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**Official Report  
of Debates  
(Hansard)**

**Monday 26 February 2007**

**Journal  
des débats  
(Hansard)**

**Lundi 26 février 2007**

**Standing committee on  
government agencies**

Intended Appointments

Agency Review:  
Ontario Power Generation

**Comité permanent des  
organismes gouvernementaux**

Nominations prévues

Examen des organismes  
gouvernementaux :  
Ontario Power Generation

Chair: Julia Munro  
Clerk: Tonia Grannum

Présidente : Julia Munro  
Greffière : Tonia Grannum

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## LEGISLATIVE ASSEMBLY OF ONTARIO

## ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

STANDING COMMITTEE ON  
GOVERNMENT AGENCIESCOMITÉ PERMANENT DES  
ORGANISMES GOUVERNEMENTAUX

Monday 26 February 2007

Lundi 26 février 2007

*The committee met at 0938 in room 151.*

## SUBCOMMITTEE REPORTS

**The Chair (Mrs. Julia Munro):** Ladies and gentlemen, I think we need to call this committee to order, as time is passing and we have a very full agenda.

Our first order of business is the report of the subcommittee on committee business dated Thursday, December 21. I'm looking for someone to move its adoption.

**Ms. Monique M. Smith (Nipissing):** I move the report of the subcommittee dated December 21, 2006.

**The Chair:** Any discussion? If not, all in favour? Opposed? The motion is carried.

Our next order of business is the report of the subcommittee on committee business dated Tuesday, January 2.

**Ms. Smith:** I move the report of the subcommittee dated January 2, 2007.

**The Chair:** Is there any discussion? If not, all in favour? Opposed? The motion is carried.

Our next order of business is the report of the subcommittee on committee business dated Thursday, January 18.

**Ms. Smith:** I move the report of the subcommittee dated January 18, 2007.

**The Chair:** Is there any discussion? All those in favour? Opposed? The motion is carried.

Our next order of business is the report of the subcommittee on committee business dated Thursday, February 1.

**Ms. Smith:** I move adoption of the report of the subcommittee dated Thursday, February 1, 2007.

**The Chair:** Is there any discussion? If not, all in favour? Opposed? The motion is carried.

Our next order of business is the report of the subcommittee on committee business dated Thursday, February 15.

**Mr. Jeff Leal (Peterborough):** I move adoption.

**The Chair:** Is there any discussion? If not, all in favour? Opposed? The motion is carried.

## INTENDED APPOINTMENTS

## DAVID WRIGHT

Review of intended appointment, selected by official opposition party: David Wright, intended appointee as

member and vice-chair, Human Rights Tribunal of Ontario.

**The Chair:** We will now move to the appointments review. Our only interview today is with David A. Wright, the intended appointee as member and vice-chair of the Human Rights Tribunal of Ontario. I'd invite Mr. Wright to come forward. Good morning, and welcome to the committee. As you may be aware, you have an opportunity, should you wish to do so, to make an initial statement. Subsequent to that, there are questions from members of the committee. Do you wish to make a statement?

**Mr. David Wright:** I would, thank you.

Good morning, Madam Chair and members of the committee. Thank you for the opportunity to speak to you about my background and interest in the position of vice-chair of the Human Rights Tribunal of Ontario. I will begin with just a brief review of my experience.

I grew up in London and Windsor, and completed an undergraduate degree in history at the University of Windsor. I did the last year of my B.A. at McGill University in Montreal, where I decided to stay and attend law school. I completed the four-year national program in civil and common law, and graduated with the gold medal for the highest average in the graduating class. I spent my articling year as clerk to Madam Justice Claire L'Heureux-Dubé at the Supreme Court of Canada and then completed a masters of law degree at New York University.

Since 2000, I have practised at the law firm of Green and Chercover in Toronto. In this capacity I have worked primarily on behalf of unions and employees, giving advice to clients and representing them in the courts and before various administrative tribunals, including grievance arbitrations, the Ontario Labour Relations Board, and the Human Rights Commission and tribunal.

J'ai une pratique bilingue et j'ai représenté des clients en français à des arbitrages à la Commission des relations de travail et à la commission des droits de la personne.

I've developed a particular interest and expertise in both human rights and administrative law. Let me speak first about human rights.

In my studies, I placed considerable emphasis on issues of equality and diversity, and I've spent time thinking and writing about equality rights in various capacities. As a lawyer, I have represented claimants, respondents and interveners in human rights cases in the

courts, at arbitration, and before human rights tribunals. I have been a member of the Association of Human Rights Lawyers since I was called to the bar, and I am currently the chair of the constitutional, civil liberties and human rights section of the Ontario Bar Association.

I will turn now to administrative law. As well as practising before various tribunals, I have been involved in a significant number of judicial review cases, both challenging and defending decisions of administrative tribunals. I taught administrative law at Osgoode Hall Law School in the fall of 2002, and I have written two articles on the topic published in academic journals.

I have spoken on human rights, labour law and administrative law issues at events sponsored by various organizations, including the Ontario Bar Association, the Society of Ontario Adjudicators and Regulators, and Lancaster House.

Becoming a vice-chair at the Human Rights Tribunal of Ontario would use skills and knowledge I have developed in various facets of my career. I am tremendously excited and honoured by being considered for this role.

Statutory human rights legislation, including the Ontario Human Rights Code, has been recognized in our jurisprudence as quasi-constitutional law, reflecting fundamental values of our society. The tribunal's core values of accessibility, fairness, transparency, timeliness and an opportunity to be heard reflect a commitment to implementing the code in an effective and balanced way. I recognize the challenge and the responsibility of being part of Ontario's human rights system.

Although as an advocate I have primarily represented unions and employees, the role of a neutral is one into which I fit easily. I began my legal career assisting a judge, and in that capacity learned about the difficult balancing involved in making decisions, particularly on issues of fundamental rights. As a union-side lawyer, I developed a reputation for being balanced and compromise-oriented, and I believe I have the respect and confidence of lawyers on the employer side as well. As a lawyer, I usually look for the creative solution that may be in the interest of both sides. These skills would, I think, serve me well when acting as a mediator and in narrowing issues in cases before me.

With the passage of Bill 107, the Human Rights Tribunal of Ontario will soon take on revised and expanded responsibilities. The legislation contemplates the use of alternatives to traditional adjudicative or adversarial procedures if provided for in the tribunal rules. I am excited about the possibilities this will present for resolving cases in a fair, open, yet efficient manner. I am confident that my background in the theory of administrative law and procedural fairness, together with my experience as a practitioner, has helped prepare me to be an adjudicator in this new process.

Clearly, there will be high expectations for the tribunal in the coming years. I hope to bring to it not only my experience and knowledge, but an attitude of thoughtfulness, balance, empathy, and openness to all parties' perspectives and views.

I look forward to answering your questions. Thank you.

**The Chair:** We will commence the questioning today with the third party.

**Mr. Peter Tabuns (Toronto-Danforth):** To be honest, Madam Chair, I have no questions in this case. The statement was straightforward. I will pass the questioning on to the next questioner.

**The Chair:** Thank you. As you know, each party will have 10 minutes allocated for questions, and we'll go in rotation.

As is the practice of this committee, the time taken by your statement will be deducted from the time allocated to the government party. However, I think that still leaves us with about five minutes. Ms. Smith.

**Ms. Smith:** I only have one simple question. I think that you're eminently qualified for this position and I'm delighted that you've chosen to apply. Could you just tell us how you came to apply for vice-chair of the tribunal?

**Mr. Wright:** Certainly. When the government first announced its intention to make changes to the human rights system, I spoke with the chair of the tribunal, Michael Gottheil, about my qualifications and my interest in any new positions that might come available. This particular position was advertised on the Public Appointments Secretariat website in June. I applied to the PAS and was interviewed by a panel consisting of three members: the chair of the tribunal, Michael Gottheil; tribunal member Kaye Joaquim; and Mary O'Donoghue, an external member who's counsel to the Information and Privacy Commissioner.

My understanding is that there were five candidates interviewed. The interview consisted of responding to one question for which the candidates had several days to prepare an answer and several others that we received shortly before the interview started and had a few minutes to prepare. The interview was about an hour.

**Ms. Smith:** Thank you, and thank you for considering the human rights tribunal.

**The Chair:** Thank you very much. We'll move on to the official opposition.

**Mr. John Yakabuski (Renfrew-Nipissing-Pembroke):** Thank you, Mr. Wright, for joining us this morning. I have a few questions. Have you had any connections with any political party in the past?

**Mr. Wright:** Yes, the NDP.

**Mr. Yakabuski:** In what capacity?

**Mr. Wright:** I've been a member, and I was the vice-president of the youth in the early 1990s.

**Mr. Yakabuski:** You raised the issue of your neutrality with regard to this position, because clearly you're expected to rule on cases. Your history is not one of neutrality. Would that be a fair assessment?

**Mr. Wright:** Not political neutrality, no, and obviously as a lawyer I've represented various clients who have a point of view. But the values in the Human Rights Code are values that probably all political parties subscribe to, I would believe and I would think. Obviously there's a role, as a vice-chair, occasionally of ruling on whether

government legislation complies with the Human Rights Code.

Obviously that's in my past. I would maintain a position of strict neutrality as a member and a vice-chair of the tribunal. I think that my job would be to enforce the provisions of the Human Rights Code as passed by this Legislature and as established in the jurisprudence. I'm confident that I'd be able to do that with complete neutrality.

**Mr. Yakabuski:** So when we see, for example, the makeup of our courts or tribunals or anything like this, the Supreme Court or Court of Appeal or whatever, and we always hear talk about, "Well, the court is shifting this way or that way, right or left," we always seem to see—if there's an appointee who is perceived to be on the right side of the political spectrum, there's always a great deal of protest. I guess that would be a question I'd ask. I would say that you would be the first one to say that you would reside on the left side of the political spectrum.

**Mr. Wright:** I think that in the matter of human rights it's probably not—I don't think human rights are a matter of right or left, quite frankly, and as a lawyer I've represented both applicants and respondents in human rights matters. I understand, through my background as a lawyer and in working for a judge as well, that there's very difficult balancing in issues of fundamental rights, and I'm not sure that that balancing, quite frankly, is an issue of right or left. For example, on matters of the charter, we've seen people on the left question courts having overturned government legislation and we've seen people on the right do that. So I don't think that the issues that are before me are really issues of right or left, quite frankly.

**Mr. Yakabuski:** I suppose that's—that wasn't my question. My question was whether you would consider yourself to reside on the left. Supposing a very qualified person came for this appointment or any other appointment, but a Human Rights Tribunal appointment, who was known to sit on the political right—I would say that you would be known to sit on the political left. If they were eminently qualified, capable from a historical, training or legal point of view—there was no question about their qualifications—but they sat on the political right, would you consider them to be a reasonable appointee to this tribunal in, say, this position?

**Mr. Wright:** Yes.

**Mr. Yakabuski:** Yes. So no one should be judged based on where they sit on the political spectrum for an appointment to, say, the Human Rights Tribunal, the Supreme Court or the Court of Appeal or anything like that?

**Mr. Wright:** No.

**Mr. Yakabuski:** It should be judged based on the qualifications of the person looking for the appointment?

**Mr. Wright:** Yes.

**Mr. Yakabuski:** Thank you very much. I do see that your qualifications are very good; we have no problem with that.

**The Chair:** We've had the opportunity to hear the comments and questions, so I would thank you very much for coming. You may step down.

**Mr. Wright:** Thank you.

**The Chair:** We will now deal with concurrence. We'll now consider the appointment of David A. Wright, intended appointee as member and vice-chair of the Human Rights Tribunal of Ontario.

**Ms. Smith:** I move concurrence of the appointment of David A. Wright.

**The Chair:** Concurrence in the appointment has been moved by Ms. Smith. Any discussion?

**Mr. Yakabuski:** What do we do?

**The Chair:** Are you agreeing with the appointment?

**Mr. Yakabuski:** Oh, yes.

**The Chair:** All those in favour? Opposed? The motion is carried.

Thank you, Mr. Wright, for being here with us this morning.

We will now commence our agency review with Ontario Power Generation.

*Interjection.*

**The Chair:** I'm going to suggest that we recess until 10 o'clock, just to give people an opportunity to come in.

*The committee recessed from 0952 to 1000.*

## AGENCY REVIEW

### ONTARIO POWER GENERATION

**The Chair:** Good morning, everyone, and welcome to the standing committee on government agencies. This morning, we are looking at a review of Ontario Power Generation, and I'm very pleased to welcome all of you here to take part in our deliberations. I would ask, for the purpose of Hansard, that you introduce yourselves and then you may begin your presentation. Mr. Epp?

**Mr. Jake Epp:** Thank you, Madam Chair. Just to follow your instructions, why don't I do that right at the beginning and start on my left. Is it preferable for you to have them introduce themselves for Hansard purposes?

**The Chair:** For Hansard purposes, either is fine. If you're comfortable doing that—

**Mr. Epp:** Why don't we do that. Jim?

**Mr. Jim Hankinson:** Jim Hankinson, president and CEO, Ontario Power Generation.

**Mr. Pierre Charlebois:** Pierre Charlebois, chief operating officer, Ontario Power Generation.

**Mr. Donn Hanbidge:** Donn Hanbidge, chief financial officer for Ontario Power Generation.

**Mr. Epp:** Also with us today is Mr. William Sheffield—there he is. Bill chairs our compensation and human resources committee and is a member of the board of directors. If you have any questions relating to how the board determines the salaries at OPG, Bill will give me assistance.

Madam Chairman, thank you to you and your committee for the invitation to appear here this morning. At Ontario Power Generation, we welcome the opportunity

to discuss what we've done since 2003 in the matter of how we stabilize the company and improve its performance. This appearance is especially meaningful for me personally because it is an opportunity to explain how we have achieved the turnaround at OPG.

I first became directly involved with the company in May 2003. I was asked then to look at the issues in the refurbishing of unit 4 at Pickering A. As the electricity industry knows, Ontario Power Generation has made major strides since then: Production has increased in our hydroelectric and nuclear divisions, our fossil plants are more reliable, and we have had profits for the past three years. As many of you will remember, after I presented my initial report in December 2003, I went on to work with the Honourable John Manley and Mr. Peter Godsoe, formerly chairman of the board of the Bank of Nova Scotia. Our committee produced recommendations on how to return OPG to focusing on its core business, and that is the generation of electricity for Ontarians. I became acting chairman of OPG in December 2003 and chairman of the present board in April 2004.

Let me recall some of the steps we took to bring stability back to OPG and re-establish it as a premier electricity-generating company. First, a new board had to be assembled. It is a board with expertise first in nuclear operations; it is a board with expertise in managing major projects; it's a board with expertise in investing the large, segregated funds under OPG's control; and it's a board with expertise in ensuring that a large company such as OPG is run effectively on a day-by-day basis.

Next, OPG needed a new, experienced president to provide the leadership to beleaguered management and employees of the company and to create a new sense of direction. In particular, the board was determined to find a president who had had experience in running a company with a nuclear unit. There was no time for a neophyte to learn, no time for on-the-job training. The intricacies of a nuclear operation just don't allow for that. After a lengthy external executive search, we found the man we needed, and he was already on our board: That's Jim Hankinson, sitting next to me. A board member appointed shortly after the major changes at OPG at the end of 2003, he brought significant experience to us. Through his years at Canadian Pacific, culminating with five years as president and chief operating officer, he had acquired the knowledge and the skills needed to run large corporations and a company that is diverse in its operations and that is geographically spread out. He had gained invaluable experience as chief executive officer running a generating company that had a nuclear division during his almost six years as president of New Brunswick Power.

Under Jim and his team of executives, the management of OPG has been reorganized to ensure that the company's priority is on improving the performance of our production units. OPG is focused on ensuring that we have the know-how and the people to take on new projects, something that wasn't there in 2003. We've been asked to do this by the government on a number of occasions.

With a new board and a new president, OPG needed a definitive understanding with the government on what the government expected from OPG. So in August 2005, OPG and the government agreed to a memorandum of understanding, which was signed by the minister, the Honourable Dwight Duncan, and myself on behalf of the company. The memorandum of agreement rounded out the high level of accountability previously established by the government for OPG, including making us subject to the Freedom of Information and Protection of Privacy Act, the Public Sector Salary Disclosure Act and the Auditor General Act. Those accountability mechanisms are additional to the disclosure and reporting requirements of the legislation under which the OPG was established, and that is the Ontario Business Corporations Act.

The memorandum of agreement allows the government as our shareholder, under the terms of the Ontario Business Corporations Act, to direct OPG to undertake special initiatives by sending the board written declarations from the shareholder. These declarations must be made public. This higher level of transparency demonstrates the separation of policy-maker and commercial electricity generator and it provides for clear, public accountability for decisions.

The turnaround, we believe, has been remarkable, as was generously noticed last summer by both the Premier and the Minister of Energy, and Ontario Power Generation is working to be even more effective in serving the people of Ontario.

With that, Madam Chair, with your indulgence and the committee's, I would ask Mr. Hankinson to make a couple of comments.

**Mr. Hankinson:** Thank you, Jake. Good morning, ladies and gentlemen. I am pleased to be here this morning. I will tell you what I have said to the employees at OPG, to our board and to the shareholder, and that is that at OPG it's all about performance, and we know that it is important to do what we say we will do.

Yes, OPG had a good year in 2006, both in generation and in financial terms. We achieved a profit for the third year in a row, our production divisions are performing better than they were three years ago, but we want our performance to be even stronger. We are working hard to increase our production of electricity and we will continue to provide power safely, efficiently and responsibly. We want to return value to our shareholder. This is what good companies do, and we take pride in doing this.

As you likely know, both demand and price for electricity declined last year. This pulled down OPG's revenue. Looking ahead, the lower demand and prices likely will continue to constrain OPG's revenue in the coming months. This, coupled with our need to invest in new generation projects that have been requested of OPG by the government, is likely to result in fresh financial challenges throughout Ontario Power Generation in 2007, given our constrained revenues. However, we are working to build the new generation plants that will be needed in the near future. We are in a partnership that is building a new natural-gas-fired plant in Toronto. We are

digging a tunnel to increase the power we generate at the Beck complex in Niagara Falls. We are developing hydroelectric resources in northern Ontario. We are assessing whether there is a business case to support refurbishing for nuclear units at Pickering B. We have launched the application process to build new nuclear units at Darlington.

Now, I believe that my time to comment is up. We are ready to answer your questions.

**The Chair:** All right. I think we'll start in 10-minute rotations and begin with the official opposition.

**Mr. Yakabuski:** Thank you very much for joining us today. We appreciate your coming in. I'm going to start with a couple of questions with regard to the government's on again, off again—I'm not sure where they are—policy with regard to coal-fired generation in Ontario.

When they were in opposition, they made what now Premier McGuinty said was an ironclad commitment, no ands, ifs and buts about it. We haven't been able to find any experts who will say that they advised the Liberal Party at that time on that promise, nor has the government been willing to disclose the names of those experts. Even though under questioning of the estimates committee they agreed to do just that, they haven't done that. I'm wondering what the position of OPG would have been in 2002-03 with respect to the prospect of being able to, from an operational point of view—and I understand you can close a plant down tomorrow if that's all you're interested in doing, but you also have a responsibility to provide power. What was the likelihood, or even the possibility, that all of the coal-fired plants would be shut down by 2007 and the power supply of this province not be completely jeopardized?

1010

**Mr. Hankinson:** Thank you, Mr. Yakabuski. To remind you, I was not at OPG in 2002-03. I became CEO in May 2005.

It would have been viewed by OPG people at that time to certainly be a challenge. However, OPG was not part of that decision; we are not policy-makers. But our view was then and continues to be today that insofar as the coal plants are needed and required by the province, we will ensure that they're in as good an operating state the day they close down as they are today.

**Mr. Yakabuski:** When the government took office in 2003, there would have been then an order of some kind—there must have been an order issued at that point. What were those orders and what discussions took place? Did the government, for example, sit down and say, "Can we do this? Now that we're actually government, can we do this?" or were orders simply issued to proceed with the plan to follow through on those shutdowns?

**Mr. Hankinson:** The information I have is that OPG was not consulted at the time. We did receive a directive to close the Lakeview plant, I believe in late 2005, and we complied with that directive. I understand that when the government deems it to be appropriate to close other

plants, we will receive individual directives specific to each plant at that time.

**Mr. Yakabuski:** It's my understanding that the regulation to close Lakeview was passed by the previous government and that the date was determined at that time, that it would have to cease producing as of the prescribed date.

**Mr. Hankinson:** I believe that's correct. Nonetheless, we did receive a directive to proceed with the shutdown of Lakeview.

**Mr. Yakabuski:** On the emissions side, the government's been touting the numbers from 2006. I know that those numbers dropped relative to 2005. Can you tell us how much of that has to do with a reduction in the number of terawatt hours, gigawatt hours produced by the fossil plants, some of the operational changes that you people have made with regard to turbine improvements, and also lower-sulphur coal etc., which were your own decisions based on the efficient operation of your utilities, and how much has been a result of an issued directive from the government? What role has the government actually played in the reduction of emissions from the fossil-fired plants at OPG?

**Mr. Hankinson:** As you know, OPG had certain programs in place to improve quality and quantity of emissions. We did put certain equipment in place in the late 1990s and early 2000s. Also, you specifically referred to 2005-06. In 2006 we were fortunate in that we could run our fossil plants less than we did in 2005. Actually, in 2005 our production was just a bit over 30 terawatt hours and in 2006 that dropped to about 25 terawatt hours. So there was a significant reduction in the quantity of electricity produced. The reason for that was that our nuclear performance was strong in 2006, as was our hydro business. Both were up over the previous year, which allowed us to run our fossil plants less. Also, we had a reduced demand in 2006 for electricity. Does that answer your question?

**Mr. Yakabuski:** In short, would it be fair to say then that in spite of their glowing press releases etc., touting their own record, Mother Nature and OPG's own initiatives were the reasons that emissions from fossil plants were down in 2006, and in fact, the government played no role whatsoever?

**Mr. Hankinson:** We had the support of the government in terms of refurbishing Pickering A, for example, which brought on 500 more megawatts. We've had the support of the government in hydro initiatives. Both of those things have allowed us to run our fossil plants less, together with lower primary demand that we experienced in 2006.

**Mr. Yakabuski:** So no specific directives or initiatives by the government led to the reduction of emissions at the fossil-fired plants?

**Mr. Hankinson:** We received no directives from the government as it relates to coal other than for the shutdown of Lakeview.

**Mr. Yakabuski:** Perhaps we'll get that in the next press release.

Remaining on the emissions side: During the time leading up to the campaign of 2003, when then opposition leader McGuinty cited the reason for shutting down coal-fired plants, never once were the words “greenhouse gases” or “CO<sub>2</sub>” mentioned. It was NO<sub>x</sub> and SO<sub>x</sub> and the effect on the health of children and childhood asthma and respiratory diseases, and those are key components for those particular ailments. One of the initiatives of the previous government to reduce NO<sub>x</sub> and SO<sub>x</sub> was the installation of scrubbers and SCRs.

I have some data here somewhere from the Ontario Clean Air Alliance. I don’t know if they are speaking to us on that today, but your own data as well—based on the emissions of nitrous oxide and sulphur dioxide and other particulates that can be dealt with partially by the installation of scrubbers and SCRs and other mitigation equipment, where would we be today—because we’ve raised this issue on numerous occasions with the government and they have said, “No, we’re not putting any of that equipment on because we’re closing these plants.” Now we’re basically near the end of this government’s mandate and nothing has been done with regard to closures of plants. As I say, Lakeview was closed as a result of the regulation passed by then-Environment Minister Elizabeth Witmer. At that time the Premier of today was saying “600-and-some premature deaths as a result of” etc. and he talked about, “When I see smog days in Algonquin Park, that’s it; we’re shutting these plants down.” They’re still operating, and nothing has been done to mitigate those emissions other than, as you said, the reduction of the use and the need of these plants, some of the efficiencies that you people have done yourselves as responsible operators of a utility, but no government initiative, no installation, no investment in installing this kind of equipment.

I guess what I’m asking is: How much further ahead could we be with regard to the emissions of those key components had mitigation equipment been installed or the program continued that was already in place to install that kind of equipment on the remaining six units at Nanticoke and two at Lambton, as far as your big operators are concerned?

1020

**Mr. Hankinson:** At the beginning of your question you referred to CO<sub>2</sub>, and I think it’s important that we draw a distinction between CO<sub>2</sub> and what we refer to as pollutants. CO<sub>2</sub> is a warming gas; it’s technically not a pollutant.

We had indeed installed scrubbers and SCRs on several of our plants, and that had reduced emissions dramatically—pollutants: NO<sub>x</sub>, SO<sub>x</sub>, mercury, that kind of thing.

In terms of CO<sub>2</sub>, that’s a much more difficult problem because CO<sub>2</sub> really cannot, under most technologies today, be captured, and even if you capture it, what do you then do with it? Some of the new technology going forward would look to streaming CO<sub>2</sub>, capturing it and then storing it in some way. But we’re a number of years away from those kinds of initiatives. So in terms of CO<sub>2</sub>,

there really isn’t much that can be done in the short term to lower the levels of CO<sub>2</sub> in the atmosphere, but certainly technology exists today that can capture 90%-plus of what technically are known as pollutants: sulphur dioxide, nitrous oxide and mercury in particulate and that kind of thing.

**The Chair:** Thank you very much. We’ll now move on to Mr. Tabuns, please.

**Mr. Tabuns:** Good morning. Could you start off by giving us an estimate of the dollar value of the power that’s generated by our coal-fired plants and sold to the United States?

**Mr. Hankinson:** I can’t give you that off the top of my head, but certainly I can get that information for you.

**Mr. Tabuns:** Do you have a sense of how much of our coal generation is exported, not in dollar terms, but in percentage?

**Mr. Hankinson:** We don’t divide it up that way. An electron produced by a fossil plant looks the same as an electron that’s produced by a nuclear plant. So it becomes a question of: What are the market opportunities out there, and are we in a position to take advantage of that opportunity? Opportunities that OPG would have to export in the market are generally in off-peak periods as opposed to peak periods during the day.

**Mr. Tabuns:** Do you have any figures within your corporation that would be able to tell people how many hours a year those coal plants are operated in order to export power to the United States?

**Mr. Hankinson:** Yes. It’s probably a question that is better asked of the IESO. We have one customer, and that happens to be the IESO.

**Mr. Tabuns:** Okay. Fair enough. In terms of clean coal, have you been asked by the provincial government to investigate carbon sequestration?

**Mr. Hankinson:** No; we have not been asked that.

**Mr. Tabuns:** I gather that you would not be forecasting demand; that’s something that’s done by the OPA, the IESO. So there’s no point in asking you questions about how you do your forecasts. Are your plans for generation—no, I’m going to go back to another question.

Mr. Yakabuski was following this line. When we looked at the reports that came out last year about power generation, we didn’t see any impact from the conservation activities undertaken by the provincial government. What we saw were comments from different authorities saying that, yes, there was reduction in demand because of reduction in economic activity, reduction in demand because there was less impact on the part of the weather. Are you actually seeing impact on your power generation from the conservation activities of this government?

**Mr. Hankinson:** We don’t attempt to identify that specifically. What we do see is a reduction in primary demand. The question of what causes that reduction would be better addressed to the OPA and the IESO.

**Mr. Tabuns:** Okay. So you were simply given a number by OPA, “Generate this much power in this time



frame,” and you do your best to meet that demand request. Is that correct?

**Mr. Hankinson:** Not really. We try to, obviously, produce as much electricity as we can at appropriate cost levels, and we bid into the marketplace.

**Mr. Tabuns:** Okay. Can you tell me: In your operations, how much money are you allocating to take care of high-level and mid-level nuclear waste?

**Mr. Hankinson:** A lot of money.

**Mr. Tabuns:** More specific, please.

**Mr. Hankinson:** I'd like to ask our chief operating officer, Pierre Charlebois, to comment more specifically on that.

**Mr. Charlebois:** For a number of years now, Ontario Power Generation has been putting money aside in a fund for the future decommissioning and storage of nuclear waste. Mr. Hanbidge probably has more exact figures, but I believe that the fund value at this point is approaching \$7.5 billion.

**Mr. Hanbidge:** That's correct.

**Mr. Tabuns:** And that's for the high-level waste?

**Mr. Charlebois:** That's for all of the nuclear waste and the decommissioning; that's correct. This is intended for the disposal of the waste that is generated by Darlington, the Pickering nuclear facility, as well as the Bruce power plants that have been leased to Bruce Power.

Depending on the actual year and the amount of money that we have to put aside in the fund, our contribution can range from \$200 million to \$300 million on an ongoing basis. Maybe Mr. Hanbidge can confirm that.

**Mr. Hanbidge:** Yes. In fact, our annual contributions to the nuclear funds are closer to \$450 million per year.

**Mr. Tabuns:** Will that allocation of funds be adequate to cover your projected liabilities?

**Mr. Charlebois:** The question of the liabilities and the amount of money that should be put aside in the funds is something that is reviewed every five years. It is also reviewed by the regulator in Ottawa, the Canadian Nuclear Safety Commission, to make sure that it in fact represents an objective estimate of the amount of money that will be required to do so. In preparing those estimates, we engage experts who have experience elsewhere in the disposal of low-, intermediate- and high-level waste to give us some advice and so on. We present that information to the regulator in Ottawa.

We are in the process of updating our estimate, and we'll be speaking with the CNSC later this year on the updated numbers. But yes, we are confident that the funds as they exist today will be sufficient to cater to the disposal of this waste in the future.

**Mr. Tabuns:** Can you give us a number as to the total value of the liability for dealing with high-level, mid-level waste and the decommissioning of the plants?

**Mr. Hanbidge:** I could answer that question. The total value of that liability today, the net present value, is just over \$10 billion.

**Mr. Epp:** Sir, you'll find that also in our MD and A primarily at the end of the year. I think we've just published that and those numbers are in there as well.

**Mr. Tabuns:** Okay. There are significant plans for expansion of nuclear generation in Ontario. Have you done projections as to the amount of money that you're going to have to set aside to cover the waste generated by those activities?

**Mr. Charlebois:** In any of our planning activities, in response to requests by the Ontario Power Authority, we would take into consideration the full life cycle costs of a new nuclear facility, from the initial construction, obviously, its operation over its lifetime, and its ultimate disposal. So all of that would be considered in the analysis.

**Mr. Tabuns:** Can I just go back? I don't think I understood something. The net present value of dealing with all the waste and the decommissioning is \$10 billion, and we have \$7.5 billion set aside.

**Mr. Hanbidge:** That's correct.

**Mr. Tabuns:** So we're short \$2.5 billion?

*Interjection.*

**Mr. Tabuns:** No? That's why I want to understand this.

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**Mr. Hanbidge:** Presently we are, but as I mentioned previously, each year we're funding the fund at about \$450 million per year. On top of that, we have earnings from the fund.

**Mr. Tabuns:** Okay. So right now, your expectation is you've covered 100% of your liability with what has been set aside. At \$450 million a year, you will be covering 100% of your liability.

**Mr. Hanbidge:** Yes, over time, we will cover 100% of the liability.

**Mr. Tabuns:** Okay. I was going to ask further questions about the decommissioning, but you've covered all of that.

The mid-level waste repository at Bruce—

**Mr. Epp:** Low- and mid-level.

**Mr. Tabuns:** Low- and mid-level; fair enough, Mr. Epp. Where do things stand in terms of that being ready when you believe it's going to be necessary to be ready?

**Mr. Charlebois:** For the low- and intermediate-level deep geological repository at Bruce, the processes with the regulator started late last year. In December, we appeared in front of the commission, at a meeting of the commission. The proposal for environmental assessment was presented to the commission. The decision by the commission was that the proposed deep geological repository at Kincardine should be subjected to a full environmental panel assessment, which would receive a very detailed review and assessment of the technical and societal issues that may result from the potential construction of such a facility. That decision has been rendered. We are awaiting consultation that is taking place at the federal level with respect to the form and composition and timing for the environmental assessment and the panel reviews.

In the meantime, we at Ontario Power Generation are continuing our scientific work, including drilling at the site to gather more information with respect to the rock formation and the geology of the region, and conducting and doing our technical work in preparation for the submission to the EA. We've held many community information sessions at the site in Bruce county, and we have good, strong support for the project at the Kincardine site.

**Mr. Hankinson:** Perhaps I could just add a couple of points to that. Two things: We will not bury waste anywhere we don't believe it's safe to do so. We don't have the answer to that yet. The studies and reviews that Pierre talks about will indicate whether or not that level of confidence is there for that site. If so, we will proceed; if not, we obviously will not proceed.

The second point is that we will only deal with willing host communities. We're not going to put waste in communities that don't want it. So far, Kincardine has proven to be a very willing host community, and we would be supportive of that.

**The Chair:** Thank you very much. I turn to the government members. Mr. Leal.

**Mr. Leal:** I certainly welcome Chairman Epp and your colleagues here this morning. Chairman Epp, I'd be remiss if I didn't recognize your enormous contribution to the provinces of Manitoba and Ontario—indeed, your contribution to our nation—over many years.

My first question is: When we had the privilege of forming government in the fall of 2003, we certainly campaigned on the necessity of OPG to be more open, more accountable and focused on operations. Could you indicate to the committee this morning, Mr. Epp and your colleagues: What were the first things you did to turn OPG around to a more open, more transparent organization?

**Mr. Epp:** First of all, thank you for those kind words. Sometimes your previous electorate has other views. I didn't have that experience, but I understand that people do, from time to time.

The issue of OPG and openness: Openness always is a challenge because the natural inclination, I think, of anybody is just to do your job. You know what you're doing and you do your job. I think the openness that OPG now is under is good for OPG and, if I may say, good for the people of Ontario.

If I can give any word of advice, if that's appropriate at all, I would be very hesitant to remove the other discipline of an OBCA company, which requires us also to meet commercial disclosure. If you take a look at what the government did with its legislation, putting us under the various acts which I listed in my opening comments, as well as being an OBCA company, where we have to meet commercial disclosure—those two disciplines, I believe, are good for a company. It might be uncomfortable from time to time, but I think it's necessary. I hope I'm answering your question.

**Mr. Leal:** To follow up on that, Mr. Epp, when you were brought in towards the end of 2003, OPG at that

time had no nuclear experience on the board of directors despite having one of the largest fleets for nuclear generation in North America. Beyond Mr. Hankinson and his involvement now, could you give us a bit of a profile of the other members of the board that you helped to recruit and the expertise that they bring to the board of directors of OPG?

**Mr. Epp:** Yes. First of all, a board of directors has to have many skills. I always say that the board that we were able to recruit, with the exception of the chairman, is very qualified.

Let's look at it very seriously. First of all, nuclear experience: We have people like Don Hintz, who was CEO of Entergy. There's been a turnaround in the United States, and if you look at the production capacity of their existing plants, there's no question that Don Hintz was one of the architects of that turnaround. Some people call it a renaissance.

We also brought on Corbin McNeill, who had given advice to the John Manley committee. Corbin was president and CEO of Exelon, and ran for a while the New York public utility. So he had this knowledge both of the private sector, obviously with nuclear technology, and expertise and operational experience in the public sector. People like that are not easy to come by.

Thirdly, we brought on Dr. Gary Kugler, whom I'd known for many years at AECL and who was close to retirement. From a technical point of view, there probably isn't a peer with respect to Candu technology.

We've already referenced Jim, who operated New Brunswick Power.

So on the nuclear side, I was—I should say this, and I didn't: When it comes to appointments, governments generally hold that responsibility and that right very closely, and that's normal. But in this case, the government gave us very much a free hand. They said, "Get the best and turn the company around." So we also hired an outside consultant who helped us on the construction of best governance or best practice.

We also have expertise in other areas, and I'll just give one. We came out of the debacle of Pickering A unit 4 and brought on a Canadian, now a resident of London, who has got very good large-project experience.

Melding all that together, I believe Ontario is, as I say, well served by the board you have.

**Mr. Leal:** Just as a commentary, in my riding of Peterborough, of course, sits the headquarters of GE nuclear products and Numet Engineering. From time to time, I have discussions with Peter Mason, who's the vice-president for GE nuclear products, and the principals of Numet Engineering, and they certainly concur with what you've provided us this morning. They have confidence in the strategic team that you've assembled to deal with the nuclear side of your fleet.

If I could switch gears for a minute and go to performance, when we had the privilege of forming government in late 2003, one of the key commitments and key observations was to improve the performance of OPG. Can you give us some indication this morning of how OPG's nuclear performance has improved since 2003?

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**Mr. Epp:** I'll ask Mr. Hankinson to answer that.

**Mr. Hankinson:** We take performance very seriously and every quarter we produce a document like this. The heading on it is "It's All About Performance." We're proud of what we've been able to accomplish in the last few years, not only in nuclear performance but in hydro and in fossil.

Perhaps I will ask Pierre, as our chief operating officer, to give you some more specifics about operation.

**Mr. Charlebois:** Maybe I should speak to, broadly speaking, the improvements that we've seen in our nuclear fleet, which range from improved performance in employee safety, improved performance in public safety. You may recall some number of years ago where licences issued by the regulator in Ottawa were of short duration. In the last three years we had all of our licences renewed for five years. Therefore, the regulator is satisfied with the safe operation of our facilities. Improvements in unit performance as well are very evident in our facilities. Steadily, every year, we have good, solid performance by our employees.

In terms of production, in 2003 we produced about 38 terawatt hours. The next year after that we produced 42; the year after that, 45; and in 2006 we produced nearly 47 terawatt hours. We know there is still potential and opportunities for improvement.

We would judge the performance of our Darlington plant to be top-notch, approaching 90% on an ongoing basis in both 2005 and 2006: excellent performance, a very strong producer of energy for the province, about 19% to 20% of the energy the province needs.

At Pickering B we have made considerable improvements in the plant condition and just finished last year a major four-year program to rehabilitate and inspect all of our fuel channels on all four units. That's 1,500 channels. That's done, so now we're looking forward to shorter outages in the future; we expect that performance to come up.

So, overall, a good, steady pace. Even financially, we've met our budgets every year. We've delivered on our work programs. We're satisfied that we're on track.

**Mr. Leal:** Mr. Charlebois, if I could just follow up, I don't know whether you collect this information or not, but in terms of performance of nuclear facilities in North America, where would Darlington rank in terms of output, performance and capability?

**Mr. Charlebois:** Well, maybe I can do a general comparison. Today, the average capacity factor for the entire fleet in the US is approximately 89% to 90%, depending on the years, but typically that's the steady, good level of performance that we're seeing. Our four units at Darlington in fact are operating around that level as well, between 88% and 90%. Some of our units, obviously, in some years are doing a whole lot better than 90%. So we're quite satisfied with the performance.

Cost-wise, the Darlington plant, on a production unit energy cost basis, which includes all fuel, services,

labour and everything, is very competitive compared to the US counterparts.

**Mr. Leal:** Thank you very much, sir.

**The Chair:** Thank you. We'll move around, then, to the official opposition. Mr. Yakabuski.

**Mr. Yakabuski:** Thank you very much. We didn't quite get finished that last part of our question there, or maybe didn't get exactly the answer we might be looking for.

I'm just going to give you some numbers, and these numbers are taken from the Ontario Clean Air Alliance's latest publication. They are the numbers for sulphur dioxide and nitrogen oxides.

Sulphur dioxide: Nanticoke generating station, 2005, in tonnes, 67,947; Lambton generating station, 29,343.

Nitrogen oxides: Nanticoke, 23,171; and Lambton, 8,991.

I want to ask that question again: What would these numbers be if OPG had been allowed to continue its program of installing emission-reduction equipment on those stations, bearing in mind that it's the current Premier who cited those emissions as the reason for proceeding with a coal shutdown policy? It wasn't CO<sub>2</sub> at that time; it was smog-causing and health-affecting pollutants. Where would we be today, or in 2005—maybe you have numbers for 2006 as well; I don't know—but what would those numbers be, or could you approximate them, if this government would have continued to allow you to install that equipment?

**Mr. Hankinson:** Pierre, do you want to take that one?

**Mr. Charlebois:** Sure. First of all, today our plants meet all the regulations. In fact, the emissions at all of our facilities are well below the allowable regulations and limits set by the province. If we had been directed to install additional cleaning equipment on our emissions, then clearly the plants would be performing better. I'm not in a position to tell you percentages or numbers at this point, but what I would like to say is that the Ontario Power Authority has been asked to examine that question by the government. They are doing this work. We have been providing input to the Ontario Power Authority in terms of options or alternatives, and that work is currently in progress.

**Mr. Yakabuski:** So no directive to the OPA for the first three and a half years or so of the government's mandate, and now all of a sudden it feels it's necessary.

You have scrubbers and SCRs on how many units at Nanticoke?

**Mr. Charlebois:** We have SCRs installed on two units.

**Mr. Yakabuski:** Just SCRs on Nanticoke?

**Mr. Charlebois:** That's correct.

**Mr. Yakabuski:** And at Lambton, you have SCRs and scrubbers on how many units?

**Mr. Charlebois:** On two units.

**Mr. Yakabuski:** So two of four at Lambton and two of eight with SCRs at Nanticoke.

**Mr. Charlebois:** That's correct.

**Mr. Yakabuski:** So if you take those numbers at Nanticoke, it would be reasonable to expect that if all eight units had both types of emissions controls on, we would be bringing those down—85%?

**Mr. Hankinson:** Perhaps just to help with that, if I may, the two units at Lambton, units 3 and 4, which have FGDs and SCRs on them, are two of the 10 top cleanest units in North America. Nanticoke is a huge facility; if any of you have ever been there, you can't help but be impressed at least with the size of this operation. In North America, there's something like 475 coal plants. Nanticoke would be among the top third in terms of its clean emissions, but we'll quickly sink on that scale, perhaps to the bottom third, five years from now, if they're still operating, as the US moves to clean up their plants.

We're very careful to benchmark all of our operations, not only fossil, against the best out there. Today we have no apologies to make in regard to comparisons with the US. On the other hand, that will decline over time.

**Mr. Yakabuski:** If so directed, you would be prepared and in a position to install this kind of equipment at both Nanticoke and the remaining units at Lambton over what period of time?

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**Mr. Hankinson:** That would be one of the criteria that would be necessary from our point of view, to be directed, but secondly, we would want to be compensated. Our financial position at OPG is better than it has been in the past, but we're being asked by the government—and we're willing to do many more things, many projects, but that's a costly exercise as well. If we were asked to install more pollution equipment, I would hope it would be accompanied by a means or a revenue stream that would pay us for doing the work. So there are those two conditions from OPG's point of view.

We are a company with a commercial mandate and, in those circumstances where the government wishes to direct us in such a way that we don't consider in a narrow commercial sense to be appropriate, they have the authority under section 108 of the Ontario Business Corporations Act to so direct us. If we were so directed, yes, we would follow the directive.

**Mr. Yakabuski:** The Premier attached a great deal of value to the lives of 665 people a year in 2002. Certainly he can't have forgotten about them. I imagine he would be thinking that those lives still have some value, so I don't know why they haven't continued with the process of trying to reduce those emissions.

Are you familiar with Bryne Purchase?

**Mr. Hankinson:** Yes, I know who he is.

**Mr. Epp:** Mr. Purchase was the deputy minister when I did the review and when the interim board was established.

**Mr. Yakabuski:** Would you consider his credentials to be above reproach?

**Mr. Hankinson:** I just don't know him enough to be able to comment on that. He was not active at the time I became CEO.

**Mr. Yakabuski:** And what about you, Chairman Epp?

**Mr. Epp:** I had a good working relationship with Mr. Purchase and I don't think it's my responsibility or job to assess people's character.

**Mr. Yakabuski:** Oh, we weren't assessing his character, just his qualifications.

**Mr. Epp:** He's been deputy minister in this province.

**Mr. Yakabuski:** Are you familiar with the article that he wrote for the Globe and Mail with regard to this government's, I would say, kind of fuzzy energy policy?

**Mr. Hankinson:** No, I'm not, but I'm sure I'm going to hear about it.

**Mr. Epp:** Yes, I have read it.

**Mr. Yakabuski:** You have read it. Are you allowed to offer an opinion? Would you agree with Mr. Purchase's article substantively or somewhat or not at all? He was a Deputy Minister of Energy and a senior public servant for some 30 years, highly respected, that I'm aware of. Would you say that his article is credible?

**Mr. Hankinson:** I haven't read it, but if you wish to get to your point, we can talk about it.

**Mr. Yakabuski:** Well, I was kind of asking Mr. Epp because he said he had read it.

**Mr. Epp:** I have read it. With respect, you made a comment, if I might, right at the beginning that we have a responsibility to supply electricity, and that is true. But I want to emphasize that we have an operational responsibility and we want a clear mandate. We have a mandate and we have a clear relationship with the shareholder in terms of how we will conduct that relationship.

In terms of policy—with respect, I'm not trying to do a fifth on you—policy is the government's responsibility, or the agency's that it has set up to give advice on policy. Our job is to make sure that to the best of our ability the capacity that we have under our jurisdiction—that we fulfill that mandate.

**Mr. Yakabuski:** I understand that perfectly—

**The Chair:** Thank you, Mr. Yakabuski. We've run out of time on this round. I'd move to the NDP.

**Mr. Howard Hampton (Kenora–Rainy River):** Thank you very much, Chair. I want to welcome everyone here from OPG. I'm sorry I wasn't here for the opening round but I'm very happy to be here now.

I want to ask you some questions about your mandate. The memorandum of agreement that you have with the Ministry of Energy specifically says that you will not pursue investment in non-hydro-related generation unless specifically instructed to do so by the Ministry of Energy. Is that my—

**Mr. Epp:** Mr. Hampton, thank you. It's good to see a neighbour again. This comes out of the Manley report, on which I was a member. At that time, you will recall, we were asked to look at the future of OPG or what its future might be. We came to a conclusion, the three of us, and recommended that OPG was too spread out in the activities that it was engaged in at the time. We strongly supported, for example, alternative energy, but we also did not believe that OPG, which needed to get back to its mandate—or as we simply said, back to its knitting, which was running its plants—that it should be involved

in some of the alternative energy issues. It is from, I believe, that advice that the mandate was structured in the manner in which you read.

**Mr. Hampton:** I want to be very clear, though. You are not to pursue investment in non-hydro-related generation unless specifically instructed to by the Ministry of Energy.

**Mr. Epp:** My recollection, Mr. Hampton, goes back to that that was alternative energy such as solar or wind at the time.

**Mr. Hampton:** Okay. So it's your sense that—

**Mr. Epp:** With respect, as you will well know, the wind industry was just starting to, I'd say, form a critical mass in Ontario and we thought it was better to leave it to the people who were investing rather than to OPG.

**Mr. Hampton:** I'm just looking at article 4 of the mandate: "With respect to investment in new generation capacity, OPG's priority will be hydroelectric generation capacity. OPG will seek to expand, develop and/or improve its hydroelectric generation capacity. This will include expansion and redevelopment on its existing sites as well as the pursuit of new projects where feasible."

So in terms of new investment, your priority is hydroelectric generation.

**Mr. Epp:** If you look at hydro generation and new projects, you will recall—and you represented that area for a long time. When is the last time the old Ontario Hydro did a hydroelectric project?

**Mr. Hampton:** In my part of the province, they've done a few but they are—

**Mr. Epp:** Yes, or upgrades, that type of thing. So if you look at today, we're doing Lac Seul. We have been asked to take a look at northern Ontario; we're mapping that, or we are surveying that at the present time. If you're asking us at OPG, would we like to see more hydroelectric development, the answer is an obvious yes. If you're asking us at what price and, you know, what are the conditions that have to go into it to be successful about it, that's what we're now determining. But if you're asking us the simple question, "Would you like to see more hydroelectric development?", it's an obvious yes.

**Mr. Hampton:** Actually, I'm just interested in what the basic ground rules are. Article 4 says that hydroelectric generation should be your priority. Article 5 says you "will not pursue investment in non-hydroelectric renewable generation projects unless specifically directed to do so by the shareholder."

I'm going to ask you this: Have you been specifically directed to pursue any non-hydroelectric renewable generation?

**Mr. Epp:** Not renewable. The one that comes to mind that is not renewable on the direction was the Portlands.

**Mr. Hampton:** Okay, right.

Article 6: "OPG will continue to operate its fossil fleet, including coal plants,"—so "fossil fleet," I take it, would mean coal plants and natural gas, and oil?

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**Mr. Epp:** And oil, at Lennox.

**Mr. Hampton:** Oil at Lennox—"according to normal commercial principles taking into account the government's coal replacement policy and recognizing the role that fossil plants play in the Ontario electricity market..." until you're told otherwise.

So were you specifically instructed by the Minister of Energy or the government of Ontario to pursue the Portlands?

**Mr. Epp:** The answer is yes. If you need more colour on that, Mr. Hankinson can give that to you.

**Mr. Hankinson:** Yes, the OPA directed us to proceed with that at the request of the Minister of Energy.

**Mr. Hampton:** Again, I'm trying to get the working relationship down here.

**Mr. Hankinson:** Perhaps I can help with that. When the mandate was put in place, OPG's credibility with the government was not very high. They specifically directed us, as you have just pointed out, to the hydro side of the business. We had, I believe, a lack of credibility on the nuclear front, so they stayed away from that. And clearly on the fossil side, they had their plans in place. So it's not unusual that we were directed to put our effort into hydro.

**Mr. Hampton:** So you were specifically directed—the Minister of Energy to the OPA to you—to do the Portlands?

**Mr. Hankinson:** Yes.

**Mr. Hampton:** And were you specifically instructed to do it in the way that it has been shaped? In other words, it is a joint venture between yourself and another corporation?

**Mr. Hankinson:** We had established the joint venture relationship with TransCanada back a few years ago, so that was the opportunity that we had to offer, and the OPA seemed comfortable with that. TransCanada obviously has lots of experience in the field of generating electricity by gas.

**Mr. Hampton:** I want to ask my question again: When the direction came from the Ministry of Energy through the Ontario Power Authority to OPG, were you instructed to undertake this project as a joint venture with the private sector partner?

**Mr. Hankinson:** Let me put it this way: There was no choice. They were our partner and that was what we had to offer. But it did not cause any difficulty, if that's your question, from either the OPA or the government.

**The Chair:** Thank you very much. We must move on now. Mr. Duguid.

**Mr. Brad Duguid (Scarborough Centre):** Thank you very much, Madam Chair. Gentlemen, welcome.

I guess my first question follows up on questions that were asked by Mr. Yakabuski of the official opposition. It would appear that the position of the official opposition at this point is to continue with the operation of coal plants and try to come up with some form of clean coal generation. My understanding of that is that it's based on a technology that really, rationally, doesn't exist at this time when it comes to dealing with things like CO<sub>2</sub> emissions.

What I'd like to get from you today is just your comments on whether in fact clean coal is something that actually exists in terms of a technology.

**Mr. Hankinson:** As I said earlier in response to a question, when you look at clean coal, you have to be very careful with your definition. CO<sub>2</sub> is not a pollutant; CO<sub>2</sub> is a warming gas. NO<sub>x</sub> and SO<sub>x</sub>, mercury and particulates are pollutants. It's the pollutants that can be very effectively addressed with existing technology today. There is no really effective way commercially to deal with CO<sub>2</sub> at this point in time. So if your definition of clean coal includes CO<sub>2</sub>, then in fact there is no such thing as clean coal other than in pilot projects where CO<sub>2</sub> is captured, sequestered. That is a technology that obviously will be developed over the next number of years and likely will become commercial in years down the road, but not today.

**Mr. Duguid:** So if we were to base our future energy supply policy on clean coal technology, would you agree that there would be a considerable environmental risk to doing that?

**Mr. Hankinson:** Risk in terms of capturing CO<sub>2</sub>, yes. Risk in terms of capturing pollutants, not much, because today's technology will in fact capture in excess of 90% of the so-called pollutants.

**Mr. Duguid:** My understanding as well is that the performance in terms of emissions of Ontario's coal plants has improved significantly over the last little while. I'm not an expert on this stuff, but it's always good news when that's happening. Could you comment on how that's taken place?

**Mr. Hankinson:** Yes. I believe that in 2006 our emissions were the lowest in our recorded history, but perhaps I could ask Pierre to give you a little more detail on that if you'd like.

**Mr. Charlebois:** Clearly, the emissions from our facilities today are very much lower than they were in the past for the same energy production. There are a number of factors at play here. I think we've talked about those already.

We have installed additional equipment in some of our plants to reduce the emissions. By the way, I should point out that those plants, generally speaking, would operate ahead of the plants without the equipment to control emissions. Additionally, we've put additional money into maintenance of our facilities to ensure that those facilities are operating at peak efficiency and that the performance of the units is good so that we minimize emissions.

Finally, as you well know, demand is down in the province, but also nuclear production is up, as well as hydroelectric production. All of those displace the need for coal generation so that coal generation in fact is down and, as a result, our emissions are down.

**Mr. Duguid:** I suppose a priority for all of us now is the generation of new supply. When you look at the performance over the past decade, prior to the McGuinty government coming into office, that appeared to be an area that was severely neglected. As we move forward with our commitments in terms of closing down coal

plants, producing alternative sources of supply obviously is a major part of our ability to do that. Can you comment on some of the things that you're doing now to get us into that position, some of the things that we're doing to increase that level of supply?

**Mr. Charlebois:** Sure. First of all, on the hydroelectric, we're pursuing a number of projects. The Niagara tunnel, for example, will give us 1.6 terawatt hours of additional energy. We have a number of hydroelectric projects. Lac Seul, currently in progress, will bring about 12.5 megawatts additionally. But we're also looking at the Lower Mattagami project, which is an additional 450 megawatts of generation. We are pursuing that right now and getting estimates from our suppliers for this particular undertaking. That's on immediate hydroelectric projects that we're pursuing. We're looking at some longer-term projects as well.

On the nuclear side, as you know, we are continuing to pursue improved performance of our nuclear units. We are targeting about one or two terawatt hours more of production in the coming year coming from our nuclear units. Those clearly will displace some of the coal-generation requirements.

We've looked at the Ontario Power Authority plan as well, the IPSP, because we need to understand the expectations that will be placed on the coal fleet, which we see as a somewhat declining role going forward as new generation in the province, from both OPG and others, comes into play.

**Mr. Duguid:** Obviously, one of the priorities that the McGuinty government has is looking at clean and green and renewable sources of energy. Hydroelectric power is one of the areas that certainly the Premier and the minister have talked about a great deal as being a priority for us. I understand that our performance has increased substantially in this area over the last little while. Could you comment on that performance, how that's increased and the extent of that enhanced performance?

**Mr. Charlebois:** We're extremely proud of the performance of our hydroelectric fleet. As Mr. Hankinson commented earlier, we benchmark or compare our performance of the nuclear and fossil, but also the hydroelectric fleet. In fact, our fleet is performing extremely well relative to other hydroelectric facilities.

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In terms of availability, I was talking about Darlington at 90%. Our hydroelectric plant will operate at 93%, for example, in 2006 in terms of availability, so very, very high availability. If the water is there, we will use it to run our turbines.

Additionally, we've invested money in upgrading runners in our generators, upgrading the equipment in our power plants, both in terms of improving the efficiency of those units as well as reducing the energy consumption that we utilize in our systems inside our stations.

So going forward, for example, I can say to you that we're looking at about 150 additional megawatts that we expect to get out of our existing units as a result of upgrades and runners and so on over the next five years.

**Mr. Duguid:** How much time do I have, Madam Chair?

**The Chair:** You have two or three minutes.

**Mr. Duguid:** It could be enough time to get this next question answered. Talking about renewable energy, we've certainly made it clear that that's a cornerstone of this government's energy policy and our energy plan. Your mandate says that hydroelectric power is one of your priorities as well, and that's something that I think we've tried to show as much leadership and direction on as we can as a government. What are you doing to fulfill that mandate?

**Mr. Hankinson:** There are the projects that Pierre has just spoken about: the Mattagami River system upgrade, which will produce some 450 megawatts; Lac Seul, which is currently being constructed, 12.5 megawatts; the diversion tunnel at the Beck complex, which diverts water to the existing Beck complex and will produce, on average, 1.6 terawatt hours a year when complete. These are all the initiatives that we currently have underway in hydroelectric. We're also mapping some of the more northern rivers of Ontario and looking at potential there.

**Mr. Duguid:** Great. I guess a final question; I think there are a few more minutes left. There's a big difference in terms of the approach that was taken previous to the McGuinty government coming into office and after, I guess, the cleaning up of OPG. How would you contrast the last 10 years in terms of energy generation, supply generation, compared to the last three years?

**Mr. Hankinson:** I've been with OPG since May 2005, so I really don't want to venture too far back. But it's a different company. When Ontario Hydro was broken up, in 1999, I guess, we became a piece of that through OPG and took over the generating facilities absent the Bruce nuclear units which of course were sold off. Our level, as a generator, would be lower in the last three years than it would have been in the previous 10 years because OPG then did the bulk of the generation in the province. We now produce something like 70% of Ontario's energy.

**Mr. Duguid:** You danced around that question very, very well. I thank you. It was a tricky one.

**The Chair:** It's time for us to move on. Mr. Yakabuski.

**Mr. Yakabuski:** Picking up where I left off—and I perfectly understand your position on policy, Chairman Epp. You are the loyal servants of the shareholder; that is, in fact, your job. But I think it's also fair to say that you are the people most qualified to operate the system or you wouldn't be there. I hardly think that the Minister of Energy knows more about electricity or energy than you people do, or the people who operate those plants. I hardly think that any political person, including myself, knows more about the operation of the system than you people know, because you are the people who are paid to operate them. You are the experts. I understand that you don't want to comment about policy but I think it's fair to say—you recognize when something is right and you

recognize when something is wrong—whether or not you have the freedom to speak out. Would that be fair to say?

**Mr. Epp:** I have found full freedom in speaking to the minister.

**Mr. Yakabuski:** To the public?

**Mr. Epp:** My role is really not a public role. I appreciate what you're saying. If the minister wants advice, he will seek it from many sources; if he seeks it from us, either corporately or personally, I believe we're obligated to give that advice to him.

I'll just put it in these terms: As a Canadian, it is vital that Ontario gets this right. This is 40% of Canada's economy. With respect, Ontario does not compete with India and China; everybody does. But Ontario competes with other people also based in a North American commercial context, manufacturing particularly, and with all respect, I can't comment on policy, but I believe it is that question that people around this table and in the Legislature have to grapple with as they look at the future of energy in Ontario.

**Mr. Yakabuski:** I noticed that Mr. Duguid was peering into his crystal ball and trying to predict what the policies of the opposition parties might be with regard to emissions etc. One thing we do know, based on fact and history, is that it is clear that the position of the current government is not to reduce the emissions from these coal plants with available technology; they've steadfastly refused to do it. Now they say they're looking at it, but stay tuned till after the election, I'm sure. That is something that we absolutely know and something that we can document and demonstrate. They've said, "No, we're not putting on things that would reduce the pollutants," which they said lead to 665 premature deaths every year in the province of Ontario. The counter is going, I suppose, while this government refuses to do anything with it.

Talking about supply: You guys produce about 70% of the province's power. With regard to the future of OPG, other than the port lands, most of the new projects that have been talked about or proposed or started or completed or are in the various stages—what's the proposed date that you would actually have the lower Mattagami in operation?

**Mr. Hankinson:** Our projections call for commencement of construction in early 2008; Pierre, can you help me with the completion on that? Is it a two-year project?

**Mr. Charlebois:** No, I think we're looking at a four-year project here, but it really depends on—

**Mr. Hankinson:** It'll come on in stages, because there are four plants that'll be upgraded.

**Mr. Yakabuski:** Are we in a position to have the transmission available? Is it ready, or will it be ready? I know this is not your side of the electricity issue.

**Mr. Hankinson:** There will be an upgrade required on the line into the Mattagami area. With series compensation, the plan is to upgrade the capacity of the line by some 450 megawatts, which will accommodate the Mattagami development.

**Mr. Yakabuski:** Now I'm getting back to where I was starting: the supply. It would appear to me, and perhaps you can confirm it, that based on what the government has done thus far, less and less of the electricity generated in the province of Ontario will come under the umbrella of OPG, as almost all of the gas plants that were being developed are not—OPG would not be operating those plants. Is that correct?

**Mr. Hankinson:** If you go back to Mr. Hampton's earlier question about our mandate and how specific and directed it was toward hydro, I believe that part of the answer to that at the time was that there was not much confidence in OPG on certain other fronts. I think the government's and others' confidence in us has increased, given our performance, and as that happens, I find the government's attitude toward OPG much more relaxed in regard to having us look at other generation projects that come along; Portlands, for example. We're currently thinking of Lakeview. We have been asked to do the EA for new build at Darlington and we are currently looking at refurbishment of Pickering B, all with the support of the government. I think over time our mandate is broadening, although you don't see it in the words in front of you today.

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**Mr. Yakabuski:** Let's switch to some nuclear. When the minister, who was the previous minister and then became the Minister of Energy again—I guess maybe he didn't have his briefing notes with him; I don't know. But when they announced that they were going to build some new nuclear in the province of Ontario—that was last June or so—the press release that day was, "We're going to build two units totalling 1,000 megawatts in the province of Ontario." I'm wondering, do you know of anybody out there who's building 500-megawatt nuclear reactors?

**Mr. Hankinson:** No, I don't. Just to go back over that for a minute, it was the OPA who determined that there was an additional 1,000 megawatts required, the logic, as I understand it, being that that would maintain the existing level of nuclear capability in the province. It just so happened that the two units that we decided not to refurbish at Pickering would have been 1,000 megawatts. So it was really the difference between the 13,000 megawatts that would be available if all units other than Pickering 2 and 3 were refurbished and the 14,000 limit that was originally there. That's where the 1,000 megawatts came from, as I understand it.

**Mr. Yakabuski:** Of course, the way I read it was that the minister said, "We're going to build two units totalling 1,000 megawatts." I was curious as to where he was going to buy them. It indicated to me that perhaps the minister himself had a lack of understanding of what the availability and what the technology is today with regards to the building and development of nuclear reactors.

**Mr. Hankinson:** Obviously, I can't speak for the minister, but the gap was precisely as I indicated now.

**Mr. Yakabuski:** I'm just wondering how you can speak for that, how you can sort of understand his

thought process, but you can't comment on the fact that he actually said we're going to build 1,000 megawatts, two reactors.

**Mr. Hankinson:** As you may know, in the EA that we're going forward with at Darlington, we're looking at up to four units in a technology-neutral way. There are some units out there where one unit will produce 1,000 megawatts. It depends a lot on the technology that you choose.

**Mr. Yakabuski:** Let's talk about nuclear, then. The government says we're going to build 1,000 megawatts of new nuclear power. They can't seem to make up their minds: "Well, we're closing those coal plants"; "We're thinking of closing those coal plants"; "We're still committed to closing those coal plants." But at some point, they're going to have to close anyway; they'll be worn out. Given that at some point the existing coal plants won't operate, where do you see us with 1,000 megawatts of new nuclear? Is that adequate?

**Mr. Hankinson:** That really isn't a determination to be made by OPG. The OPA has the responsibility for the supply-demand equation. They are the ones who are currently doing all of the studies. We will do what is required of us in the OPA determination.

**Mr. Yakabuski:** I realize that, and that's going back to Mr. Epp's position. But you do produce 70% of the power in the province. I'm sure you do projections on a regular basis as to what the demands this year, next year, five years from now or whatever are going to be. If you knew that on a certain date those fossil plants are closed—and you also have a pretty good idea, I would think, of the ability to produce power from other sources—in your opinion, is 1,000 megawatts of nuclear going to be adequate, say, in 2014?

**Mr. Hankinson:** There is flexibility in the EA, as I've already indicated, for up to four units at Darlington. That's not our call, though; that's very much the OPA and, depending on what other generation supply projects they may be looking at, may require more or less of OPG. We can't determine that.

**Mr. Yakabuski:** The location of this said new nuclear: We're hearing various stories, rumours, positioning; everybody's got an idea of where it should or should not go. I guess one question that I'd have is about the AECL facility at Chalk River and the decommissioned reactor at Rolphton. Would Rolphton be a suitable place to build a nuclear reactor?

**Mr. Hankinson:** We've looked at the potential sites and have concluded that in our judgement Darlington is the best place from an overall point of view to have these units. You must look at the transmission system as it exists today. You need a willing host community. We have that in Darlington. We have the skills, and as Pierre has just mentioned earlier, Darlington has had an operating rate in the 88% to 90% range for the last couple years. So we feel pretty comfortable that Darlington is the right place from OPG's perspective.

**The Chair:** Thank you very much. We've run out of time. It's time to move on. Mr. Hampton.



**Mr. Hampton:** I have a few more questions I want to ask you about your mandate. You indicated in your 2006 financial report that you are exploring the possibility of building a natural gas power plant on the Lakeview site.

**Mr. Hankinson:** Yes.

**Mr. Hampton:** Has that been mandated by the Minister of Energy?

**Mr. Hankinson:** We were asked to look at the prospect of doing a gas plant at the Lakeview site and we have done that. We have done it in conjunction with Enersource, which is the old Mississauga Hydro, and we do have a joint venture arrangement with Enersource that if we are to build on that site, they will be our partner.

**Mr. Hampton:** So you were directed by the Minister of Energy to—

**Mr. Hankinson:** To look at the opportunity; to explore it.

**Mr. Hampton:** Can I ask you, what form did that direction take?

**Mr. Hankinson:** It came in the form of a letter.

**Mr. Hampton:** As I understand it if I read section B of the mandate, Governance Framework, article 2 of section B, “The shareholder may at times direct OPG to undertake special initiatives. Such directives will be communicated as written declarations by way of a unanimous shareholder agreement or declaration in accordance with section 108” of the Ontario Business Corporations Act “and be made public within a reasonable timeframe.” So that’s how these directions have to come?

**Mr. Hankinson:** Normally they do if we are being directed to do something that we don’t wish to do for narrow commercial purposes. In this case at Lakeview, it’s very much in our interests and desire to do a project. So if we get a letter from the minister suggesting that we should look pretty hard at our capability of doing that, we’re all for it.

**Mr. Hampton:** In this case you got a directive?

**Mr. Hankinson:** No. We have a letter that asks us to look at the prospect of doing a site. It would be the OPA who would ultimately give the directive to proceed in this case.

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**Mr. Hampton:** So have you received any directives like this, either a unanimous shareholder agreement or a declaration? Have you received others?

**Mr. Hankinson:** Yes, we have. They are posted on our website when we receive them.

**Mr. Hampton:** When you receive them?

**Mr. Hankinson:** Yes.

**Mr. Hampton:** Because it says they will be made public within a reasonable time frame.

**Mr. Hankinson:** I believe we post them very quickly. We’ve had, I think, three or four directives at this point.

**Mr. Hampton:** So you have directives. Then you’ll get letters from the minister indicating that the government would be pleased if you would undertake X or if you investigate ABC?

**Mr. Hankinson:** We did have a letter in the case of Lakeview, yes.

**Mr. Hampton:** Have you received other letters indicating where you should be focusing your efforts?

**Mr. Hankinson:** I believe our advice from the government with respect to new build for the EA came by way of letter. Pierre?

**Mr. Charlebois:** That’s correct, yes. The request was to start the environmental assessment process on the existing, established site for a potential new, future nuclear.

**Mr. Hampton:** So that was by letter; that wasn’t by directive?

**Mr. Hankinson:** That’s right. Where we get pretty sticky about having a formal directive is in the those few instances where we don’t believe that it’s a commercial project, and therefore we request formally that they follow section 108 of the Ontario Business Corporations Act.

**Mr. Hampton:** I think you probably know what I’m getting at here. On the one hand, we’re told you’re supposed to be a business corporation, but on the other hand—

**Mr. Hankinson:** Yes, but I don’t believe that’s inconsistent. What I’m saying is that there are certain areas where we would like to proceed—for example, we want to proceed with new nuclear. There’s no reason we would object to that, so if I get a letter from the minister saying, “Go ahead and do it,” we go ahead. If we get asked to do something that we don’t believe is in the best commercial interests of OPG, then we formally request a directive.

**Mr. Hampton:** And it’s your discretion to post the directive? Is it discretionary for you to post the directive?

**Mr. Hankinson:** It was by our choice to post the directives, because normally, if we get a directive, it will mean that we’re being asked to do something that we don’t believe is in the best interests of OPG from a commercial point of view. And if you read the preamble to our mandate, it says that we are a commercial organization, we are to operate as one, and indeed we have a fiduciary responsibility to operate that way as an OBCCA company, so if we are getting a directive that we believe not to be in our best commercial interests, the government has every right to do that but to do it by following the formal process of a section 108 directive.

**Mr. Hampton:** So let me ask you, what’s your relationship with the OPA? Is the OPA, for all intents and purposes from your perspective, an arm of the government? In other words, if the OPA says to you, “We’d like you to do thus and so,” if you don’t think it’s a commercially viable operation—how do they interrelate with you? Do they send you directives?

**Mr. Hankinson:** There are a number of agencies that are in place and we work within that framework. If we are formally directed to do something and it’s done in a proper manner, we will honour that directive.

**Mr. Hampton:** So have you received directives from the OPA, separate and apart from letters or directives from the government?

**Mr. Hankinson:** Most directives—well, I believe all directives now—would come through the OPA. The reason, perhaps, our original directive may have come directly from the Minister of Energy was that the OPA did not exist at that time.

**Mr. Hampton:** So conceivably you could now get a directive from the government, from the Minister of Energy, and you could get a directive from the OPA. The fact that the OPA is now there does not then somehow remove the Minister of Energy from the picture? You could get a directive from the Minister of Energy and you could get a directive from OPA?

**Mr. Hankinson:** No, I believe it would be more in the line that the minister would be at one remove. He would direct the OPA, which would, in turn, direct us. That's part of their mandate, the OPA.

**Mr. Hampton:** But it's conceivable you could get a directive directly from the minister.

**Mr. Hankinson:** Anything's possible.

**Mr. Hampton:** I'm talking about the legal framework here.

**Mr. Hankinson:** I don't know about the legal framework. I would have to take advice on that, but I would normally now expect, with the OPA in the equation, that the directive would go from the minister to the OPA and OPA to OPG.

**Mr. Hampton:** You mentioned in some of the answers that were given earlier that you're in constant talks with the Ministry of Energy on issues related to your mandate.

**Mr. Hankinson:** I'm not sure I said that.

**Mr. Epp:** You'll have to help us on that; I'm sorry.

**Mr. Hankinson:** Either our memory is short or we don't remember what we said.

**Mr. Hampton:** Research folks who work for the committee submitted a number of questions to you, and I believe the response to question 7 was that you're in constant talks with the Ministry of Energy on issues related to your mandate.

**Mr. Hankinson:** We do have open dialogue, at various levels within our organization, with the ministry. We co-operate fully in that regard.

**Mr. Hampton:** How long is your current memorandum of agreement in effect?

**Mr. Hankinson:** How long has it been in effect?

**Mr. Hampton:** Is there a timeline on it?

**Mr. Hankinson:** I don't believe so, no.

**Mr. Hampton:** So when you say you're in discussions with the ministry about your mandate, are there areas of your mandate that you believe should be changed?

**Mr. Hankinson:** No, but as I indicated earlier, as we at OPG gain credibility we are being asked to take on more and more in terms of generation that was not initially contemplated when that memorandum was put in place.

**Mr. Hampton:** Just so I'm clear, how long are you before the committee? Until when? All afternoon, all day or just until noon?

**The Chair:** Until noon.

**Mr. Hampton:** Do we have another round?

**The Chair:** We have individuals speaking this afternoon about OPG.

**Mr. Hampton:** But will we have another round with OPG?

**The Chair:** Thursday morning for one hour, which is really designed for them to respond to the people who—

**Mr. Hampton:** I have a lot more questions, but I want to ask you this question. As you would appreciate, because I think you read the newspapers as much as we do, there has been some controversy about things like pay, pensions, perks etc. It was the government's position—the former Minister of Energy said that she called folks together from the various hydro agencies to review these issues. I guess this is really a question for you, Mr. Epp, although, Mr. Hankinson, you could jump in if you'd like.

Many of us were confused because what we got was that there was a discussion, a review, and then it was only a short time after that that the issue of pay, perks and so on became a public issue in the papers again, but not necessarily with your agency. Can you tell me: What was the content of this review of pay, salaries, perks, pensions, bonuses etc. that apparently happened?

**Mr. Epp:** Mr. Hampton, if I might, this might take a little while and it's a valid question. Before you came into the room, Mr. Hampton, I introduced Bill Sheffield, who is the chair of our HR and comp committee. If you don't mind, I would prefer if I as chair and Bill as chair of the committee would answer the compensation questions rather than the individuals involved.

**Mr. Hampton:** Sure.

**Mr. Epp:** I'm not trying to bypass your question. Let me start out this way and then I'll turn it over to Bill. There will be a couple of factors, and I'll go over them quickly to give the context, and then you can ask the questions.

When some of us took responsibility on an interim basis at OPG, a number of things had to happen. The first thing that had to happen was, how do we gain back the public's trust? Only time does that, but there had to be some immediate actions. Number one, on perks: The perks that existed—not all of them, but a lot of them, such as golf memberships—and OPG had a fairly, shall we say, attractive stable of memberships on various golf courses. I eliminated all of those. The issue of boxes at the ACC, at the Rogers, at Stratford, at Shaw, you name it: I eliminated all of those. I just felt that we had to take some action quickly.

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Secondly, from 29 executives we went down to 22. That reduced the payroll on the executive floor by 11%, which is still in existence. We then froze those salaries; we froze the bands. LTIPs, long-term incentive plans, were eliminated. So there were some things, and there are others, but those were done up front and quickly.

When the board was established as it was, we said we had to have good governance and good benchmarking in

relationship to salaries. There, if you don't mind, I'll turn to Bill, and then you'll probably have not the whole picture, but at least the outline of what was done.

**Mr. William Sheffield:** Let me start by answering your question about the conversation with the previous minister. The chairman and I both went and met, as was explained in the House, and we explained how the system works, what has been done to date, what we do to make sure the decisions we are making are the right ones. I'd be happy to give you a snapshot of how that all works if that would be helpful at this point.

**The Chair:** We are under constraint of time, so I'd just ask you to make your comments—

**Mr. Sheffield:** Quickly? Okay.

**The Chair:** Thank you.

**Mr. Sheffield:** We're actually glad you've asked about the issue because it's difficult for all the people at OPG to be listening to this conversation, which indirectly affects them. The way I would best put this is, when the new board was put together and we put together the appropriate independent compensation committee, we then went out and decided to hire an external adviser. We interviewed a number of them; we picked Mercer.

We asked them to go back and look at everything that's been looked at before and compare the salaries we paid to the executives to two different benchmarks. One of the benchmarks is the general private sector, because we do compete for some of those executives—certainly some of them. Second was the utility sector. The utility sector is made up of all the names that you would have seen in the press. You may have actually used some of them: Manitoba Hydro, Quebec Hydro, BC Hydro. It also includes the other private sector players in the same space such as Adco, Fortis and TransAlta.

We compared to both of those to see how we do because we know full well that what we need to do is retain and recruit the best but at the same time recognize that the people we're serving through the current shareholder, whatever government is in power, are the people of Ontario. So we target ourselves to be as close to the utility sector as we can but pay enough to bring in the best people. So if you look at where we actually are, we would have ourselves at a little bit above—we target to be at about the 75th percentile of the utility sector, which would put it near the top of other publicly owned enterprises, other utilities, but at 50% or below in the private sector. In fact, if you look at our very senior executives, we do well in the cash compensation, which is basically the base salary plus the annual bonus, in being competitive. We have a little bit better pension plan, but we have no long-term incentive plan. So if you actually look at our top executives, they bring in, in total compensation, probably about half of what they would in the private sector.

We have a number of graphs that we showed to the minister. We'd be happy to share them with this committee if you'd like to do that, or if you'd like to talk to the experts who know the markets best. But that's what we do. Our people are paid well, yes. Are they paid

above market? No, they're paid below private sector market, but at the top of the utility sector because it has the most complex and most important assets in the business.

**The Chair:** Thank you very much. We need to move on. Mr. Leal.

**Mr. Leal:** Mr. Sheffield, if you'd like to continue, because this is an area I can assure you that from time to time constituents phone me about—and, I'm sure, all my colleagues here today. I'd like to give you the opportunity to add to your answer to Mr. Hampton's question. It's an area that the public really needs to understand—this issue on compensation.

**Mr. Sheffield:** Let me make a comment, and I don't mean this to sound flippant. My mother never understood why I got paid as much as I did as a CEO. The only reason I'm saying that is because there's no reason in the world that all of the people in Ontario should like the fact that there is an executive talent marketplace.

**Mr. Leal:** I understand that.

**Mr. Sheffield:** But, unfortunately, it exists. So the board's job is to make sure we retain and recruit the best people. We can't ignore it. We can't wish it away. We can't have it go away with government decree. So we deal with it.

If I were in a debate and you would say to me, "Please, make everything match BC Hydro and Quebec Hydro," I would say, "Well, that's being selective in who you compare to." I could also use a comparison using Alberta's energy sector or the US power sector. Then we wouldn't be talking about CEOs' salaries around a million and a half; we'd be talking \$5 million, \$10 million, and all of us would be getting tomatoes when we walk outside the door.

So the reality is, we've tried to pick what we think are benchmarks that make sense, but we have to make sure we have the best people. Nobody has nuclear assets that are anything like or as critical as the ones in Ontario, so we have to have the best people.

The other market that we don't benchmark directly in our philosophy but we have to watch closely is the US. The market for nuclear executives is very thin. We basically have OPG, Bruce Power, and that's kind of it; a little bit in New Brunswick, a little bit in Quebec. But it's basically US. So we're always cognizant of the fact that the US, with their renaissance in nuclear, is looking for talented people, and they're ours.

Just to give you a sense—let's not talk about the executives—it takes 10 years to get a nuclear operator trained so that we feel comfortable having them run the show. So you can imagine: You can't have a learning executive in charge.

**Mr. Leal:** Thank you very much for that very full explanation.

If I could continue with a question to Mr. Hankinson, one of the things I heard—I guess about a year ago; I think it was in a presentation by executives from AECL. Could you confirm to me that the last four projects that AECL had in China were on time and on budget?

**Mr. Hankinson:** I'm told that that's the case and I have no reason to not believe that to be true.

**Mr. Leal:** Do you get a chance to review, from a financial and construction aspect, those projects to assist you as you go forward in terms of the plans for Darlington and the expansion at Darlington?

**Mr. Hankinson:** We're looking at a lot of major capital projects under way all over the world, not just nuclear. We're trying to find out: For those that go off the track, why do they go off the track? We're wanting to learn from those lessons. For example, we've talked to Boeing; we've talked to nuclear operators. We will look at those issues that cause projects trouble. How will we proceed if we're asked to new-build or to refurbish existing plants? We will not be like the old Ontario Hydro, which did design-build and construction on their own. We will be managers of projects and we will be looking for turnkey operations whenever and wherever we can get it to pass the risk on to those who will actually be doing the work. So that's our approach. We no longer have the huge construction capability that Ontario Hydro had in the past.

**Mr. Leal:** If I could continue with my next question through to Mr. Epp: Mr. Epp, I know you are very interested in First Nations as a former Minister of Indian Affairs and Northern Development during your cabinet time in Ottawa. Could you share with us this morning your work with First Nations communities in northern Ontario in terms of partnership to develop some hydro-electric opportunities?

**Mr. Epp:** I'll be very specific. If any success has been realized—and there is, and I'll point it out—it's the people at OPG. I don't think I have to tell you and others who have represented northern Ontario for many years in the Legislature that the relationship between the old Ontario Hydro and then OPG and First Nations at best has been one of antipathy, of wrongs not righted. If one is going to follow a mandate of developing hydroelectric power in Ontario—the point that Mr. Hampton highlighted in his questions—you've got to change that relationship. Those of us who have a little bit of experience in that area know that there has been a renaissance in First Nations of Canada. Today we have celebrations of business success among the First Nations. We have people in the universities and colleges. This sounds like an old guy speaking, but back in 1979 we literally counted the number of people we had of First Nations background in post-secondary education. If I can be very specific, I remember hiring Roberta Jamieson, who was just new, coming out of university. All that has changed. There's expertise, there's knowledge in First Nations.

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Secondly, we at OPG had a change. OPG has changed now that we've got a very active First Nations secretariat, if I can call it that. They're in negotiations. We know that Mattagami will not be developed without an arrangement or agreement. Also now, in some of those agreements, they'll not only look at past grievances that haven't been taken care of, but can they be a partner for the future?

I'm hopeful; I'm hopeful for many reasons, not least of which is that I think it's more often attitude in these things that can give you a change of atmosphere than actual facts. But I'm glad, whether it's Lac Seul, whether it's Mattagami, whether it's what we're doing now with Moose Cree or with the others, that if we're going to get that development, First Nations are going to be part of it.

**Mr. Leal:** If I could continue—

**The Chair:** One minute.

**Mr. Leal:**—one minute—Chairman Epp, the Auditor General reviewed some activities with OPG. Our government provided him with the powers to lift the veil and look at a number of things. Could you indicate to this committee this morning your response and your ongoing response to the auditor's findings?

**Mr. Epp:** Yes, I can. I was smiling when Mr. Hampton said, "What other communication do you have with the minister?" I got one this morning by letter. He said, "Jake, I hope you are following the Auditor General's report and implementing its recommendations."

The answer is yes to all those questions. Jim and others—Donn and the people who have these responsibilities directly—have looked at every one of the recommendations and are implementing every one of the recommendations. I might even say—Jim might not like this—that we went too far, but in order to be responsible, that was done: employee recognition, for example. I have no question that the Auditor General's report is one that we accept, one that we have been studying and one that we're implementing.

**The Chair:** Thank you very much. Mr. Yakabuski?

**Mr. Yakabuski:** This is likely the last round, then, is it?

**The Chair:** Yes.

**Mr. Yakabuski:** You said in your earlier statements, Mr. Hankinson, that at OPG you believe that it's very important to do what you say you will do. Not that you have any interest, but I can assure you, you have no future in the Liberal cabinet.

But anyhow, on the—

**Mr. Epp:** I'm sorry, sir, he's not available. He's at OPG.

*Laughter.*

**Mr. Yakabuski:** I know that. Given the on again/off again, the to-and-fro and the complete backtracking on so many of their energy policies, now I want to talk about the nuclear policy. Let's assume that Darlington was approved as the site for the 1,000 megawatts of nuclear power. How would you put 1,000 megawatts of nuclear power at Darlington?

**Mr. Hankinson:** If I may, I'll ask Pierre to speak to that.

**Mr. Charlebois:** As we discussed earlier, our initial application for the site preparation licence indicated that we were looking at up to four units. We did not get any direction from the government in terms of actually proceeding with any projects or any construction at this point in time. Our direction from the government is purely to begin the environmental assessment process on

an existing site. For us, Darlington is the preferred site, as Mr. Hankinson outlined. At the present time, what we are doing is the environmental assessment work for up to four units, being very clear that currently the maximum allowed in Ontario for nuclear generation would be limited to 14,000 megawatts. What we are doing is creating options and alternatives for ourselves and for the province and for the OPA for the future. We don't have any mandate or any direction to actually start any construction.

I think you may be aware that at the same time we are considering the feasibility and the commercial business case for a life extension of Pickering B. In the event that a decision is not favourable on Pickering B, one of the alternatives would be to potentially utilize some of that space that is available at Darlington for extra construction.

In essence, I think it's way too early to talk about how we can build 1,000 megawatts and, "Is there such a reactor out there?" There are reactors of that size, yes, but we will examine the different technologies, the different sizes, the economics of those, in our consideration. The discussions around how many and what size and so on are for down the road, not for right now.

**Mr. Yakabuski:** A single reactor of 1,000 megawatts wouldn't currently be available from AECL, so what would the options be?

**Mr. Charlebois:** You're correct in saying that the Candu 6E from AECL is obviously a smaller reactor of about 700 megawatts. The new advanced Candu reactor, which is on the drawing board at this point, is slightly larger than 1,000 megawatts. There are pressurized water reactors. The standard nuclear power plant being built in Korea is in fact 1,000 megawatts. So there are 1,000-megawatt reactors that are available, and that's one that is on our list of technologies for consideration.

**Mr. Yakabuski:** If Darlington was chosen as the site, do you have a preference with regard to the technology, given the fact that all of your reactors today are heavy water reactors, AECL Candu reactors? Do you have a preference as to what would be the reactor choice of the future?

**Mr. Charlebois:** First off, part of the direction that we received from the government in looking at this was—and I think you're aware—that they are interested in seeing Canadian technology and so on being considered in the process but they want to make sure that we get the best value for the people of Ontario. So the process that we have launched, in effect, will examine the various technologies.

**Mr. Yakabuski:** I'm asking if OPG has a preference.

**Mr. Charlebois:** No. Right now we are conducting an objective process to look at the alternatives, the benefits and so on. I can assure you that our employees clearly know the Candu technology well; we have a lot of confidence in that technology, and many of our employees would like us to continue to use that technology on the project. We at OPG are looking at the alternatives very objectively.

**The Chair:** We've run out of time. I want to thank you for coming this morning and giving us some insight. We will recess until 1 p.m.

*The committee recessed from 1201 to 1304.*

## SOCIETY OF ENERGY PROFESSIONALS

**The Chair:** Good afternoon. I'd like to call the committee to order. This afternoon we are pleased to welcome members of the Society of Energy Professionals. For the purposes of Hansard, I'd ask each of you to introduce yourselves. You will have 15 minutes in which to make your presentation, and that will allow for a five-minute rotation amongst the parties here. Please begin.

**Mr. Andrew Müller:** Thank you, and good afternoon. My name is Andrew Müller. I'm the president of the Society of Energy Professionals. I have a number of our members here with me today, both at the table and in the audience. To my right is Lanny Totten, who is a vice-president of our organization and is elected by the members from Ontario Power Generation. To my left I have Joseph Fierro, who is one of our elected reps from OPG, and Joel Barton, who is also an elected rep from OPG.

I was reminded that while all four of us are actually OPG employees, we are here today speaking on behalf of the members from our union and not the company, so we will try to restrict our comments to our opinions as union members and not as employees. I'm not a stranger to this committee; I was here when you were reviewing Hydro One and I ran out of time, so this morning I'm going to talk quicker and flip faster.

Just quickly running through the slides, we represent over 7,000 professionals—scientists, engineers, supervisors, IT professionals and so on—in the electricity industry, at most of the major companies that are in this industry, whether it's Ontario Power Generation, Bruce Power, Hydro One, the IESO and so on. Our members work in all aspects of the industry, whether it's design, build, operate, maintain, provide consulting and professional services, and so on. It's particularly because of our expertise and our professional ethics that we feel it's important for us to speak out and to maintain our ability to speak out on issues around electricity.

One of the common themes I think you'll see throughout the presentation—and we heard some of that in the questioning this morning—is around the mandate of OPG and whether it's a private company that's operating to make money or whether it's a tool, an arm of the government, to implement social policy. I think that's really the key question in all of this.

Back in 1999, as we discussed this morning, Ontario Hydro at the time was broken up through Bill 35. OPG's mandate at that time was to reduce their share of generation in the market. This resulted in a number of changes in the company, including the sale of the Mississagi River plants—there are four hydroelectric plants on the Mississagi River—and the leasing of the Bruce nuclear power facility.

We wanted to point out that those facilities are costing more now to the ratepayers of Ontario because of the price for the electricity they receive as compared to what Ontario Power Generation would have received if our company still owned those facilities. It gives you just a sampling of the cost of electricity and the impact that restructuring has on the price of electricity.

OPG was also forced by this situation to look at spinning off businesses, departments in the former Ontario Hydro that serviced all of the generating facilities. For that reason, it then became more prudent for them to spin off these organizations so they could continue to service the now private organizations. The information technology department, our research division and our nuclear safety department all ended up being spun off into separate companies.

This era of turmoil obviously caused a lot of strained labour relations, a lot of difficulties for our members, employees of the company, as they went through restructuring and downsizing and so on. But finally, in 2004, things began to stabilize. OPG's mandate was more consistent and I think things were becoming better for the company and for our members as a whole.

Recently, we've signed a five-year collective agreement with OPG, which we think is a testament to a fairly strong relationship between our union, our members and the company. We think the current situation is a fairly reliable producer of power, an improvement in the health and safety record and so on.

Looking back, in the years prior to now, OPG was covered by the market power mitigation agreement, which is an agreement that basically capped the revenue that OPG was able to retain from the sale of electricity. During the period, they paid almost \$4 billion in rebates to the ratepayers of Ontario, because the price of electricity was higher than OPG was allowed to receive for their electricity.

In April 2005, based on a return on equity of 5%, OPG paid \$740 million in the last nine months, again to protect consumers from the high price of electricity. That, I think, goes to the social policy mandate that OPG, and Ontario Hydro before it, had. I actually think that's a good thing. I think our organization thinks that's a good thing: that OPG is helping keep the price of electricity low for the people of Ontario.

Again, by comparison, if you look at the nuclear side of the business, Bruce Power's A units are receiving \$63 per megawatt hour, whereas the Pickering A units are receiving \$49.50 per megawatt hour. Strictly based on price, obviously OPG is able to continue and make it go at a much lower rate, and that, when blended into the overall price of electricity, helps the ratepayers.

Now, the difference in this is had OPG been paid \$63 per megawatt hour instead of \$49.50—obviously this is a huge source of revenue and was discussed this morning—it could be money that OPG could use to invest in other projects, be they hydroelectric projects, scrubbers on coal-fired plants etc.

Currently, the rates that OPG receives are capped for essentially their baseload hydroelectric generation and for their nuclear generation. Hydro is regulated at \$33 per megawatt hour and nuclear is regulated at \$49.50. Essentially, the peaking hydroelectric power and the fossil generation are capped at \$47 per megawatt hour. These prices put a limit on what OPG can do as a business. While they are incorporated under the Business Corporations Act, they have to make decisions based on the money they are going to receive for the generation, and that limits what's available to them.

#### 1310

Getting more specifically into the various lines of business: In the hydro business, we think probably the most meaningful relic from the Ontario Hydro system was their motto. I gather there are a few spelling mistakes in our Latin translation, but essentially the motto was, "The gifts of nature are for the people." I think the Ontario public sees that our river systems and hydro plants really are taking advantage of the gifts of nature, and that should be for the people of Ontario.

OPG operates 64 hydroelectric plants, almost \$8 billion worth of assets, and 7,000 megawatts of capacity, and these are very affordable to run, maintain and operate. In fact, before the breakup in 1999, many of the plants had zero dollar value on the books because they had long been paid for, but obviously they are priceless as assets to the people of Ontario.

OPG has improved and continues to improve relations with the aboriginal people. Many of these plants are located in their areas, and many of the new opportunities for hydroelectric plants are located either close to or on First Nations land. I think you heard this morning that OPG has made major steps in improving relations to allow for further development and further opportunity, something that we strongly encourage.

The question that came to our mind was how to keep our hydro system healthy. The biggest concern there is the revenue that OPG gets for their power. Part of what goes into the cost of the power is a gross revenue charge for the users of water, whether it's from the lakes and so on. Our concern is that the charge puts large projects at risk. Large projects have to pay more for the use of the water and that obviously impacts on the economics of the operation.

We're concerned about power purchase agreements and the need for them, because Ontario Power Generation in a lot of instances is forced to bid their electricity on the market, and that gives price uncertainty. Therefore, it's hard to come up with a business case to justify new projects if you don't know what price you are getting for the electricity. If the government is interested in pursuing more hydroelectric projects, providing some stability and some knowledge of what the price will be would greatly assist OPG in pursuing those projects.

There are up to 3,024 megawatts of potential development out there and 500 megawatts of pumped storage capacity available if the economics are right and we can pursue them. Some of the major sites are the Upper

Mattagami, Lower Mattagami, Albany, Little Jackfish and the Severn River. There's been much talk about an east-west corridor for transmission through the province. There would be a lot of synergies between a corridor such as this and development out of these hydroelectric sites. Many of these sites are in northern Ontario and one of the major issues is to get the transmission down to where the load is, primarily here in Toronto. An expanded grid would greatly help that and enable those projects.

**Fossil generation:** As we heard this morning, the current mandate is to operate all the coal plants until instructed otherwise. OPG is meeting the environmental regulations, but there are concerns about how they could improve the emissions from these plants if there was money to do so, and also an opportunity to improve their reliability and efficiency if the plants had a future and if there was a case to invest in those plants. OPG is maintaining the flexibility to operate these plants according to the shareholder's directions.

OPG, as we heard, was recently asked to look at development of a gas plant at the former Lakeview coal plant site.

Some of the issues we see with the fossil generation: It plays a critical part in the energy mix of Ontario. Our recovery from the 2003 blackout was in large part due to the ability of our fossil plants to bring on power and get the grid back in business.

I'll note that our fossil plants were essentially a \$224-million asset that was written off when they were told to close the plants. That just gives you a sense of the value these facilities have to the people of Ontario if we were able to use them.

The current thought from the integrated power system plan is that coal plants need to continue to operate beyond 2014, and we're very much of that view. These plants are critical to keep open for backup, for support during outages and so on. There are not enough funds currently to keep the facilities operating in the current circumstances, and that's a big concern for us. OPG needs more revenue if we are to keep these plants open and operating and to keep them as clean as possible. We heard this morning that, as time goes on, emission limitations will constrain OPG's ability to generate.

Moving on to nuclear power plants—refurbishment of Pickering, for example—we strongly believe that Pickering B should be refurbished. That will extend its life out some 30-odd years. We think it's a very positive thing for Ontario and for the electricity system. OPG, as you heard, is going through the process of hearings to get approvals to do this and we think it's very key to that that we get on with that decision. Darlington also needs to be looked at, and timing is critical for all these plants to be able to do that refurbishment.

The rationale for Pickering, we believe, is good. It's cost-effective against other options and very good on the environmental side of the equation—no greenhouse gas etc. There is local community support. We have existing transmission lines there that make sense to do this

project, and Pickering is a \$440-million asset that should be preserved and used as much as possible.

There was talk again this morning about new nuclear power. We are strongly supportive of the next plant being built at the Darlington site, for a number of reasons: strong support from the community, existing facilities and transmission capability. We think both for reasons of supplying the load and for the speed with which it can be done that Darlington is an obvious site. We're also very supportive of the Bruce nuclear site as another location for a nuclear plant, but there are some issues that need to be addressed there, which is the only reason why we put that second in the scheme of things as far as the timeline is concerned.

What's critical to any new nuclear power is a strong and consistent direction from the government. There is a lot of news and stories about why Darlington was delayed and why it was so expensive, but I think the single biggest factor was different decisions, different directions given to Ontario Hydro at the time regarding the construction that had a tremendous cost impact.

The society, as an organization, fully supports the use of Candu-designed reactors supplied by AECL. We're very proud of our members' performance in AECL and their ability to complete projects on time and even under budget. We think that experience can be easily translated here to Ontario, where we're closer to suppliers and closer to an industry that's very familiar with that. We think it would be a great thing for the economy and a great thing for Ontario.

Obviously, one of the questions that comes up when you talk about nuclear power is nuclear waste. Our members have spent a long time working on this subject, have done a lot of research and done a lot of support. We believe there are technical answers out there for the safe storage of low-, intermediate- and high-level nuclear waste. It has now become a political decision that the federal government has to make. I'm sure you are aware that there were hearings by the Nuclear Waste Management Organization into this. There are other jurisdictions, other countries, that are dealing with the issue, and it's now a political one.

**1320**

To just quickly wrap up, as a union, one of our major concerns is labour relations and the shortage of skilled people. We think things are improving at OPG, but there's more to do, and we'd like to work with them to improve the environment at OPG.

**The Chair:** Thank you very much. We'll go in rotation. I think we started with the official opposition this morning, and so we'll move, in starting this afternoon, to the NDP.

**Mr. Hampton:** I recognize I only have a couple of minutes. So one of the issues that your members would see close up is the fact that, for example, on the nuclear front, Ontario Power Generation gets a certain rate for generating electricity. The nuclear plant that's run by Bruce Nuclear gets a much bigger rate. Let's say, in terms of hydroelectric power, you get a certain rate.

Those companies like Brascan which now own hydro stations get a much higher rate. What impact has that had in terms of the work that you do and the prospects for work down the road?

**Mr. Müller:** I think first of all it's a testament to our members and their company's ability to turn a profit under tougher circumstances. Obviously, with the capped rates, OPG is still a successful company. That's a good thing, but clearly that limits their ability as a company to invest in things that aren't clearly a direct payback, whether it's environmental controls or pursuing new developments and new projects. That cap on their revenue makes it difficult to justify and difficult to pursue new generation, for example.

**Mr. Hampton:** In the drive to privatize Ontario's hydroelectricity system, a number of things were in fact privatized, so I understand that information technology, research and nuclear safety are all now run by private entities. Yet you have members who continue to work for those new profit-driven private entities. What do you see happening there? Has this experiment worked? Whom has it worked for? Whom hasn't it worked for? Do you have a sense of it?

**Mr. Müller:** We were very concerned about that trend when it was happening, and we remain concerned. There's a certain line of logic that seemed to make sense if you were going to take OPG down to 35% of the generation in Ontario. That meant a number of the plants would somehow be sold off to private companies, and therefore there might be some efficiencies in an IT department's being able to service all of those plants, as they did under Ontario Hydro, but now as a separate entity.

That never happened. As you heard this morning, we're at about 70% of the generation in Ontario. The business driver that would have said they should have been privatized so they could service a number of different independent plants is no longer there; it actually never came to fruition.

So from our perspective, this isn't good for our members as employees of these companies. Their businesses hinge strictly on OPG or Hydro One, for example. There aren't the efficiencies. We see to some degree some duplication in those companies because it's difficult, when you outsource a key service, to trust a private company to provide you with what you need, so as an organization you tend to rebuild to some degree your own capacity to do that work. So I think it's costing more, I think it's putting some risk in the supply of that service, and we don't think it's a good idea.

**Mr. Hampton:** You mentioned that one of the things that OPG is looking at is, of course, more hydroelectric power, but you also mentioned that, from your perspective, what OPG needs to see is a power purchase agreement or a regulated rate that is dependable or where we have some knowledge going in. Why is that important in the current context that OPG operates in? Why is a guaranteed rate or a power purchase agreement important?

**Mr. Müller:** OPG, in our minds, is forced to wear two hats simultaneously. On one hand, they're an arm of the government and implement decisions or directions the government is interested in doing. Oftentimes, that's a very good thing. At the same time, however, they're forced to participate in what's called a hybrid electricity market, where they have to bid their electricity and run the risk that the price may be low today as compared to tomorrow. It becomes very difficult to pursue these options and take these risky ventures when you're not certain what to rely on if you're going to get another direction from the government to do something different from what was in your plan.

A completely independent private company can assess the risk on one level and determine the sort of project they're going to pursue, and they may win or lose in that assessment. But they're not suddenly given a direction to do something else that has an impact on their business plan. On the other hand, a government agency, with the backing of the government, can decide to pursue a venture, and if there's a change in direction, the government makes that decision based on the economics, and it may still be the right thing to do even if it costs money.

OPG has to play both sides of that, and I don't think it's fair to them as an organization to try and do that: to decide to build a plant based on a certain set of financial circumstances and then get a direction, for example, to shut down the coal plants, which changes the economic landscape, and then this no longer may be a project they would have pursued had they known that.

**The Chair:** Mr. Milloy.

**Mr. John Milloy (Kitchener Centre):** Thank you for your appearance this afternoon. You didn't have a chance to finish the entire presentation, and I just thought I'd take a second to ask you about the shortage of skilled, experienced staff. Your presentation in written form talks about OPG's efforts at the University of Ontario Institute of Technology. I just wondered if you could expand on what's been going on there, how you see it unfolding and if it's a successful program.

**Mr. Müller:** Yes. I would say, just backing up generally for a second, that there's a skilled labour shortage in just about any segment of the workforce in Ontario, Canada and North America. We're no different from other groups in that respect except that, for people who require degrees—professionals who take years of experience to get their accreditation—obviously there's a longer lead time in getting those kinds of people. So it's critical for us. Also, in a business such as nuclear power, where there aren't a lot of other participants, universities don't always have the kinds of training programs we need. For a time, a number of universities shut down those programs.

I think OPG's efforts with UOIT are very positive. They're helping to dramatically increase the availability of professionals with skills to work in the industry. It's a very difficult thing to provide that support when you're not certain about the future. Again, part of the supply mix question that's very critical to OPG and others to know



is, are we building more nuclear power? Is there a future for students going through programs like that or not? I think that's the biggest issue for any organization: Can we convince people to come and take that course with the security of knowing that they're going to get a job when it's all done?

**Mr. Milloy:** I realize I have limited time. Just to pick up on the point about nuclear power, looking through the material that you've handed out in your presentation today, obviously your organization is supportive of a significant nuclear component. One of the things you say right here is that a part of its benefits is no greenhouse gas emissions. But at the same time your organization, and you can correct me if I'm wrong, has stated repeatedly its opposition to shutting down the coal-fired plants. Obviously, although there are technologies we discussed this morning to deal with certain emissions, they don't deal with the CO<sub>2</sub>. How do you square that, that on the one hand you're favouring nuclear because of global warming and on the other hand you're not favouring the elimination of coal?

**Mr. Müller:** It all comes down to how you operate them. Nuclear power is best suited for baseload running all the time, supplying the energy needs. Coal-fired generation is very responsive to demand. If you need more, you can quickly turn on more generation. So we think it plays a critical role in the energy mix, but we don't recommend that you run it flat out for baseload capacity. You reserve it for running only when needed to meet the demand or to phase in other units. It's also ideally suited for backup when there are outages, whether it be a nuclear plant or whether there's a lack of rain, that kind of thing. There's a difference between keeping the coal plants available and running them full-time. We don't recommend, when possible, that they're run flat out. We do think they need to be available and maintained and ready as a backup source of power or a peaking source of power when needed.

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**Mr. Milloy:** Do I have time for one quick one?

**The Chair:** We are running short. Is it very brief?

**Mr. Milloy:** I'll be really quick. I'm going to change topics just to get it in under the wire. I want to talk about salaries, both executive and yours. You folks have been criticized that a large portion of your membership is making over \$100,000 a year. We've seen executives criticized. How do you see this going out? What do you think of the panel that's been set up and how do you respond to some of the criticism that's been levelled at your members?

I'm sorry. I've given you about 30 seconds to answer.

**Mr. Müller:** I think it's obviously in the public interest to look at all the costs that go into our electricity prices. We're very prepared to defend our members' salaries. We do it every time at the negotiating table. The salary survey is out there. We can point to that. And particularly with the skills shortage and so on that's our there, we think that's reasonable.

I think it's important that you decide what kind of company you're looking at and make sure you have com-

parators that are relative to that. That's where I think some of the questions and criticisms were aimed at the executive salaries: Are you a public utility? Are you a private corporation? What are you?

I think it's good that it's being looked at. We certainly support the panel and its work.

**The Chair:** Thank you very much. We'll move on to Mr. Yakabuski.

**Mr. Yakabuski:** Thank you for joining us today. It's very appropriate that Mr. Milloy, on the government side, would raise the issue of inconsistency, because they certainly are experts in the field.

Speaking of that, I wanted to get into this with OPG when they were here, but I was unable to—we ran out of time—speaking about the requirement of skilled labour when you're getting mixed signals coming from the top. As you know, the government is the sole shareholder of OPG and they are a loyal operator on behalf of the shareholder. When you're sending so many mixed signals about where you're going in coal, where you're going in nuclear, what kind of negative effect—well, tell me if it's negative, and I'm going to guess that it is. What kind of negative effect does that have on the ability to retain and attract skilled people when they're not sure as to what the situation might be in plant A, B, C at any given time?

**Mr. Müller:** I think the future of the corporation has a huge impact on their ability to both attract and retain people. Our members are highly skilled professionals. They're highly mobile. They can change companies, change jobs if necessary. We saw a lot of that over the last few years with the uncertainty that was facing the company. A lot of people chose to leave and get other jobs in other places.

I think, particularly with the kind of people we represent, it's critical to have a strong vision and a strong future for the company if they want to keep people around. Sometimes, during downsizing circumstances, I guess the company wanted that uncertainty because it helped reduce the workforce and people left. But now is the time when I think OPG and other companies need to build a good reputation if they want to attract the people who are going to keep the lights on in Ontario. I think it's critical. The shortage we're going to see in the next five to 10 years is going to be massive. Only those best and brightest companies are going to get the best and brightest people.

**Mr. Yakabuski:** I'm going to roll two of these into one so the Chair doesn't stop me from getting it in. First we're going to talk about the Candu technology and then we're going to talk about your relationship with OPG. I wasn't able to get to this with OPG today, but in my last question I was trying to get to what this is going to mean to OPG if a technology other than Candu is chosen as the new nuclear build in the province of Ontario. Obviously all of your people are well trained and experts in the Candu system. I'd like to get your feedback as to what this could mean cost-wise, operationally and everything else to OPG if a decision is made to take technologies other than Candu.

The other thing, on your relationship with OPG itself, I know that when you spoke here at the Hydro One hearings there was no question that there was a very adversarial, acrimonious relationship between your group and Hydro One, perhaps from the CEO down; it started with the CEO of Hydro One. I do see a far better relationship between you and OPG, which I think is conducive to smooth operations. Would you comment on that as well?

**Mr. Müller:** Sure. I'll go backwards. Certainly our relationship with OPG has been fairly positive throughout their existence since 1999. As a corporation, they faced some challenges that we didn't support and didn't agree with, but we were able to work with senior management to address those concerns even if their directive was to go somewhere other than we thought was best for the company and for our members. I think that has had a very positive effect on the workforce and their ability to respond to that adversity and to continue to perform very well and have good production, good reliability and so on at OPG. I think management's approach to labour relations has a huge impact on their performance as a company. I think Hydro One suffered from a poor relationship, and OPG is quite the contrast.

Back to the Candu technologies: It's kind of an oxymoron to talk about nuclear power being a very specialized, small segment of the market when everything in nuclear power is billions of dollars and dozens of years to build and so on. But the truth is, when you look at an industry, nuclear power in Canada is fairly small compared to automotive or something else. The rationale why Ontario Hydro built Candu reactors was to get the economies of scale and the efficiencies that there are in repeating similar systems.

We're concerned that if you branch into a different technology for nuclear power now, you're going to lose some of that. If we were looking at building dozens of plants, then it might make sense to diversify and there's a future and it would be worthwhile investing in that. When we're talking about a very small increase in the size of nuclear power in Ontario, I don't think the efficiencies are there to talk about investigating in other technology, particularly when that comes with the need for other suppliers, other support services, other industries.

**The Chair:** Thank you very much. I'm sorry; we've run out of time. I do appreciate you coming here for the committee.

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#### ASSOCIATION OF MAJOR POWER CONSUMERS IN ONTARIO

**The Chair:** I would like to ask now the Association of Major Power Consumers in Ontario, Mr. Adam White, to come forward.

Thank you very much for your participation. I just want to remind you that we are splitting the time that you have available, so you can take up to 15 minutes. It will

allow each of the three parties five minutes. You may begin your presentation.

**Mr. Adam White:** Thank you, Madam Chair, and good afternoon, members, ladies and gentlemen. I'm very pleased to have been invited to present to you and to have the opportunity.

I've brought a slide presentation for you. It's short, but I've violated the rules about the maximum number of words on a page, so I'll try to go quickly through this to give you the most amount of time for questioning.

If you don't know, AMPCO is a not-for-profit consumer interest advocacy organization. It has been in existence since the early 1960s. Basically, we want what all customers want—value for money, reliable supplies at affordable prices—and we want to promote the competitiveness of our businesses.

AMPCO's members are some of the largest power consumers in the province. We're well represented across the sectors of the manufacturing industry. We spend more than a billion dollars a year just on the electricity commodity. We represent 14% of Ontario's demand: about one half of industrial demand and one third of all business consumer demand. Our members collectively employ 50,000 people. I would mention that these are good-paying jobs. These are jobs that will support families in communities across the province. You will know, in your line of work, that many of these communities and many of these families are dependent on the industries that I represent.

Page 3 has a brief agenda for what I want to talk to you about. There is less here that is specific to OPG's operations and more that is a broader perspective on how OPG fits within the structure, and regulation of the sector going forward.

I would bring to your attention on page 4 that these are quotes taken from a recent report of the federal standing committee on industry, science and technology. They do confirm and reiterate what many of my members have been saying to me and probably to you also—that there are a variety of pressures on manufacturing in Ontario: exchange rate fluctuations, increasing competition, red tape. Among those factors affecting Ontario's competitiveness are rising and unpredictable energy costs, and electricity is an important component of the energy supply to Ontario. I would draw your attention to where I've added emphasis in that second paragraph, which is that "a significant percentage of the US manufacturing sector has a competitive advantage over Canadian manufacturers." That is especially true in Ontario because we now have some of the highest electricity prices in Ontario as compared to other provinces.

On page 5 I've put a chart that shows you how rates are broken down and how some of those rates have changed since 2001. These are numbers reported from a typical AMPCO member. The numbers around the hourly Ontario energy price aren't necessarily an arithmetic average of the price as reported by the IESO but an actual price that would be experienced by a typical member. So what you can see here is that the price has fluctuated.

I would also draw your attention to the other elements of the bill that have also fluctuated quite significantly, in particular the sum of rebates, the global adjustment in rebates, that result and derive from the various caps and limits on Ontario Power Generation and the combination of other contracted generation. This added up to almost \$14 a megawatt hour in 2005 and only \$3.52 in 2006. The graph on page 6 shows this perhaps a little more easily.

There are folks in the sector who've been going around and showing people this bottom line, the one that goes last year from \$72 and this year to \$48.75. Well, it is true that the arithmetic average of the hourly Ontario energy price is lower now than it has been since 2002, but when you add to that the various uplifts in transmission costs, retirement charges, wholesale market service charges, congestion management settlement credits and the global adjustment in rebates, you get a slightly different picture. In fact, what that shows is that we had, as you will know, an abnormally hot summer last year, and we have had this year an extraordinarily mild year early in 2006 by way of weather averages. But you can see there that when you add all of those things up, the trend is upward-sloping. Electricity bills are higher now than they used to be.

Page 7: I have some points here on OPG and its role in the hybrid sector as it currently stands. However one might want the future to unfold or wish it had unfolded, the reality now is that Ontario Power Generation supplies 70% of Ontario demand. Ontario Power Generation owns and operates, has exclusive control over, a diversified, integrated portfolio of generation assets, from one extreme of the supply curve to the other extreme of the supply curve across Ontario. OPG is a dominant player in the wholesale electricity sector. In addition to that, they not only have control over a large majority of the generation assets; because of the way the system was designed around those assets, they in fact also have control over virtually all of the very best generation development sites. So there's no question that, like it or not, OPG is going to play a significant role now and into the future, one way or another.

There was an article in the *Globe and Mail* last week based on an interview with the president of Direct Energy. It was attributed to him—the suggestion that we needed to end subsidies for power consumers. Of course, it begs the questions about, “What are the subsidies? Where do the subsidies derive from? What is the evidence that there are in fact subsidies?” I'll speak to that a little bit later. What he, I suppose, is talking about is these various price caps and revenue caps. They're complicated. We're into an Ontario Energy Board process to review the payment amounts for the heritage baseload assets: the Pickering plant, the Darlington plant, the Beck Niagara Falls complex, and the large hydroelectric run-of-river facilities along the St. Lawrence.

The Niagara Falls and St. Lawrence facilities really are the jewel in Ontario's electricity crown. These are old assets; these are great-performing assets; these are highly reliable assets. They're pretty well fully depreciated and

they deliver very cheap power. The question is, if we understand that, and we understand as well that the government intends to retain ownership in public hands—and I was at the announcement where Energy Minister Duncan spoke to the mandate of the Arnett review panel, and he made it very clear there that the government's policy is to retain ownership. He also put some question as to whether they should be a business corporation or whether they should be structured like some kind of public service agency. To my mind, that's a question best left to the lawyers, but what I am interested in is, if these assets are a source of abundant, environmentally friendly low-cost power, then how can we capitalize on that fact for the benefit of the citizens of Ontario and the electricity consumers of Ontario?

There are some risks in the current regulatory review of these assets, in particular relating to what the decisions are about capital structure and the return on equity. OPG, of course, has one view. We have an alternative view. I think our concerns are that if we are not careful, we can default to a regulatory outcome that increases costs for customers across the board with no value, no increased assets, no more output, no more productivity, no more efficiency and no more reliability. This is a situation that would be worrisome to me. We need assets; we need infrastructure; we need reliability; we need productivity and efficiency. I think our members and other consumers are happy to support investments and see the costs of such investments recovered from the rate base. Where I have a little less comfort is seeing costs rising for no tangible result, and this is one of the automatic results of changing the way that those payment amounts are set.

The other issue, of course, is that we have the revenue caps on what are called the non-prescribed, but again, these are heritage assets; these are smaller, run-of-river hydroelectric systems, other than the Niagara Falls and St. Lawrence systems. It also includes the intermediate thermal plants. Again, the issue here is that the combination of the price caps and revenue caps serves a number of functions. Because the revenues of that company exceed its costs, I think it's difficult to construct an argument, as was suggested in the *Globe and Mail*, that there's the presence of a subsidy. “Subsidy” typically means that things are being sold below their cost, and that's not the case in the output of OPG.

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But the caps, in combination, serve a number of important purposes, not just for customers but for the shareholders as well. One is, it stabilizes OPG revenues. Until 2005, OPG was not profitable. One outcome of these revenue caps and price caps, which raised the realized price of power for OPG, is that it became profitable. That's a good thing, I think, from the perspective of the shareholder and the provincial treasury. The other thing it did is stabilize prices.

The other important and necessary function of some kind of policy, whether it's a price cap, a revenue cap or some more complicated market power mitigation agreement, as we had in place previously, is that you have to

address the fact that OPG is dominant in the market for generation. Whether it abuses its market power or whether there's any kind of nefarious intention to do so I don't think is the point, and I'm not suggesting that there is. In fact, the market surveillance panel has found repeatedly that there's no evidence to suggest any abuses of market power, but market power is a reality and this is a fact not only of the Ontario legal and regulatory framework but also the federal framework.

It begs the question as well of what to do with these heritage, intermediate and peaking assets when the existing revenue cap expires in May 2009. This is of interest to consumers. It's particularly of interest to capital-intensive consumers when they're trying to come up with their capital plans and budgets for the years ahead.

On page 8 I have listed here, just as a reminder to me and to you, the purposes of the legislation that this government has put in place, not fundamentally different from the purposes of the legislation that previous governments have put in place. What I'm interested in most here is the third bullet, which is to promote and protect the interest of consumers with respect to prices and the adequacy, reliability and quality of electricity service. This really is my mandate as president of the Association of Major Power Consumers in Ontario and this really is central to the concern of consumers. If you're doing all of the other things—if the electricity industry is financially viable, if the cumulative effect of policy, law and regulation is to promote efficiency, if we have policies and programs in place to encourage conservation and we have entities charged with ensuring reliability—then it's important that we do all of that while protecting the interests of consumers.

On page 9 I've put a slide here just speaking to the institutional framework. There's been a lot in recent weeks and months in the media and in Hansard about potential overlap and duplication, about the multiplicity of new agencies that have evolved out of what was Ontario Hydro. When I talk to my own members about this, I think about it in a relatively simplistic way: There are certain things that need doing and we need people who are going to do them. So we need, for example, an impartial, trusted, capable, independent adjudicative tribunal. We have that in the Ontario Energy Board. They regulate, they set rates, they establish codes, rules and guidelines. So no matter what we do, we need someone to do that. This is a significant improvement, I might say, over the situation before Ontario Hydro was broken up, because in those days Ontario Hydro regulated itself and it was not at all clear to consumers or anyone else what was actually happening inside that corporation. Not only did it regulate itself, it regulated all the municipal distribution utilities. Now all of those assets, all of those utilities are regulated in a very transparent, open and proper quasi-legal process. That is a significant improvement, in my opinion, over the situation as it existed prior to restructuring.

**The Chair:** I'm sorry, I have to interrupt. We've run out of time. I believe we're at the government members for questions.

**Mr. Vic Dhillon (Brampton West–Mississauga):**

Thank you, Mr. White, for your presentation. The minister set up a panel to review the salaries of the executives of Ontario's energy agencies. How have your members received this panel?

**Mr. White:** We issued a media release the day of suggesting that we supported the review of the panel. I and my members are not particularly interested in executive compensation. I've been working in this sector long enough to see a number of executives come and go. By and large, though, these institutions have managed to carry on and they will manage to carry on no matter who the executive is and how much they're paid, more or less.

I can understand how there is a sort of visible optical opportunity, but really, in the scheme of things, we're talking about a \$15-billion-a-year industry. So whether somebody is paid \$800,000 or \$1 million or \$1.2 million, so long as they are competent and manage the company well, then it doesn't really add up to much in terms of customers' bills.

I am, though, and we are, quite supportive of the second part of that panel's mandate, which is to look into the roles and responsibilities of the various regulatory agencies. I understand from the terms of reference that the minister has provided to Mr. Arnett that that will take place over the spring and summer and into the fall, so we'll be engaging with it as it goes.

**Mr. Dhillon:** As you probably know, our government is quite committed to fostering a culture of conservation. What efforts has AMPCO been making on that front?

**Mr. White:** I'm glad you asked. I've been working very hard, and my members as well, over the last number of months to build capacity within the organization, within our membership, and then more broadly within the business community to understand what the issue is, to become aware and to engage with the government, with the Conservation Bureau and the Ontario Power Authority to take advantage of the opportunity we have to promote efficient and cost-effective conservation demand management.

I am persuaded, based on the numerous conversations, meetings and workshops we held through the fall, that there is a significant untapped opportunity for conservation in the business community. I think that the power authority, the Conservation Bureau and the government would be well served by emphasizing efforts to engage with the business community. I'm quite hopeful, at a personal level, quite ambitious for AMPCO, that we can play a role in promoting that effort.

**The Chair:** Thank you very much. We'll move on to Mr. Yakabuski.

**Mr. Yakabuski:** On the topic of conservation—of course, you're the major power consumers in the province of Ontario, and I certainly concur with your little graph about the actual price of power, even though the minister must have said a dozen times throughout the fall that the price of power is down in the province of Ontario. But no one sees that reflected on their bills,

including consumers, including residential consumers, so I appreciate the clarification on that.

On the conservation side, you're major consumers, and one of them you talked about is the forestry industry. I'm very interested in that because we have a lot of forestry operators in my neck of the woods as well as in northern Ontario, which Mr. Hampton is probably going to be talking about as well.

If there was a significant, real program to allow some of these operators to upgrade efficiency through being able to be far more conservatory when it comes to energy use, coupled with a palatable price, how much positive effect could that have on that particular industry, for example, the pulp and paper, the forestry industry?

**Mr. White:** I can't say—we are working on understanding that better and building a database of business consumers which allows us to produce more accurate estimates of what the potential is. The OPA has produced some estimates of the potential. I think, actually, in talking to individuals, what we've seen in terms of the methodologies used by the OPA is that they tend to underestimate, and I think in some cases significantly, the amount of potential that exists in the business community.

I will say, though, that the way I have put this to business consumers when I speak to them is that we're not doing this because we're philanthropists and we're not doing this for other reasons. The imperative for conservation in Ontario is to avert and defer the need for new generation and transmission infrastructure. We know what we're competing against on the generation side. We know all of the risks and perils in bringing new generation to market, of whatever technology, when you're trying to site it and permit it and get approvals for it and build transmission corridors. We're competing against that. I'm persuaded that we can deliver better, cheaper, quicker and faster.

I would say, though, that when you talk to business consumers, they're not primarily concerned about gigawatts or gigajoules or these kinds of numbers; they're concerned about money. They're concerned about their operating costs and controlling those costs, and they're concerned about the profitability. Of course, this is the basic fact of the forest sector in Ontario: It's not profitable. So long as it's not profitable, we're going to have serious problems and serious potential rationalization in that sector.

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So the way that the OPA is going about this I think has some merit. One of the challenges is that they're simply just focusing on electricity, and that's not good enough, because when you go into a pulp mill, of course, what they want to do is optimize their process. They want to make efficient use of hot water and steam. They want to reduce their reliance on expensive natural gas and they want to reduce the consumption of electricity. But they're looking for that in a way that optimizes the economic benefits of the customer. So I think we need to move beyond sort of electric-centric procurement of megawatts

and megawatt hours in a very prescriptive way to understanding business needs and talking to business about what we can do to promote that. I think there's a very large opportunity. We're working on that and hopefully we will be able, within a matter of weeks and months, to report back on what we've found, because I think there's a significant untapped opportunity.

**The Chair:** We'll move on to Mr. Hampton.

**Mr. Hampton:** I too want to thank you for your outline of what the actual industrial rate is and what it has been since 2001. Whenever you hear the minister in the Legislature, he tries to cite a much different figure. Whenever I call somebody who's trying to run a paper mill, they look at you and say, "That's not the rate. That's not what we paid last month and it's not the rate that's going to put us out of business." I want to thank you for presenting the actual, true rate, something the government has great difficulty discovering or admitting these days.

I note that you devote a page to talking about OPG and rate structure. It seems to me what OPG is saying when they make the case is, "Look, if Bruce provides a megawatt of electricity, they get paid this amount. We provide the same megawatt of electricity at Pickering and Darlington and we only get paid this amount." I think what they're also saying is, "We provide a megawatt of electricity from one of our coal-fired stations or one of our unregulated hydro stations and we're capped at a certain amount. But Brascan, if they provide that same megawatt of electricity out of hydro dams that used to be owned by the people of Ontario, they get paid much more." I think the case that OPG is making is, "Isn't this a crazy market that pays some people this price for a megawatt of nuclear power and somebody else only this price for a megawatt of nuclear power, and somebody this price for a megawatt produced at a Brascan dam somewhere between Sault Ste. Marie and Sudbury, but an OPG dam that's 200 kilometres away provides the same megawatt of hydro power and only gets paid this amount?" Isn't OPG really saying, "This so-called market doesn't make much sense when somebody gets paid a lot more for generating the same megawatt of electricity in the same way"? What's your comment?

**Mr. White:** There are a couple of ways to look at that, I guess. One is to suggest that, as citizens of Ontario, we see the dividends from OPG in the form of rebates as well as debt reduction. Shareholders of Bruce Power and Brascan similarly see dividends. So I think one would want to sort of add up and make sure that the sum of dividends and profits from the publicly owned companies and the privately owned companies—are they in fact significantly different, no matter what the price is that each gets paid or is compensated?

But I think the other, perhaps more fundamental point is what you describe is a symptom of market failure. There's no question in my mind that we have a very clear-cut case of market failure in Ontario. However, we have policies and regulations that mitigate that, and the price caps and revenue caps are examples of policies that

mitigate the presence of market failure. But I think we have a way to go, and we're looking forward to working with the electricity agency review panel because it's important that we explore some of these issues. The question is, how are prices set in Ontario, whether or not anybody pays them or gets them? The reality is, of course, that 80% of generation receives a picked price and 80% of a customer's bill is fixed, so it's really only on the margin. But even with that, is marginal cost pricing the appropriate price-setting model where we have a clear-cut case of market failure? There are no new entrants who are going to come into Ontario's generation market and undercut the baseload incumbents. It's impossible. So we have a problem where the baseload incumbents are accruing intramarginal profits that no one can take away, except the government, through policy, law and regulation. We have some policy, law and regulation, but only as it applies to OPG's assets. There are other baseload incumbents who are not similarly regulated. As uncomfortable or inconvenient a fact as this might be for the sector, I think this is something that consumers are going to require that attention be paid to going forward.

**Mr. Hampton:** Bruce is baseload, OPG is baseload, in terms of their nuclear assets. Why aren't they subject to the same rules?

**Mr. White:** There's that question, I guess. One of the ways to do that would be to have a perfectly competitive market, but according to economic theory, that requires no barriers to entry: equivalent technologies all the way up and down the supply curve. No one is coming into town and building new nuclear, other than the government; no one is coming to town and building new baseload hydro, because there isn't any; and with the government's policy on coal, no one is coming to town and building new coal. The only new assets that are being built are natural-gas-fired, and the more and more supply we get from them, the more they're going to be setting the electricity price and the more these baseload incumbents are going to be receiving a price set on the basis of natural gas, where their costs are based on having access to Ontario's heritage resources.

This is in fact the elephant in the room. We haven't really, I don't think, had a frank policy debate for a number of years about this issue; we've sort of skirted around it. I think it has to do primarily and fundamentally with the role of OPG going forward and how that is managed. Whether we have a market or any other structure, so long as the government's intent is to retain ownership, we have to manage that.

**The Chair:** I have to stop you here. Thank you very much for coming today. We appreciate your participation.

#### TOWN OF PICKERING

**The Chair:** I'd now like to ask Mayor David Ryan of Pickering to come forward. Thank you very much for appearing here today. We welcome you here. You have

15 minutes in which to make your presentation, and that will then leave five minutes for each caucus to ask questions. You may proceed.

**Mr. David Ryan:** I appreciate the opportunity to be here this afternoon and hopefully give you some insight as to what it means to be a nuclear host community, what our expectations are of OPG in that regard and how well they've met them. I'd like to touch upon my future vision of Pickering and how it will be inextricably linked with OPG.

As the gateway city to both the east GTA and Toronto, the city of Pickering is making a name for itself as a place of opportunity, innovation and success. In the June 2006 issue of Profit magazine, Pickering received nationwide recognition as one of the top 10 municipalities in Canada to start and grow a business.

I'm proud that Pickering is developing a reputation as a municipal leader and a preferred place to do business. However, I will be the first to admit that a large part of our identity continues to be the Pickering nuclear generating station. Wherever I may go across our country, when people find out that I am from Pickering, inevitably the first thought that comes to their mind is nuclear.

As we are all aware, people tend to have mixed emotions about nuclear power, as it is such a powerful yet divisive issue. I don't feel it's necessary to detail these arguments, as they are apparent. My point is simply this: Regardless of on which side of the fence one sits, no one can argue against the success of the city of Pickering. Our homes continue to have the highest value in all of Durham region, while our property tax rates are the lowest among Durham's lakeshore municipalities. In fact, a few years back, Canadian Living magazine named Pickering as the best city in Canada to raise a family. More recently, the provincial government has recognized Pickering as an urban growth centre in its Places to Grow legislation. In combination with the intensification of our downtown core and the future community of Seaton, the city of Pickering is expected to lead the country in terms of growth and economic development over the next 10 to 20 years. Evidently, the nuclear generating station is not the harbinger of doom that many detractors had mistakenly predicted.

While we still have to deal with the negative perceptions of being a nuclear host community, we have not let it define us as a city. Instead, we try to work in collaboration with OPG and its nuclear station to help achieve our city's successes. For example, OPG has proven to be an excellent corporate citizen, as demonstrated through its corporate citizenship program. This program provides financial and in-kind support to local registered charities and not-for-profit environmental, educational and community organizations whose initiatives reflect OPG's visions of citizenship and sustainability. In addition, OPG has been the presenting sponsor of the annual Pickering dragon boat challenge and fundraiser in support of youth rowing initiatives since 2002.

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I was also very proud to have OPG as the lead sponsor for the city of Pickering mayor's gala. Since the

inaugural mayor's gala two years ago, this black-tie fundraiser has raised nearly a quarter of a million dollars, the majority of which is going to the Rouge Valley Ajax-Pickering hospital. We could not have had this level of success without OPG's commitment and partnership. OPG's generous and continuous support of the city and its community partners is an acknowledgement of its responsibility to Pickering and to its residents.

While I'm very positive about OPG's commitment to corporate social responsibility, there was a time when we didn't always hold OPG in such high esteem. Mainly, we have had concerns in the past, specifically in regard to its operations and communications. There were several incidents that occurred in the 1990s, such as the much-publicized heavy-water spills, which caused a great deal of community angst and turmoil. This was exacerbated by the cost overruns of restarting Pickering A. In this situation, in excess of well over \$1 billion was a source of national embarrassment and scorn and arguably the low point in our community's pride. However, I believe that in the last several years OPG has turned the corner. It has made a concerted effort to tighten its ship and fix its numerous problems. As a result, it made the corporate decision to open the lines of communication with the city of Pickering, its most important stakeholder. Currently, I receive timely information updates from OPG and am informed almost immediately of anything that may result in community concern.

Another positive development is that in recent years there has been an increased awareness of the need for clean, reliable and sustainable energy. In response to the province's renewed commitment to nuclear, both our municipal and regional governments have passed resolutions in favour of the refurb in Pickering and the new build in Durham. These shows of support and heightened public appreciation have restored a lot of pride and lustre to the generating station and to its staff.

From a corporate and industry perspective, OPG is helping the city of Pickering solidify its growing reputation as an energy centre. In fact, other organizations have recognized this golden opportunity to build upon our reputation and take a leadership role in the energy industry. That is why I created the Durham Strategic Energy Alliance, or DSEA. The city of Pickering and OPG have partnered with other organizations such as Enbridge, the region of Durham, Siemens, Veridian, Intellimeter, Areva and the University of Ontario Institute of Technology to meet the rising challenges facing the province's energy sector. The DSEA's vision is to position Durham region as a world leader in providing timely, sustainable and reliable energy solutions. Its mission is to foster an energy-friendly environment in Durham region that will be a model of action in Ontario and Canada in the 21st century. Without question, the city of Pickering and its OPG operations are the nucleus of this emerging power. We are working in conjunction with other DSEA members to help fulfill the promise of a clean and vibrant city of Pickering and province of Ontario. "Sustainability" must be a popular buzzword

now, but it is a philosophy that we have been trying to implement in Pickering over the last several years. In fact, internationally renowned environmentalist David Suzuki paid an official visit to Pickering two weeks ago on his cross-country tour and praised the work we are doing in sustainability.

As you are aware, the province has released its plans for the future community of Seaton, which geographically represents our central Pickering lands. This community will be home to 70,000 people and 35,000 new jobs and will essentially be a new and vibrant city within our city. However, going beyond the sheer size and scope of this community, the promise of Seaton is much more significant and represents a once-in-a-lifetime opportunity not just for the province but also for the entire country. Imagine a community that is in harmony with nature and the environment, where homes are built to LEED—which is Leadership in Energy and Environmental Design—standards, have solar panels, and draw their energy from alternative means such as geothermal or district energy. We have the opportunity to make Seaton the most sustainable and environmentally innovative community in North America. So when you combine the revolutionary impacts of the DSEA and Seaton, you will create a one-of-a-kind, game-changing foundation of industry employment, energy generation, knowledge capital, residential housing, and community infrastructure, all working in synergy and aligned with the tenets of sustainability. There simply won't be anything comparable in North America.

That is the opportunity that lies before us now. If we do not seize this opportunity, it will be a complete and ignominious failure on our part.

For this reason, I would like to see OPG bolster its presence in our city of Pickering so that it could devote more energies and resources to fostering this emerging hub of sustainability. Right now, the OPG corporate head office is located downtown at 700 University Avenue. To me, that doesn't make a whole lot of sense, as its core businesses and multi-billion-dollar investments are in Pickering and Durham region. I feel it would be a bold and strategic move to relocate OPG's head office to Pickering. This way, OPG's senior levels of management could keep a closer watch on its core operations and have an active day-to-day role in its multi-billion-dollar investment in new build and refurb. As well, OPG would be able to solidify its status as the driving force and foundation of Canada's emerging hub of sustainability. It won't be able to accomplish this from the far reaches of University Avenue.

This relocation to Pickering would also prove beneficial to the operations of the provincial government. Once 700 University is fully vacated, the province can start pulling in its various ministries and legislative offices that are scattered around the downtown area and not currently in the Queen's Park campus. As well, the province will realize multi-million-dollar cost savings every year, as it will no longer have to pay lease rates on those external offices. Overall, this could be an incredible

coup and public relations victory for the province as it works on so many fronts: economic, organizational, sustainable and political.

The city of Pickering looks forward to working with the province, OPG and other stakeholders to realize this very exciting vision of the future. However, I would be remiss not to address an emergency management concern the city of Pickering has. In the event of a nuclear incident, Pickering's fire headquarters will have to be shut down, as it is within the designated three-kilometre safety zone from ground zero. As a result of having our headquarters and emergency dispatch incapacitated, our ability to respond to emergencies or other incidents in the community will be severely compromised.

As well, the city and OPG have a support agreement for the nuclear station. Should there be any form of emergency at the plant, Pickering will send a fire response team. While attending to the emergency at the plant, there may be cause to lock down the facility. Should this occur, the attending team will be effectively out of service to the rest of the city. Coupled with the closure of the fire headquarters, Pickering's fire and emergency services will be operating basically with a skeleton crew. Obviously, we need to plan around this potential scenario.

When OPG and the government of the day introduced this designated three-kilometre safety zone, it was our expectation that OPG would build a new fire station just outside of the safety perimeter. It is our position that OPG should provide funding for the construction of a new fire headquarters outside of the specified safety zone so that we can continue to respond to our community's need despite a nuclear incident. In addition to paying for the bricks and mortar, it is my belief that OPG should provide sustainable funding so that we can purchase the appropriate emergency response vehicles and equipment and attract, train and retain a highly skilled emergency response team.

Overall, I believe that OPG is running a safe and sound operation. The chances of a nuclear incident are absolutely minuscule. However, we must always plan for the worst-case scenario. We are making a commitment to our emergency planning measures, and we need to have a new fire headquarters. I am pleased that OPG has acknowledged our need and has begun discussion in this area with the city. It is our desire to reach a timely conclusion.

On a final note, despite being given many disadvantages, Pickering has been able to succeed as a community. We are constantly working to strengthen our reputation in areas such as economic development, intensification, sustainability and municipal excellence. Quite frankly, it is difficult to overcome the stigma of being a nuclear host community and all that that entails. For this reason, I'm not very pleased that Emergency Management Ontario is in the process of implementing another initiative that will reinforce the negative connotation of being a nuclear community: Our phone books will soon have red pages to list emergency management contact phone numbers.

I am in favour of implementing measures to safeguard our community. Every community, province-wide, should be protected in this way. However, community is a province-wide concern. There should be emergency measures in place for all municipalities, not just those with a nuclear plant. All phone books should have red-page sections so that any Ontarian will know who to call in an emergency. By differentiating Pickering and in effect highlighting our potential for a disaster, we are being disadvantaged. It will make it harder for us to attract prestige employment and new residents. I invite the province to take a more proactive role in Pickering sustainability and economic development initiatives.

Once again, thank you for providing me with this opportunity to speak today. Essentially, Pickering is managing to the best of its abilities the realities of being a nuclear host community. This means working collaboratively with OPG as we grow and mature as a municipality, and right now we are at a crossroads for our future. As the world is struggling to find a balance between its energy needs and environmental responsibilities, we have a unique opportunity to provide leadership, innovation and example. Together with the province, OPG and other stakeholders, we are creating something truly special that will resonate around our nation and make a real and meaningful difference to the health, well-being and prosperity of our residents and future generations of Ontarians.

I thank you for this opportunity.

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**The Chair:** Thank you very much. We'll begin with Mr. Yakabuski.

**Mr. Yakabuski:** Thank you very much, Mayor Ryan, for joining us today. Top 10 in Canada: That's pretty good.

**Mr. Ryan:** Thank you.

**Mr. Yakabuski:** I congratulate you on that. On the nuclear refurbishment, clearly you would be in favour of OPG and the government proceeding with the refurbishment of Pickering B. You talked about a number of different partners, and Areva was mentioned. With the refurbishment, obviously they would be refurbishing Candu reactors in Pickering. Do you consider Pickering a site for a new build if Pickering A was at some point completely decommissioned? Where do you see that going?

**Mr. Ryan:** The position we have in Pickering and in Durham region is that Pickering would be the refurbishment site and that the new build would occur at the Darlington site. We don't have the capacity to expand in terms of the footprint of the plant in Pickering.

**Mr. Yakabuski:** So you're comfortable with that?

**Mr. Ryan:** We're very comfortable with that. OPG Nuclear has been in Pickering for 40 years. Forty years ago the population of Pickering was approximately 16,000. Today we're 100,000. We all knew that the plant was there when we moved there. We're very comfortable with it. We're pleased with what it does in our community.



**Mr. Yakabuski:** But then you do know that at some point down the road, you have—even if it's refurbished, you're talking about another 30 years.

**Mr. Ryan:** Possibly. A lot will happen in 30 years. New technologies will evolve and we may find better ways to utilize the existing site. So who knows, 30 years from now, when in fact nuclear will leave Pickering or anywhere else?

**Mr. Yakabuski:** Clearly, the city of Pickering views OPG as a very good corporate citizen. These hearings are about OPG, as you know. The relationship between the city and OPG is very good. The people are very accepting of OPG's presence.

**Mr. Ryan:** Yes, and as I just stated, we've all grown up together with OPG. A lot of the OPG personnel live within our community. In fact, Pierre Charlebois, who was here earlier this morning, is a resident of Pickering. It contributes a great deal to our community financially. Approximately \$400 million a year is directly attributable in our local economy to the Pickering nuclear generating station. We have 3,000 employees at the plant in round figures. It varies between 3,000 and 5,000, but 3,000 is a good base number. There has been a lot of investment both socially and economically in the community.

**Mr. Yakabuski:** What would be the circumstances for Pickering if refurbishment of B did not proceed?

**Mr. Ryan:** As I've just stated, given that it is such a big part of our community, there would be a downside to that. We would hope that we would find other ways to offset it.

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

**The Chair:** We'll move on to Mr. Hampton.

**Mr. Hampton:** I want to thank you. I wasn't here for all of your presentation. One of the issues that nuclear power certainly has to answer within the Ontario context is the fact that nuclear power plants that have been built in Ontario have a long history of going over-budget in the construction process and have also proved to be very expensive to maintain. When nuclear power was first introduced into Ontario, people were told that once the plants are built, they would produce electricity so cheaply that it wouldn't even be worth metering it, and the plants would be basically maintenance-free. Well, maintenance has been an issue. I think the third issue has been that, when it comes to refurbishing the plants, they have also proven to be more expensive to refurbish than people were told as well.

I guess my question to you would be: Does it bother you that on the initial building side, the refurbishment side and the operating side, nuclear has proven to be much more expensive than was first advertised to the electricity consumers of Ontario?

**Mr. Ryan:** As a municipal representative here today to talk about Pickering as the nuclear host community, all of those things quite frankly have contributed to our economy; so thank you.

Having said that, I'm really not qualified to argue the pros and cons of any one of the technologies or their costs. I do know, as a consumer and a resident of On-

tario, that we're all concerned about escalating costs, but I believe that every technology is usually over-promoted and typically costs more than everybody believes it's going to initially.

**Mr. Hampton:** Every once in a while—this is especially true of the financial community—they will talk about our electricity system's \$20 billion of stranded debt, which everyone pays on their monthly hydro bill. For a lot of people, it's an issue of some concern. Most of that \$20 billion of stranded debt is in fact nuclear debt. Darlington was supposed to cost about \$4.5 billion to build; it ended up costing closer to \$15 billion. You can assign some blame along the way: governments that stopped and then went; there was an election, so, "Oh, we're going to stop building Darlington"—it seems to me that when you have \$20 billion of stranded debt that requires special payments to deal with that debt, above and beyond the other issues of running the electricity system, you'd want to look carefully before you go down that road further.

**Mr. Ryan:** The stranded debt is an issue for all of us, and I'll couple that with the whole situation that we have on the overburdening of the residential tax base. There are different ways to handle the stranded debt. The stranded debt is a matter of fact. It has to be dealt with. The objective of the government should be, first of all, not to increase it, and secondly to find more productive ways of dealing with it rather than hiding it in an energy consumption bill that goes to the homeowners—and I'm speaking on behalf of the homeowners, not the businesses that are using them.

I've got residents in Pickering who, with the current taxation system with market value assessment, are finding themselves in a situation where they bought affordable homes 35 years ago that they can't maintain today on their pensions. When they bought them, they were affordable; as they were working, they were affordable. On a fixed income, with the continued downloading, with things like stranded debt being forced upon them on a day-to-day basis, they're finding homeownership untenable. That's the real issue that needs to be addressed by all levels of government.

**Mr. Hampton:** In that vein, we heard earlier this morning that OPG sets aside a certain amount of money every year to deal with the liabilities and obligations under long-term nuclear waste storage. But I think one of the things we heard is that they may in fact have to set aside even more money to address the obligations, responsibilities and liabilities under long-term nuclear waste storage. With all of those things hanging out—stranded debt and even more money having to be set aside potentially to deal with the long-term nuclear waste issue—what does that say about affordability in the future?

**Mr. Ryan:** I don't have that answer. I see the direction you're trying to take it. The point is that whatever technologies are employed, there are going to be costs associated with them. In terms of the costs associated with nuclear, not all of the costs are directly attributable

to nuclear itself, the example being the imposition of a three-kilometre impact zone that was put in place by OPG without consideration of what that would mean on the existing infrastructures in the nuclear host municipalities. So in our case, we have a fire hall that is our headquarters but now has to be relocated.

**The Chair:** I'm sorry to interrupt, but we've run out of time. Thank you very much for coming here today.

**Mr. Ryan:** Thank you.

**The Chair:** I'd like to ask Mr. Tom Adams of Energy Probe to come forward, please.

1430

**Mr. Leal:** You skipped us.

**The Chair:** I did. I'm terribly sorry. Mayor Ryan, could you come back. I do apologize. I meant to move the conversation—

*Interjections.*

**The Chair:** I'm sorry. It is the government members who have the opportunity to ask questions, and I believe it's Mr. Leal.

**Mr. Leal:** Thanks very much, Madam Chair. You handled that very well.

It's good to see Your Worship here today at committee.

**Mr. Ryan:** Thank you.

**Mr. Leal:** The Pickering nuclear station has been in your community now, if my math is right, about 40-plus years. How would you characterize OPG's Pickering station as a neighbour? Is it open? Is it an open and transparent utility in your community?

**Mr. Ryan:** OPG celebrated their 40th anniversary in our community last year and I think that's just an example of the way they do business in our community. They have employee volunteers who go door to door within the community soliciting input from the broader community on how they are as a neighbour.

In terms of their day-to-day operation with the city of Pickering, I'm notified immediately of anything that is occurring on the plant that might be a real or a perceived concern—and so far, it has always been a perceived concern—to the general population. I'm very pleased for that. We have a communication protocol whereby my senior staff and myself are on a 24/7 communication link with the plant in that regard.

In the broader community, as I mentioned, they've really gone to great lengths to partner with community organizations. The number of OPG employees who actually live within our community and make themselves known within our community I think is admirable. The past chair of the United Way is a senior member of the Pickering plant, as another example. I could list very many opportunities which they've taken advantage of.

**Mr. Leal:** A follow-up question: Your neighbours down the road in the Bowmanville area have indicated they will be a willing host for any potential expansion in that area. What is the position of Pickering with regard to possible expansion as a willing host?

**Mr. Ryan:** As I stated to the previous question, the Pickering council, by resolution, and the region of

Durham council, by resolution, are both supportive of the refurb at the Pickering station and of the expansion at the Darlington station, the new build.

**Mr. Leal:** Would you know offhand the value of the payroll to Pickering?

**Mr. Ryan:** No, I don't know the payroll dollars. As I did say, we do know that in a 2000 study about \$400 million a year is added to our economy as a direct result of nuclear being in our municipality. We know that they employ between 3,000 and 5,000 employees at the Pickering station. In addition to the plant, there is a training centre and a seven-storey office building on Brock Road that was completed just three years ago. We see the opportunity to consolidate those, along with the folks from University Avenue, into an office tower that we have partnered on with the teachers' pension fund, with a connecting pedestrian bridge to the Pickering GO station to bring the folks from downtown out to Pickering in comfort and work in a brand new modern building.

**Mr. Leal:** Just one last question: If we ever move OPG headquarters, you'd share that with Peterborough, wouldn't you?

**Mr. Ryan:** Absolutely.

**Mr. Leal:** Thanks so much. Thank you, Your Worship; good to see you again.

**The Chair:** Thank you very much, and I do apologize for the confusion.

## ENERGY PROBE

**The Chair:** Now can we have Mr. Tom Adams from Energy Probe? Sorry for the earlier confusion. Welcome to the committee. Thank you very much for taking time today to participate in our hearings. As I have mentioned, you will have up to 15 minutes to make a presentation, which will allow each caucus to ask questions for approximately five minutes.

**Mr. Tom Adams:** Thank you very much, members of the committee. I appreciate the opportunity to appear.

Energy Probe is an independent, non-profit consumer and environmental think tank. We've been active in multiple forms in Ontario since before the Pickering nuclear power station was brought into service.

We're promoters of economic efficiency and conservation with respect to natural resources and take a long-term public interest and concern with respect to consumers and the environment, particularly residential consumers. We've been active in public utility regulation; we are in direct communication with our supporters; we appear frequently in the press with regard to comments and analyses on energy matters; we're active in the educational environment; and we're directly involved in scientific and technical research.

The purpose of my presentation is threefold. I'm going to present an overview of the current process that's underway at the Ontario Energy Board with respect to OPG's rates for 2008 and encourage this committee to endorse that process. The second thing I want to present to you is some encouragement for the committee to en-

dorse an exploration by OPG of the potential for dramatic emission reduction cuts at its existing coal-fired generation sites using coal in a new and much more environmentally responsible fashion. The third issue I want to address with you is to make a case against sole-sourcing any nuclear expansion and make a case for nuclear competition.

The Ontario Energy Board has been given a mandate by the Ontario government to establish rates for OPG's prescribed assets starting in May 2008. This direction from the Ontario government was made pursuant to the Ontario government's initial commitment back in 2003 to depoliticize fundamental decisions taken in the electricity sector. Of all the initiatives that the Ontario government has taken since that time in electricity matters, this initiative to give the OEB some responsibility with respect to OPG rates is one of the few that is squarely within that depoliticization strategy.

The participants that are active in the Ontario Energy Board proceeding include government agencies, interest groups and consumer organizations. Hydro One, the IESO and the Ontario Power Authority are examples of government agencies that are active there. The Power Workers' Union, Toronto Hydro and Bruce Power, as well as power marketing agencies, are examples of interest groups. Consumer organizations active there include the School Energy Coalition, the Vulnerable Energy Consumers Coalition, AMPCO, which was just speaking, the Canadian Manufacturers and Exporters, as well as Energy Probe.

The review is technically oriented and has access to experts in a variety of fields. Board staff has presented a number of discussion papers and is developing a methodology for the review. They are about to present guidelines for the filing of the detailed technical documents behind the review.

This is a unique historical process. Ontario has never had such a level of public oversight with respect to OPG or its predecessor and it would be unreasonable to expect the process to happen quickly. It's anticipated that at least three years is required for the review. This is a very thorough process, far more thorough and inclusive of public participation than could be provided by a committee such as this.

The point I want to make to you with regard to the exploration of opportunity for dramatic emission cuts from coal-fired generation starts with the premise that the technology for coal-fired utilization is making rapid progress under intense public and industrial support. Many parts of the world—the United States, Japan and Europe—are clearly in the lead. The representatives from OPG who were here this morning explained, and accurately explained, that we can now, with existing off-the-shelf technology, virtually eliminate conventional pollutants from coal-fired generation. The Ontario government has endorsed the exploration of alternative uses for the coal-fired sites through the biofuel initiative for the Atikokan station. I believe that this initiative ought to be expanded, and one of the technologies that ought to be

addressed is a technology that is a dominant power supply alternative in Europe right now, and that is coal-fired cogeneration for district heating purposes. The city of Thunder Bay is an example of perhaps one of the best opportunities in Canada for the creation of an ultra-low-emission coal-fired generation and combined heat and power unit. This is an opportunity that we should not overlook. It would be a mistake to ignore the progress that other communities are pursuing.

**1440**

With regard to nuclear expansion, our organization is steadfastly opposed to any expansion of nuclear. However, if Ontario is to consider the expansion of this technology in the future, we believe that it would be irresponsible to do so without comparison shopping. There is a tremendous opportunity to bring the potential suppliers of nuclear goods and services into a direct, transparent public review process where they would be invited to critique each other's proposals with respect to cost, reliability and safety. The process that OPG has described for its internal review is one that depends on OPG retaining the freedom to explore all of the technology options. Energy Probe is supportive of that freedom of scope but believes that lifting the veil of secrecy so that there can be transparency with regard to the information that OPG is gleaned from this process would benefit the public directly. We can see the benefits that have occurred when OPG has been operating in an attempt to enhance its public confidence. It has improved the behaviour and the performance of OPG, and that's a good thing. When the government undertook sole sourcing for the Bruce refurbishment, they did not have the advantage of the comparison shopping that we think is essential, and some of the consequences that we expect to see for ratepayers will flow directly from that sole-sourcing arrangement.

Those are my comments for the committee. I really want to express my appreciation again for the opportunity to appear.

**The Chair:** I think we are around to the NDP for the first question.

**Mr. Hampton:** I wanted to ask you some questions about coal. It is certainly true that in Europe they are looking at different ways of using coal, cleaner ways of using coal etc. I understand that the United States has put a fair amount of money into research. Based on your knowledge of what's going on, can you tell us what are the best technologies that appear to be out there and what is the solution to carbon emissions?

**Mr. Adams:** One example that is in my mind is one of the most exciting coal-fired facilities in the world: a coal station in downtown Copenhagen called Avedøre. It's a multi-fuel station that uses biofuels as well as coal. It's producing heat and power. It has a very large storage tank, so if it's producing power at a time when customers don't need the heat, it can store the heat for a period of time and release the heat when the customers need it. The downtown location is key to the efficiency profile of the station. When a dedicated facility is producing only

electricity and throwing away the waste heat, at least 60% of the thermal value of the fuel is disposed of into the environment. What they're doing at the Avedore station is achieving over 80% thermal efficiency, particularly in the winter heating season.

If you look at a community like Thunder Bay, they've got a downtown coal station. They've got a large heating load. It's not a warm part of the world. They need to heat their houses. They're using natural gas and electricity today. That's a terrible waste of resources. While we're throwing heat out into Lake Superior, that's heat that could be funnelled to the community and causing a reduction in the fuel use that people would be incurring today for heating municipal buildings, industrial services as well as residential purposes. This is a strategy that's proven, and it would be a terrible shame if we couldn't learn from the experience of others.

**Mr. Hampton:** There is an issue around carbon, though. So, to your knowledge, how is that being addressed? There's some rather interesting stuff going on in the north end of Scotland, where they're doing experiments on sequestration of carbon back under the North Sea oilfields etc. But even they admit that this is one part reality and nine parts research and hope. What are the prospects for dealing with the carbon?

**Mr. Adams:** The zero-emission coal plant is not a reality today with respect to carbon. With respect to conventional pollutants, virtual elimination is the standard we ought to have. We ought to set the standard. There's no reason why we ought to be sucking on the tailpipe with respect to sulphur dioxide, nitrogen oxides; it's silly. It's relatively inexpensive to clean that stuff up and it's mind-boggling that we don't do that. But with respect to carbon emissions that are residual after you have achieved the cogeneration benefits and the high-efficiency generation like they have at Avedore, a very high-efficiency fuel unit, you still have carbon emissions. So what are you going to do about it?

The technology is making rapid progress and Canada is part of that. We have federal programs now that are pursuing the science on this. In the Thunder Bay area, the geology does not appear to be suitable for this type of disposal. However, in southwestern Ontario we are part of the same geologic formations that are underpinning the geology of Michigan, Ohio and Indiana, and the research effort on the other side of the border is showing that there are these deep saline aquifer formations that represent very large storage potential. So Ontario, unfortunately, is not participating in those mid-western states initiatives that are under way now. There's a huge amount of science going on that I feel very confident in the foreseeable future is going to come up with solutions. But in terms of solutions that you can plug in today, go out and get a supplier to strap them on to your coal plant today, they're not there.

**The Chair:** Thank you very much. We need to move on. Mr. Duguid.

**Mr. Duguid:** Thank you, Mr. Adams, for your presentation and all the good work you do, making sure that

your perspective is out there. You are definitely very active and work very hard at this stuff and we appreciate that.

I've got a few questions, but the first follows on the lines of Mr. Hampton's. Given that just about everybody who has appeared before us so far, and most people we have spoken to outside of this forum, suggests that coal technology is not at a place yet where it can deal with emissions of CO<sub>2</sub>, and that it's not at a place yet where environmentally it's superior to other technologies, I just want you to confirm: Are you suggesting that the government should be looking at investing in these coal technologies, even though most would suggest that they're not the best environmental way for us to provide our energy?

**Mr. Adams:** Well, the question of what is the most environmental form of power generation cannot be considered in isolation from the costs of these things. Consumers don't want to pay more for electricity, and the natural-gas-fired generation that Ontario is now making a huge commitment to and which many people seem to be endorsing has gigantic cost consequences. The cost of natural gas today, the cost of natural gas in the futures market for next January and the cost of natural gas in the futures market for the January after that suggest that the fuel is about five times as expensive as the cost of coal. That price differential represents a lot of financial potential to fund the environmental cleanup that coal needs. Coal has a bad history. It was used before people were aware of the problems associated with it and used carelessly after we had an understanding of the environmental consequences. In this day and age, for a modern society like Ontario to be operating coal plants without scrubbers on them is a highly questionable proposition.

**1450**

It's not coal versus wind or coal versus nuclear. These are not alternatives to coal, because none of them has the flexibility of production characteristics that are essential for keeping the lights on. These lights are on because we have enough generation on our system that can follow the load. The only alternatives that we have available to us to do that today are coal or gas, so how much gas do you want to have on the system when gas is selling for 10 US bucks a GJ?

**Mr. Duguid:** I'm going to change gears a little bit and talk about electricity prices. Some of the deputants who appeared before you today expressed concern about energy prices as it affects their particular area of responsibility. Are you in support of an approach that allows the market to set these energy prices so that consumers are paying closer to the true costs or do you think that the government should intervene and get involved in artificially setting the price for electricity?

**Mr. Adams:** We have always taken a long-term view of this. If it was just for "how to get my bill lower next month," if that was the only objective that we had, that would be easy. The old Ontario Hydro figured how you do that. What you do is you go and issue a lot of bonds,

you get your accountants to fiddle with your books, you come up with some fancy numbers and you get on with life, right? But you build up this gigantic liability. That's not a long-term strategy, and we're on the tailpipe of that. So we've got to look beyond that. Consumers need to pay the real price of energy, but that doesn't mean that they just ought to pay any price for energy. We ought to have a system that gives people reasonably clean power as efficiently as possible, but then, when it's finally delivered to the customer, they're paying the full freight.

With respect to OPG, it's not clear that the prices that we are paying today for OPG, for its operations, reflecting the cost outlook for operation of these aging facilities—keep in mind, what is the average age of these facilities we're talking about? These are old units. It may well be that the outcome of the Ontario Energy Board process is a recommendation from the regulator, taking into account the input they received from all these parties, that the price might have to rise a little bit. I hope that our society has the wherewithal to actually let the regulator do that job if that's the decision.

**The Chair:** Thank you very much. We'll move on to Mr. Yakabuski.

**Mr. Yakabuski:** Thank you very much, Mr. Adams, for joining us. Mr. Duguid was talking about the research into possible coal technology. I don't think anybody has stated that zero-emission coal exists today, but I think we should be clear that zero-emission natural gas doesn't exist either. I think that sometimes people get the erroneous viewpoint that natural gas is without CO<sub>2</sub> emissions, which of course we know it isn't, and you can elaborate on that.

Research is going on in every industrialized country and is particularly strong in the United States because they have so many coal-burning plants and they have so much of the resource that they are not going to turn their backs on coal because they have over a quarter of the world's coal. So if they perfect this technology so that they can at least reach the emission level of natural gas, they're going to have a tremendous cost advantage over us in the production of electricity. When this government says, "It doesn't exist, it's not there yet, so we're not going to be involved in it and we're not going to invest any money in it"—the government owns the plants that burn coal. I'm just wondering, if I could draw an analogy: We've been looking for a cure for cancer for as long as I've been alive. We haven't found it, but we haven't stopped investing in it because it's a worthwhile goal to try to eliminate that kind of insidious disease. But this government seems to turn its back on innovation and technological advancements just because they're not there yet. I'd like your comments on that, particularly when all of the people whom we have to compete with are investing huge amounts of money, which could lead to a tremendous economic advantage for them.

**Mr. Adams:** Your cancer analogy is apropos in the sense that we haven't beaten cancer, but we've hugely improved the life expectancy for people who are diagnosed with this disease in many of the categories of

cancer that still afflict us. It's not as if the project of trying to fight the disease has been fruitless. You can look to other areas of technology. Fusion power is an example where we've put effort into it for 50 years and we've got nothing to show, but cancer research is not one of those examples. Something similar is happening with coal: There's no zero-emission coal, just as cancer hasn't been beaten. But the modern coal plant doesn't look anything like—look at this Avedore plant that's in downtown Copenhagen. It's not an environmentally unaware community that decided to allow this thing to be built in their midst.

When we're thinking about constructing natural-gas-fired generation—and not just thinking about it; we are committing to building a very large fleet that is under construction in Ontario today—what is the fuel for those units? North America is now becoming increasingly reliant on liquefied natural gas. These are huge tankers that are transported across the oceans from business partners like Algeria and Putin's Russia to supply us with fuel that itself has high embedded energy costs to get the refrigeration down to minus 162 degrees Fahrenheit so that the stuff can be liquefied. It's illustrative to think of what the Americans do when they bring these tankers into some of their ports: The kind of military resources that they commit to protecting those tankers as they come into Boston harbour, for example, would stretch the Canadian military in terms of our capability to provide what Americans consider to be an adequate level of security for those facilities, given the particular kind of risk.

Ontario building gas-fired generation is part of what is driving North America towards liquefied natural gas. We don't—

**Mr. Yakabuski:** What about the emissions from natural gas, CO<sub>2</sub>?

**Mr. Adams:** When you go to LNG, you increase the life cycle emissions about 20% by some people's estimates; more, by other estimates. There are lots of contests about this in the literature.

In the days when natural gas was cheap, back in the 1990s, it was an easy one to pick: It was cleaner than coal. There are emissions, but they're much less than coal in conventional facilities. It wasn't really attracting the kind of scrutiny that it's getting now, when you've got the package of liquefied natural gas and the environmental hazards associated with that, plus the cost.

**The Chair:** Thank you very much. We have run out of time but appreciate you coming today.

#### CLEAN AFFORDABLE ENERGY ALLIANCE

**The Chair:** I'd now like to ask Carol Chudy of the Clean Affordable Energy Alliance to come forward. I'm sorry; I'm not sure how to pronounce your last name.

**Ms. Carol Chudy:** "Chuddie."

**The Chair:** Thank you. As I know you know, you have 15 minutes in which to make a presentation. That will allow five minutes for each caucus. Please begin.

**Ms. Chudy:** Thank you. As is noted, I am Carol Chudy, co-chair of the Clean Affordable Energy Alliance. We are an energy ratepayers' organization which advocates reliability and security of power supply, environmental accountability and the preservation of economic sustainability. We've closely followed provincial power restructuring over the past few years, having reviewed and responded to OPA reports, stakeholder submissions, discussion papers, Web conferences and workshops. We have spent considerable time researching credible energy and environmental information. Our initial concerns for the future affordability and stability of Ontario's power system have not diminished through this process. We have expressed our concerns to the media, the Ministry of Energy, the Ministry of the Environment, opposition critics, the OPA, and committees such as this.

**1500**

As a voice for ratepayers, we appreciate this opportunity and wish to address three issues that are directly related to the services and the mandate of Ontario Power Generation. We obviously have much information in this report that I will barely even touch on, but I do hope you will take the opportunity to read what we have to substantiate what we are going to say today.

First, Ontario's publicly owned utility, now known as Ontario Power Generation, has undergone significant changes since its inception in 1906. The original mandate was to "provide all citizens with electricity at the lowest possible cost." The utility which first brought a modern convenience to early Ontario now provides an essential service, vital to every aspect of our life. In spite of the changes, the mandate is essentially the same: to cost-effectively produce electricity from its diversified generating assets while operating in an open, safe, and environmentally responsible manner. A memorandum of agreement between OPG and the crown, as represented by the Minister of Energy, describes and develops the mandate. Both parties to the agreement—the minister and OPG—have responsibilities. Those of OPG are specified; those of the minister are implied by virtue of his office as a representative of Ontario ratepayers.

Some implications: The Minister of Energy must not act on his own behalf, nor out of political motivation, but as one who protects the interests of the people of Ontario. His interaction with OPG ought to conform to the ministry mandate to "ensure that Ontarians have access to safe, reliable and environmentally sustainable energy supplies at competitive prices" and be in harmony with the Ontario Energy Board mandate to "protect the interests of consumers with respect to prices and the adequacy, reliability and quality of electricity service."

Secondly, the average Ontarian forms opinions primarily from media information and public interest groups as reported to the OPA. Unfortunately, there are recurring reports that, in our opinion, represent partial information as the whole, misinform, or mislead. When sustained and combined, the public forms opinions that are based on perception, not reality. We are concerned

that much information regarding the environmental impacts of power generating resources goes uncontested.

OPG has the mandate to operate with transparency, accountability and social responsibility. In fact, Minister Duncan has said that OPG is a publicly owned company belonging to the people of Ontario; it plays a critical role in all our lives and the people of Ontario pay this company's bills. It must operate and be seen as operating with transparency and accountability to taxpayers.

The CAE Alliance therefore asserts that OPG has a public duty to counter any misinformation, misrepresentation of information, or misperception from any source.

Thirdly, according to the agreement, "OPG will operate as a commercial enterprise with an independent board of directors." As such, OPG operations should be guided by the same market principles as other prospective generators, including fair and unbiased procurement options, and subject to competitive processes that are open and accessible. If private industry can compete against OPG without concessions, contracts should be awarded. Otherwise, the ratepayer subsidizes private enterprise.

The CAE Alliance believes that ministry and government involvement with OPG should be characterized by oversight and accountability, not intervention. Although the agreement grants the minister the prerogative to direct OPG to undertake special initiatives, the instances to date, we believe, have not been in the public interest. Those include the reduction of Bruce Power lease payments, the conversion of Thunder Bay to natural gas, later cancelled, the direction disallowing OPG to bid in on RFP projects, and the coal closure mandate.

The second area that we wish to discuss is the role and restrictions of OPG in a market-based system.

Throughout the last decade, deregulation and market participation was considered by many as an ideal solution to address the massive new infrastructure investment required to replace and enhance Ontario's power supply. Private investment would divert the risks from ratepayers to producers, share in the cost of new power plants and create a climate of competition guaranteed to lower costs for consumers.

Five years ago, Mr. McGuinty voiced support for a genuinely competitive market for power generation but noted that the province needed to break up OPG to ensure competition in electricity generation. At that time, it was determined that 4,000 megawatts of price-setting power production should be divested in order to develop a competitive marketplace. The long-term vision for the creation of a competitive market for electricity supply is a stated goal of the Ontario Power Authority.

The interim years have seen significant changes in Ontario's power administration which have not only paved the way for market participation but have resulted in much more government intervention in production and distribution of power. In spite of this, the OPA notes that insufficient supply-side competition exists and the necessary market features have not developed. A genuinely competitive marketplace has not materialized. We've listed a number of examples, including the divestment of

assets at a fraction of their value, and we are now paying more for power from them; a granting of subsidies, tax benefits, bonuses and guaranteed minimum payments to private power producers; ratepayers will pay more for all forms of private generation, as confirmed by the OPA; and in terms of risk, the federal Parliamentary Information and Research Service notes that the provincial government approach in dealing with the private sector “entails potentially significant financial risks for the province and ultimately for the electricity ratepayers and taxpayers of Ontario.”

As noted, significant changes have occurred in the last five years, including higher/volatile cost of natural gas, advances in technology to keep pace with environmental guidelines, geopolitical concerns impacting security of supply resources and the emergence of international economies that impact Canadian competitiveness for both our goods and services and external fuel sources.

The CAE Alliance is concerned that the government’s vision for a strong presence of emergent generation in Ontario is driving their current energy policy. There does not appear to be an assessment or evaluation of the merits of proceeding or what it is costing the consumer to get there. We believe it’s an outdated agenda not in the public interest, or prudent to pursue.

We need to recognize that OPG owns one of the most diversified, low-cost and low-emission portfolios in North America, with a commitment to continually improve the efficiency of the generating stations so that Ontario has the power it needs when it needs it. We’re asking the government to reassess the market model and the role of OPG in power production.

Thirdly, we wish to consider the continued presence of coal-fired power generation in Ontario. After extensive research, the CAE Alliance has concluded that the coal replacement strategy is based more on political will than on science and economics. If we consider air contaminant emissions, the purported reason for closing the coal plants, note that the Ontario Medical Association indicates that health impacts are attributed to chronic acute exposure to five common smog components. Of three of these—carbon monoxide, particulate matter and VOCs—coal-fired generation contributes less than 1%. Coal combustion does contribute more significantly to the other two, NO<sub>x</sub> and SO<sub>2</sub>, but as has been mentioned here a few times today, those can be reduced 80% to 95%. Government reports confirm that. For example, the government’s health report indicates that coal plants contribute 1% in Toronto on smog days, and it is not surprising, therefore, that the closure of Lakeview GS has had no impact on the GTA.

In spite of this, the Minister of Energy has specifically called for coal-fired generation in Ontario to be replaced with cleaner sources in the earliest practical time frame. The IESO has indicated that the characteristics of replacement resources should closely resemble the withdrawn supply. Also, as has been noted today, natural-gas-fired generation is the only close substitute. Therefore, although the OPA acknowledges there are considerable

risks associated with price, volatility and supply of natural gas, an additional 7,000 megawatts of gas-fired generation is included in the power plan. That’s more than double the existing capacity, with almost triple the output. This will cost billions of dollars required for the transition. To us, it seems pointless.

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Studies and reports indicate that emissions from coal plants can be reduced to about 1% with current available emissions control technology that is within 1% of natural gas. That is confirmed by a recent report by the University of Waterloo indicating that that remediation technology could reduce SO<sub>2</sub> and NO<sub>x</sub> contributions to about 0.3% when averaged across southern Ontario. Particulate matter, mercury and other harmful metals can also be reduced that same amount.

Transitioning from coal to gas will come at great cost, for marginal, if any, environmental benefit. We document significant concerns with the supply of natural gas. In fact, the OPA indicates that by the middle of the next decade there will be much more cost associated with natural gas because of the reduction of production in the Alberta basin, where we get most of our gas from.

The remaining concern for coal-fired generation is the climate change potential. Let’s look at that in perspective. According to Environment Canada statistics, coal plants contribute about 13% to Ontario greenhouse gas emissions, about 3% of the national total and 0.006% globally. When we consider that about 4% of global greenhouse gases are anthropogenic, Canada contributes about 2% of that. Here again, the replacement of natural gas will have limited impact.

When we consider point of combustion—again using information from Natural Resources Canada, Environment Canada and the US government—greenhouse gas emissions from natural gas are 52% to 57% those of coal. If we consider, however, the lifecycle emissions associated with gas production, refining and transport, the difference narrows.

The World Energy Council indicates, “If lifecycle analysis was used and other greenhouse gases were taken into account, electricity generation from fuels other than coal would show similar or even higher greenhouse gas emissions.”

Further consider that CO<sub>2</sub> emissions from coal plants can be reduced by coal-firing with biomass, which is done very well in European countries. Germany, for example, uses that technology quite a bit, and they have 50% of their power production from coal. If we implement emissions control technology, we will increase unit efficiency, and that will mean less coal-burn and less carbon emissions.

As Mr. Adams has pointed out, combined heat and power operations used in coal-fired generation would cut CO<sub>2</sub> significantly. And we also have to finally acknowledge the contribution of fly ash from coal combustion that is diverted from landfill and used in place of cement for concrete production. More than one tonne of CO<sub>2</sub> is emitted for each tonne of cement used.

The CAE Alliance concludes that the coal closure is unnecessary and will be effected at great cost to the consumer. Closing coal plants will not significantly improve either air quality in Ontario or climate change. What it will guarantee, however, is the removal of 6,500 megawatts of affordable, flexible and reliable power. That, we believe, is not in the provincial interest.

Finally, our assessment of the OPA proposals in the integrated power system supply indicates that coal-fired generation will be required past 2014, and we give you a number of reasons why we've come to that conclusion.

Many changes and uncertainties are anticipated through the next decade. Retaining the reliability of coal-fired generation will stabilize the power system as significant changes are made in our supply portfolio. The OPA acknowledges coal-fired generation to be "an important component of the present supply mix ... supporting the security of the electricity system and in helping to manage uncertainties caused by the unavailability and/or reduced capacity of other generating plants." It meets all the criteria. Therefore, it is imperative that the coal-fired power plants be maintained in optimum condition and that the very best available emissions control technology be installed without delay.

Thank you.

**The Chair:** Thank you. Right on time. We are looking at questions from Mr. Leal, please.

**Mr. Leal:** Carol, I had the opportunity to meet you in Simcoe some time ago. I appreciate you being with us today.

I have a couple of questions. There have been estimates of about \$1 billion with regard to scrubbers and SCRs to be installed on coal-fired plants. My understanding is, yes, they can probably contain both NO<sub>x</sub> and SO<sub>x</sub>. There is some question in terms of mercury and particulates, and they have no impact on CO<sub>2</sub>. If we went that route, that billion dollars, would you see the ratepayers of Ontario picking up the cost for the installation?

**Ms. Chudy:** Let me just clarify: Particulate matter and mercury are reduced—particulate matter up to 99%, and mercury about 95%—and we document in there our resources for that. In fact, Lambton generating station is already noting that on two of their units.

Is the cost worth it? Well, because of the generating characteristics of coal-fired generation, if we remove that, we have to replace it with natural gas. That's going to cost the Ontario consumer big-time. The Ontario Energy Board indicates that the amount of gas that we will use to replace coal will be more than what we use for all residential consumers combined presently.

**Mr. Leal:** The other question—and I will take the opportunity to read your full brief. You talked a little about hydroelectric development. This morning we had OPG officials with us. They went to great lengths talking about the tunnel that's being dug in Niagara Falls and other potential developments, run-of-the-river and OPG. I notice that you don't really highlight that at all. Could you just respond to that?

**Ms. Chudy:** On the use of hydroelectric power?

**Mr. Leal:** Yes.

**Ms. Chudy:** I think it goes without saying that hydroelectric power is a vital resource. Again, though, as has been said earlier, we need the balance of resources. When hydroelectric is down in the summer like it was, I think, a couple of years ago—in the summer of 2005 it was down about 15% because of drought-like conditions. If we have wind power and the same condition in the summertime and we have nuclear for baseload, you need something for the load following the flexibility, the dispatch capability. Again, natural gas and coal are the only two resources.

**Mr. Leal:** My last question is, has your group done any extensive research in terms of CO<sub>2</sub> sequestration and having the right geological formations? I heard earlier today from Mr. Adams that it might be available. Has your group had any geologists look at that issue to make some determination?

**Ms. Chudy:** We're a pretty small group, so, no, not specifically. We've read quite a bit about it. In fact, I believe that Montana is sending some of their CO<sub>2</sub> to Alberta, and they're looking into developing in that area and they've had some experimentation there. I think it's definitely something that's in the works, because there's the need for it, there's the desire for it and there's the money for it. I think it's only a matter of time.

**Mr. Leal:** Thank you so much for being with us today.

**Mr. Yakabuski:** Thank you, Carol, for joining us again today.

One thing you touched on was that the minister shouldn't be politically motivated and that OPG, as the operator of the asset, should have the right to contradict the minister if it is clear that the minister's statements are political and not backed up by good science. Are you familiar with Bryne Purchase, the former deputy minister?

**Ms. Chudy:** Only in that, when I read his article, I did a slight bio of him on the Internet. So other than those two things, no.

**Mr. Yakabuski:** As you know, Mr. Purchase, a senior public servant of some 30 years, basically said that it is the politicization of the issue that the government is guilty of. His headline is, "Coal Isn't the Demon; Politicizing Energy Policy Is."

I'm wondering why you might feel that this government is so opposed to what the rest of the world is doing with regard to clean-coal technology, if it exists, or at least trying to find that out there. Certainly we have the ability to remove pollutants. If the government had done something prior to now—they're almost four years into their mandate. You commented on Germany. I've often heard them cite Germany and Denmark as shining examples of green power. Germany and Denmark both get about 50% of their power from coal. We're currently getting about 16% or 17%, in 2006.

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Is it all political on the part of this government or is it backed up by science? Or is it just simply because they



believe there's a political gain to be made regardless of the expense, regardless of the cost vis-à-vis the true cost and total cost, which we can't find out, by the way, of any of these contracts that are signed for gas generation? There's no release of what they're going to pay, when they're producing energy, when they're not producing energy. At least with the Bruce deal we know that this is what we're going to pay; we're going to pay 6.2 cents a kilowatt hour for power produced from Bruce. But for any of these gas deals that have been signed, they won't even release the numbers. Is it political or is there any science to back them at all?

**Ms. Chudy:** Early on, we began to realize—in fact, our group formed because of this. We thought, “All we have to do is inform people.” Our research showed it's economically good to keep coal, it's totally environmentally a good way to go, unless we switch to natural gas. So we began to ask those questions. We asked those questions of the ministry. We asked, “Where is the full study?” Even the cost-benefit study itself—which was the only document that the government provided to us—said that when they compared natural gas and clean coal, they were on a par with one another. So, is it political?

**Mr. Yakabuski:** We don't have clean coal yet either.

**Ms. Chudy:** If I can just speak to that, is it political? Unfortunately, the public has a misperception and the political will is to look out for the interests of the public, so if that's perceived as the public interest, it has to be investigated and the public has to be aware.

**Mr. Yakabuski:** Of course, one thing we do know is that they had an ironclad promise, commitment, undertaking. Assurances were made that they would shut these plants down by 2007—no ands, ifs or buts about it—come hell or high water. We're into 2007 and they're not going to be shut down in the foreseeable future. Quite frankly, I guess that anything they say on this subject you have to take with a grain of salt.

**Ms. Chudy:** Mr. McGuinty has indicated that he was ill-advised on the coal closure timetable. We are asserting that he has been equally ill-advised as to the need to close coal.

**Mr. Yakabuski:** You'd think he would release the names of those ill-advisers. Not at all.

**Ms. Chudy:** We would like to speak with them.

**Mr. Yakabuski:** I'd sure like to know who they are.

**Ms. Chudy:** I'd like to discuss with them.

*Interjection.*

**Mr. Yakabuski:** Probably invented, eh? Thank you very much, Carol.

**The Chair:** Thank you very much. We'll move on to Mr. Hampton.

**Mr. Hampton:** I want to thank you for a submission that covers a lot of ground.

I want to focus a bit on the coal issue. I think everyone understands that natural gas is a pretty risky venture and that if we move, as the McGuinty government indicated they wanted to move, to using more and more natural gas, we very quickly would have electricity rates in the

province that would be closing industrial plants on an almost weekly basis.

So let's come back to clean coal. I asked Mr. Adams this question earlier. It seems to me, given the debate that's happening around the world now about carbon dioxide emissions, that one of the challenges that has to be overcome is dealing with carbon dioxide. I think everyone accepts that you can scrub out the SO<sub>x</sub> and the NO<sub>x</sub> and most of the mercury, but the issue is quickly becoming what to do about the carbon dioxide emissions.

You've surveyed some literature. What do you think is the best bet for carbon dioxide emissions?

**Ms. Chudy:** I believe the combination of co-firing, combined heat and power. I think we also have to consider and look at the big picture. We are myopically focused on coal-fired generation. It's 13% of our province and 3% nationally. Let's cut that out. But it's going to cost us a lot. If we want to be really concerned about global warming and climate change, we have to consider the fact that in countries like China, which are not bound by Kyoto or anything else, greenhouse gas emissions are rising so fast that by 2009 they will outpace the US, and the US is at 25%. That's 10 years earlier than anyone expected. Yet we are importing so many goods, to the detriment of our own manufacturing base, from this country. Meanwhile, we're going to close our coal-fired power plants, impact our industry and our manufacturing, and yet support industries in China, India and other countries that have little thought.

**Mr. Hampton:** I agree that if you start mixing up some of the global market issues with some of the global climate issues and with some of the global power issues, this is a pretty big equation. But my sense is that, politically, we're going to face increasing public pressure to address the carbon dioxide issue. Saying to people, “Well, we don't have to worry about this because they're not worrying about it in Asia,” I don't think is going to pass muster with the public.

**Ms. Chudy:** Okay, but when we consider it's 13% of Ontario, if we look at the generating mix—we need a certain amount of either coal or natural gas. If we switch to natural gas, and we have the figures in here, it's still about two thirds when you look at the life cycle emissions.

**Mr. Hampton:** I completely agree with you. If you're talking about carbon dioxide emissions, natural gas is not the answer. I think increasingly environmentalists are looking at the switch to natural gas and saying, “This is not going to help us on the carbon dioxide emissions. It is very superficial.”

**Ms. Chudy:** Coal-fired with biomass: I know that OPG is looking at that at Nanticoke. That's 30%. I guess we can do what we can at this point in time, but can you remove a fossil fuel at this point in time? We can't. We can mitigate the damage, but our point is, if we just go from one fossil fuel to another, at very little change, that's not going to do us any good, at great cost.

**Mr. Hampton:** I want to ask you a question about rates because you've been in the room most of the day.

One of the things the McGuinty government has—it's bizarre when Ontario Power Generation gets about \$49 a megawatt for electricity that they produce at a nuclear station, yet Bruce Power for the same megawatt of nuclear power will get in the upper range of \$60 a megawatt. When Ontario Power Generation produces electricity at, say, one of its small hydro dams, it gets about \$47 a megawatt for that electricity. The same hydro dam now under the control of Brascan can, as a peaking plant, get four or five times that rate. Does it make any sense to you that this company over here, because it's publicly owned, is told, "Well, this is all you get for generating this megawatt of electricity," but this company over here, because it's privately owned, can get two, three or four times as much for generating a megawatt of electricity? Does that make any sense to you?

**Ms. Chudy:** Not at all, from a consumer's perspective, and that's a big part of our concern with a market operating system. Do one or the other. If you're going to allow the market at certain rates, then allow OPG to have the same rates. Essentially we own OPG, or the shareholder does, and whatever monies OPG makes can be turned back down to reduce debt, for innovation and research and technology, to pre-fund new plants. It's either one or the other, but give them fair, competitive market rules.

**The Chair:** Thank you very much. We appreciate your coming today. We've run out of time.

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#### UNIVERSITY OF ONTARIO INSTITUTE OF TECHNOLOGY

**The Chair:** I'd like to ask Richard Marceau to come forward from the University of Ontario Institute of Technology. Welcome.

**Dr. Richard Marceau:** Thank you very much. I have a copy of my presentation.

**The Chair:** Now, as I know you know, you have 15 minutes in which to make your presentation. That will allow each caucus, then, five minutes for any questions you might wish to take.

**Dr. Marceau:** Ladies and gentlemen, thank you for this opportunity to bear witness to the value of the strategic relationship which exists between Ontario Power Generation and the University of Ontario Institute of Technology.

Before I begin, let me introduce myself and provide a bit of background. I come to you not only as a member of the educational community that has a strong partnership with Ontario Power Generation, but also as someone very familiar with the electric industry. Currently, I am provost of the University of Ontario Institute of Technology in Oshawa, the province's youngest university. I hold a PhD in electric energy transmission and I have been a professional engineer since 1979. I spent 15 years in industry, including Hydro-Québec, before making the leap to academia at École Polytechnique de Montréal in 1993. In 1997, I was elected chair of the department of

electrical and computer engineering at École Polytechnique, at that time one of the three largest such departments in Canada. I became dean of the faculty of engineering of the Université de Sherbrooke in 2001, before moving on to UOIT as provost on January 1, 2005.

The reality of our current society demographics is that we have an aging population of workers, many of whom are now eligible to retire or will be eligible in the next five to 10 years. The electric energy industry, and specifically OPG, could face up to a 50% reduction in their workforce during this time period.

This is compounded by a shift in the types of employment young graduates are seeking. Increasingly over the past 20 years, there has been a lack of candidates for the skilled trades in particular and for various other types of expertise needed by the electric power industry in general. Until the founding of UOIT, a program specifically geared to producing engineers and other trained professionals for the nuclear industry never even existed in Canada. This is a tremendous challenge for any company, but none more so than one that relies on highly skilled tradespeople and highly trained personnel such as required by OPG.

Fortunately, even prior to the opening of the university, OPG and Durham College—the institution that leveraged its resources to create a university in Durham region and bring UOIT into the world—were already developing a strategy around this challenge through college programs, internships and apprenticeship programs targeted to the types of skilled tradespeople that OPG would require in the years to come.

At the same time, OPG and other energy industry companies began working with selected universities to develop programming that would train and educate future graduates with the skill sets required to meet the knowledge worker gap they knew they would face. An example of this is OPG's participation in the University Network of Excellence in Nuclear Engineering, UNENE, of which UOIT is now a member. UNENE not only funds research chairs in nuclear engineering at five universities in Ontario to support the Canadian nuclear industry, but through these chairs promotes internships and provides valuable financial aid and scholarships to attract and retain students in areas critical to OPG.

In regard to OPG's strategy, the piece of which I am most intimate with, of course, is its role in the development of UOIT. This is particularly evident in our faculty of engineering and applied science, including its School of Energy Systems and Nuclear Science, which has benefited significantly from OPG's investment of resources, both human and financial.

Since its doors opened to its first 900 students in September 2003, let me provide you with a brief overview of UOIT in its fourth academic year. We presently have 4,300 students; more than 30 undergraduate offerings; two master's programs, and six more planned for September of this year; more than 100 core faculty members, all of whom have PhDs, the only university in

the country able to make this claim; and six faculties: engineering, science, health sciences, business and information technology, education, and criminology.

From the moment UOIT came into being, senior OPG staff have worked with our professors to provide input on targeted skill sets, course curricula and technical detail to enhance the learning process. In fact, the dean of our School of Energy Systems and Nuclear Science is a former Ontario Hydro/OPG employee. Dr. George Bereznai brings a wealth of technical and training capability from his many years with the company, including numerous contacts and a deep understanding of the industry. Thanks to this, UOIT's partnership with OPG has already demonstrated significant outcomes. For example:

- Canada's first cohort of nuclear engineers will graduate in June of this year;

- students are presently engaged in or are planning capstone projects under the supervision of OPG personnel;

- UOIT is currently finalizing negotiations with another major corporation to fund an industrial research chair in the area of nuclear fuels and materials;

- UOIT has just obtained a \$250,000 commitment from a private donor in the Alberta energy industry towards the establishment of a centre of excellence in advanced energy systems; and

- UOIT is poised to submit a proposal for a master's program in nuclear engineering to its academic council by early spring.

These outcomes will benefit OPG far into the future. As to the quality of our students, this is evident from such events as the recent Ontario student engineering competition, held only two weekends ago in Ottawa, where UOIT's senior team won an admirable third place and our junior team won first place while competing against teams representing all of Ontario's engineering faculties.

You may be wondering how a university so young has already accomplished so much. The primary reason is that UOIT has a very special mission: to be market-oriented, research-intensive, to provide career-oriented pathways and to provide innovative pathways to university education for college graduates. Additionally, this mission is supported by an extremely focused strategic business plan in which we have targeted a limited number of areas and taken deliberate steps to excel in these areas through the implementation of best practices, technology and innovation.

For example, we innovate in the area of teaching and learning by being Ontario's only laptop university. UOIT's technologically intensive environment is conducive to continuous innovation in learning strategies, such as problem-based learning. Every evening, our students take home simulation software on their laptops which would often only be found in other universities' graduate computer laboratories.

We also innovate by offering rare or previously non-existent bachelor-level programs such as nuclear, auto-

motive and manufacturing engineering, health physics, radiation science, forensic science and med lab. For more traditional programs such as nursing, commerce, the sciences and others, we innovate in the areas of disciplinary content, technological content and delivery modes. We innovate in the aggressive establishment of master's programs thanks to our professors' remarkable success in obtaining research grants from various granting councils, a performance well above the national average. Because of this, we presently have two fully subsidized chairs. This number will rise to six by September of this year and to eight in the next year. All of these chairs will contribute to attracting bright students, thanks to the research infrastructure they will provide, and retaining them, thanks to the financial aid they will make available. At least three of these chairs will address areas related to nuclear engineering, radiation science and energy, all of which are of considerable interest to OPG.

Lastly, we innovate in terms of creating intellectual property and impacting the economy. We launched our first spin-off company last November and our second one is planned in June. There is something truly special happening at UOIT.

All of this activity will benefit OPG, through the training of highly qualified personnel at the bachelor, master's and PhD levels, through new IP or through the founding of new high-tech firms which support OPG's business needs.

You see, at UOIT, as in the case of OPG, the focus is on the community. In our view, a university is fundamentally a community's investment in its future and in the future of its children. If you ask anyone in Oshawa or Durham region what they think of UOIT, from the mayor to the man on the street, they will say that UOIT will some day make a difference to their community and to their children's opportunity. At UOIT, we take this responsibility very seriously.

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This is why UOIT will soon be the home of this country's most significant research centre in the automotive area, including a unique world-class wind tunnel, in partnership with GM, the province and others, to provide needed support to Ontario's important automotive manufacturing industry.

This is also why UOIT is the only university in Canada spearheading a major research effort in sustainable hydrogen production through the thermo-chemical catalysis and separation of steam from nuclear power plants. We have been earmarked to receive a major \$5.5 million grant from the Ontario government, with AECL, OPG, Bruce Power, Argonne National Laboratory and other Ontario and European universities as partners. In this way, we will leverage our recognized expertise in nuclear power and energy systems to solve, with our partners, a key problem in the area of global warming and climate change.

This is also why UOIT has created the country's first observatory on sustainable urban communities, in order to understand the principles of how some communities

thrive despite natural catastrophe or economic, social, military and technological upheaval, and others do not. This information will then be made available, through the observatory, to our own communities.

To accomplish so much before the end of its fourth academic year, UOIT has become both a complex organization and a tightly run business. UOIT has developed a business model to guide its development, and constructed a strategic business plan to achieve its ambitious goals. UOIT has also partnered with key OPG personnel to aid with its governance. OPG senior vice-president Pat McNeil has been a long-time member of the Durham College board of governors and is a founding member of the UOIT board of governors. Presently, he is chair of both boards and is providing business expertise and guidance to help us navigate the challenges we face as a new organization.

For UOIT to educate and train future graduates who are work-ready and able to take over from their more senior, experienced predecessors in the energy industry, there is a need for resources, including financial. A university needs equipment, the ability to attract good professors and an environment that nurtures learning. In 2005, OPG committed to a \$2-million-a-year, five-year investment in UOIT totalling \$10 million for the essential bricks and mortar. On March 30, when we hold the official opening of UOIT's OPG engineering building, what we will be celebrating will be less about the building itself and more about what is going on inside. Without this capital funding, UOIT simply wouldn't be able to deliver on OPG's needs in the critical area of succession planning.

These types of investments are not unique to Ontario. While in Quebec, I personally spearheaded the creation of a similar initiative for training electrical engineers specialized in the power area, bringing together a consortium of five universities to educate and train 40 power engineering graduates a year over a seven-year time span for Hydro-Québec and other industry players. In exchange, the utility made an investment of \$4 million in capital, equipment and operations.

So you see, strategies such as investments in educational institutions to address succession planning are being used nationally and elsewhere, which only underscores the importance for OPG to ensure that they are capturing a piece of that market of bright, young minds that are much sought after. In 2007, the company will hire 90 new university graduates, and UOIT will contribute to the available resource stream not only through its engineering graduates but by adding value to the partnership through its science, health sciences and commerce graduates. Additionally, UOIT is working with OPG in the development and future delivery of nuclear regulatory education and training for its personnel, designed to enhance the safe and economic operation of nuclear power plants. Clearly, OPG's business interests of safe, reliable and economic operation will benefit.

In closing, my presence here today speaks to the great value placed by UOIT on its partnership with OPG. I also

wish to affirm UOIT's deep commitment to ensuring the sustainability and ensured growth of the electricity, nuclear and energy industries in Ontario through education, research and innovation. UOIT is extremely grateful for its partnership with OPG. Through this strategic partnership, UOIT plans to make a measurable difference to the continued quality of life and economic prosperity of Ontario. Thank you for your kind attention.

**The Chair:** Thank you very much. Each caucus has a couple of minutes. Mr. Yakabuski.

**Mr. Yakabuski:** Thank you very much, Mr. Marceau, for joining us today. In your address you said how people say that someday UOIT will make a difference in their community. I would humbly say that it already has. Clearly, investing in that facility and making it happen is one of the many things that the previous government was very proud of.

I'm going to ask you a hypothetical question. You are essentially a research facility. You do piles of technological research and stuff like that and clearly are becoming leaders in the field. If you saw a most abundant source of readily available, accessible, low-cost energy in the world but the attached baggage with it was that it was considered to be dirty and had a lot of emissions, as a researcher, would you think it would be a good investment to try and find a way to be able to use that energy source at a better level of emissions than its much higher-cost alternative? As a researcher, would you think that that would be a prudent step to take or, just because it's dirty, "Let's forget about it. There's nothing we can do about it. We don't do research. We just say we do research, and if something's dirty, we're not going to touch it"?

**Dr. Marceau:** That's a very good question. I think that only fools don't change their minds. We are learning all the time and there is new information that comes out all the time. What was bad at some point in human history becomes good and what is good becomes bad. That's because we learn more, we understand better and we evolve our technology and bring our civilization to the next technological level.

To answer your question in a very general sense, I would simply say that when we have information that enables us to act in favour not just of the public, but I would argue of our civilization, and take our civilization to a higher quality of life, a cleaner kind of civilization and more efficient from every perspective, including economic, there's no reason why we shouldn't be doing that. However, we are in a transition period where there are things that we know and there are things that we don't know. I wouldn't want to engage on a specific example without perhaps having a little more clarity on where you would like me to discuss a little more.

**Mr. Yakabuski:** Do we have two minutes or five minutes, Chair?

**The Chair:** I'm sorry, you have another minute.

**Mr. Yakabuski:** Okay, now we're going to be specific. We're going to say, are we squandering an opportunity here in Ontario, with the amount of coal that

exists in the world, if we simply say, “Coal is bad and we don’t want to touch it. End of story”? Or should we be trying to do what some of the rest of the industrial countries in the world are doing and exhaust the possibility of whether there is a way to use coal to generate power and electricity and energy in a clean fashion, at least one that would mirror or exceed that of natural gas, which is a far higher-cost alternative, and less abundant as well?

**Dr. Marceau:** I’m going to answer on the basis of having been for some time in the energy area and for some time in the university. My area of expertise is not coal, but I’ll try to answer based on the environment that I’ve been in.

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If you were to invest in new infrastructure for coal, that’s one thing. Rather than investing in combustion, I would invest in nuclear power because that is the least greenhouse-gas-producing technology in the world presently. It’s the only one we’ve got that doesn’t produce greenhouse gases. Nuclear fission is a transitional technology. In 50 years’ time, we’ll hopefully have another alternative, but right now that’s the one that doesn’t produce greenhouse gases.

Now, if you were to say, “We’ve got coal plants. We’ve made very important capital investments upfront; they are there, they are operating. Can we make an incremental investment in our coal plants to make them cleaner?” the answer is: That’s smart, because it costs less to do that than to build a nuclear power plant, to build a brand new gas power plant or any other power plant for that matter. So it’s a question of looking at it from an incremental perspective. If you’ve made an investment upfront, it makes sense to make a small additional investment to make it more environmentally acceptable. If you were to create a brand new power plant today out of coal, I would argue there are other alternatives.

**Mr. Yakabuski:** Thank you.

**The Chair:** Thank you very much. Mr. Hampton.

**Mr. Hampton:** Thanks very much for your time here. I wanted to ask you this: How long did you work for Hydro-Québec?

**Dr. Marceau:** I worked for Hydro-Québec from 1984 to 1990. Then I did my PhD full time from 1990 to 1993 while solving one of Hydro-Québec’s major problems. So even though I was a student, I was deeply involved with Hydro-Québec for almost 10 years.

**Mr. Hampton:** Then, when you went to the École Polytechnique de Montréal and then to the University of Sherbrooke, did you have a continuing working relationship with Hydro-Québec?

**Dr. Marceau:** Yes, I did. Some of my research students did projects with Hydro-Québec’s support. I got software from Hydro-Québec. I got research grants and contracts from Hydro-Québec. That relationship lasted until I became chair of the department. I don’t think that you can serve two masters at some point. Either you choose to be a manager or you choose to be a researcher,

but you can’t do both. So when I became chair, I decided that I would make the commitment and try to learn how to manage people, which is a lot harder than managing things.

**Mr. Hampton:** In your work with Hydro-Québec, would you say it is a well-run organization?

**Dr. Marceau:** The answer is yes. What is very, very interesting about the difference in Quebec with respect to Ontario is that in Quebec they have had the hydroelectric resource to work with for decades, and they still have some left that they can exploit. So they’ve been able to invest less in the production of electricity and they’ve used a very traditional form of producing electricity, if we can put it that way, that’s basically less because it’s technologically intensive to some degree, and they’ve invested a lot of money in the transmission system. So one could argue that they have a lower-technology hydro generation system, even though there is a lot of technology there—don’t get me wrong—and they hire technology transmission systems in Ontario. So if you compare the two very roughly—

**Mr. Hampton:** One of the issues that OPG is trying to resolve with the Ontario Institute of Technology is of course the training of competent people and the retention of competent people. Was Hydro-Québec able to retain the skilled workforce, the expertise, the brains, the knowledge? Because it strikes me, as you point out certainly on the transmission side and on the power planning side, it’s a very complex outfit.

**Dr. Marceau:** Yes. In 2001, when this project that I spearheaded finally came to fruition, around that time, Hydro-Québec looked at the future and saw that, just as in Ontario, about half of its electrical engineers would basically be retiring in the next 10 to 15 years. But, worse than that, the universities were losing their electrical engineering professors in the power area even more rapidly because—not just in Quebec but throughout North America—the oldest electrical engineers were power engineers. What was happening was that the universities were saying, “The utilities aren’t hiring, they aren’t sponsoring research, and there’s all this activity in communications, information technology, computer hardware and software; there are a lot of other areas that we want to develop,” so they’d replace power engineers with engineers in the electrical area who would be in just about any area except for power engineering. So basically most engineering faculties were phasing out people in their power sections, and Hydro-Québec was saying, “My goodness, how are we going to operate the power system 10 years out with all these people going away?” These are people who were taken on at 21, 22, 25 years old, so 25 or 30 years later, a lot of them had a lifelong career with Hydro-Québec. They were able to take their retirement and leave. The whole industry, not just in Quebec but in all of Canada, on the electrical engineering side, was threatened with the tremendous dearth of electrical engineers, and Hydro-Québec was the first to move in this area.

It’s funny, because 40 engineers a year is a modest number of engineers, and it’s a modest number of

engineers for the whole industry in Quebec. More than that, it's a very traditional area. It's the oldest electrical engineering area, even though there's tremendous technology in that area, and I love it. As I like to say, my area is the Jurassic Park of electrical engineering, but there's a lot of technology in Jurassic Park even so. They decided to act, and they put in \$4 million for seven years to graduate 40 engineers, of whom they hoped at least half would go to Hydro-Québec. So it's a tremendous investment for relatively few engineers and over not that long a time. By the way, what we did was we leveraged that \$4 million to obtain another \$4 million from the Canadian Foundation for Innovation at the federal government. So these are the kinds of things that we hope to be able to do in the future with our OPG partnership.

**The Chair:** We'll move on now. Mr. Leal.

**Mr. Leal:** It's good to have you with us today. I had the opportunity to tour the University of Ontario Institute of Technology with your founding president, Gary Polonsky, because of the relationship they have in my community, in Peterborough, with Trent University.

We had officials, chair Jake Epp and his colleagues, from OPG, and they did describe to us this morning two of their thrusts: of course, waterwheel generation and nuclear power. How is your university going to match their human resource needs in the number of people that you're going to graduate over the next number of years?

**Dr. Marceau:** Presently we are graduating, on average, I would say, 40 nuclear engineers a year, starting this year. In addition to that, starting next year, we have a small class of electrical engineering, between 20 and 30 students, that will be graduating, and a significant number of those will be in the area of power engineering. We have, on average, about 10 radiation science graduates who will start graduating this year. We have a few medical health physics graduates who start graduating this year. Let's say that, between radiation science and health physics, we'll have another 12 to 15 graduates a year. In other words, if you add up these numbers, we're

talking about 60 to 70 graduates a year who could potentially work for OPG and certainly for the industry. That doesn't count the commerce graduates who will be hired by OPG who will know something about the nuclear power industry; the health science graduates, the nurses, who could potentially work for OPG as well; and other graduates whom they might need from that region.

The other side of it is that by September of this year, we'll have about six research chairs up and running. This is a remarkable number, given that we only have 100 faculty. When one considers that 6% of your faculty have research chairs and you're not four years old, it's a pretty interesting datum about what's going on over at our place. But with these research chairs, we'll be able to train master's and PhD students and graduates who will be able to help the nuclear industry directly.

One of the things that we are leveraging presently is the fact that because we have such a strength in nuclear power and other areas of engineering, we're working on producing hydrogen sustainably.

**Mr. Leal:** Have I got a couple more minutes?

**The Chair:** Well, we have come to 4 o'clock.

**Mr. Leal:** Okay. Thank you, Madam Chair.

Thank you, sir.

**The Chair:** Thank you very much for coming today. We appreciate your being here.

This concludes the official proceedings of the committee, but I would ask members to just wait for one moment. We have some scheduling issues that we need to discuss.

**Dr. Marceau:** Thank you very much, Madam Chair. I would just like to take the opportunity to salute the MPP for Nipissing. I was born in North Bay. I grew up there 19 years and I left for 30 years. I'm back in Ontario for two years now; it feels good to come home.

*Interjections.*

**The Chair:** Thank you very much. The committee stands adjourned.

*The committee adjourned at 1603.*

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