilot project.

The take-up on the part of the business community for conservation programs is extremely significant, and it's growing by leaps and bounds. When you look at Home Depot, for example, they are accessing conservation programs in every one of their outlets across Ontario—huge, huge savings for them and savings to the system, which is taking away some of the pressure on costs.

Tim Hortons—we had an event at Tim Hortons, for example, just last week. Tim Hortons is putting in LED lighting throughout the whole system in Ontario. They're converting.

The Canadian Tire Centre, home of the Ottawa Senators: they've been working with the Ontario Power Authority and have converted all of the lighting inside to LED lighting, saving themselves thousands and thousands of dollars in electricity and also putting less demand on the system.

So when you see projections of no growth in electricity demand, conservation is one of the big, big reasons why that is happening. We're very, very pleased to see that level of participation from the business community with the LDCs, OPA and the system.

Deputy, do you have anything to add to that?

The Chair (Ms. Cindy Forster): Two minutes.

Mr. Serge Imbrogno: Two minutes? Kaili, do you—Kaili Sermat-Harding again might have a few additional words.

Mr. John Yakabuski: Kaili's going to put a wrap on this? All right.

Mr. Randy Hillier: Did you get all new lights at your place, too?

Ms. Soo Wong: Shh. Stop interrupting. That's very disrespectful.

Ms. Kaili Sermat-Harding: Thank you. Perhaps I could talk a little bit more about how the roving energy managers program actually works and sort of the various steps that result in the benefits of the program.

As the minister mentioned, it's a program that is available for small businesses to get the services of an energy manager for a short-term project. How they work is, the business contacts the local distribution company or the sector association to schedule a free energy audit with a roving energy manager. That's sort of the initial step. The next step is, the roving energy manager provides the business with a report that includes suggested energy efficiency upgrades, retrofit incentives and information on return on investment. The roving energy manager then assists the business in deciding which energy efficiency upgrades would be recommended to proceed with. The roving energy manager assists the business in submitting an incentive application through their local distribution company.

The Chair (Ms. Cindy Forster): Your time is just about up.

Ms. Kaili Sermat-Harding: Then, after receiving the approval for the incentive amounts, the roving energy manager assists the business in making arrangements to actually install the energy retrofits. So it's very much a step-by-step process that assists the small business in proceeding.

Interjection.

The Chair (Ms. Cindy Forster): Thank you.

Hon. Bob Chiarelli: We have sort of a very sub voce, a very low-voice choir over there singing. I wonder if he could do it a little bit louder.

Mr. John Yakabuski: You'd have to talk to my agent.

Hon. Bob Chiarelli: Which one of you is the tenor?

The Chair (Ms. Cindy Forster): I want to thank the minister and the ministry staff for a number of days of answering questions here. This concludes the committee's consideration of estimates of the Ministry of Energy.

Standing order 66(b) requires that the Chair put, without further amendment or debate, every question necessary to dispose of the estimates. Are the members ready to vote?

Mr. John Yakabuski: Oh, yes.

Mr. Randy Hillier: It was very entertaining. Thanks for being here.

Mr. Peter Tabuns: Before you do, can you tell me what the motion is?

The Chair (Ms. Cindy Forster): I'm going to, yes. Shall vote 2901 carry?

Mr. Randy Hillier: Recorded vote.

Ayes

Ballard, Delaney, Dong, Kiwala, Wong.

Nays

Hillier, Tabuns, Yakabuski.

The Chair (Ms. Cindy Forster): That's carried. Shall vote 2902 carry?

Mr. Randy Hillier: Recorded vote.

Ayes

Ballard, Delaney, Dong, Kiwala, Wong.

Nays

Hillier, Tabuns, Yakabuski.

The Chair (Ms. Cindy Forster): Carried.

Mr. Randy Hillier: If you like, just a recorded vote for each.

The Chair (Ms. Cindy Forster): Shall vote 2905 carry?

Ayes

Ballard, Delaney, Dong, Kiwala, Wong.

Nays

Hillier, Tabuns, Yakabuski.

The Chair (Ms. Cindy Forster): Carried. Shall the 2014-15 estimates of the Ministry of Energy carry?

Ayes

Ballard, Delaney, Dong, Kiwala, Wong.

Nays

Hillier, Tabuns, Yakabuski.

The Chair (Ms. Cindy Forster): Carried. Shall I report the 2014-15 estimates of the Ministry of Energy to the House?

Ayes

Ballard, Delaney, Dong, Kiwala, Wong.

Nays

Hillier, Tabuns, Yakabuski.

The Chair (Ms. Cindy Forster): Carried.

We'll give the Ministry of Energy a few minutes to depart, and then we'll be calling the Ministry of Finance.

Is there a motion to adjourn?

Mr. Bob Delaney: Yes, a motion to adjourn.

The Chair (Ms. Cindy Forster): All in favour? Opposed? Carried.

The committee adjourned at 1731.

CONTENTS

Tuesday 25 November 2014

Ministry of Energy	E-355
Hon. Bob Chiarelli	
Mr. Serge Imbrogno	
Mr. Paul Pasquet	
Mr. Rick Jennings	
Ms. Kaili Sermat-Harding	
Mr. Michael Reid	

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