



House of Commons  
CANADA

# **Standing Committee on Industry, Natural Resources, Science and Technology**

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INDU • NUMBER 063 • 1st SESSION • 38th PARLIAMENT

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**EVIDENCE**

**Wednesday, November 16, 2005**

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**Chair**

**Mr. Brent St. Denis**

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## Standing Committee on Industry, Natural Resources, Science and Technology

Wednesday, November 16, 2005

•(1530)

[English]

**The Chair (Mr. Brent St. Denis (Algoma—Manitoulin—Kapuskasing, Lib.)):** Bonjour. Good afternoon, everyone.

I'm pleased to call to order this November 16 meeting of the Standing Committee on Industry, Natural Resources, Science and Technology.

We're here to consider the certificate of nomination of Robert G. Van Adel to continue or to become the president and chief executive officer of Atomic Energy of Canada Limited.

I know you have with you today the chair of the board, who I understand may say a few words at the outset. Then we'll invite you, Mr. Van Adel, to speak to us for five, six, seven, eight minutes or so to address the appointment. Then we'll go to questions.

I invite you to start.

**Mr. Robert Van Adel (President and Chief Executive Officer, Atomic Energy of Canada Limited):** Thank you very much, Mr. Chairman.

It's a great pleasure to be here to appear before the committee.

I'd like to start by asking our chairman, Jean-Pierre Soublière, to make a few opening remarks. Then I'll make my brief presentation.

Thank you.

[Translation]

**Mr. Jean-Pierre Soublière (Acting Chairman, Board of Directors, Atomic Energy of Canada Limited):** Mr. Chair, Vice-Chairs, Members of the Committee, it is a pleasure for me to speak in favour of the reappointment of Robert Van Adel as President and Chief Executive Officer of Atomic Energy of Canada Ltd. I am currently Acting Chair of AECL, and I have been a member of AECL's board since 1998.

I would like to say that AECL has an active and engaged Board that is a leader in Crown Corporation governance. The Board meets a minimum of five times a year, and has an Audit Committee, a Human Resources and Governance Committee, a Science and Technology Committee, a Nominating Committee, and a Risk Evaluation Panel. This Panel was established several years ago to ensure that all major commercial and other risks are assessed by the Board in a systematic manner, and all major projects and initiatives require the Panel's approval before they are recommended to the Board. The Board sees its role as one of stewardship of the corporation and the shareholder's interest, setting the strategic plan,

and working in an open and trusting manner with the CEO and senior management in the implementation of the corporate objectives.

[English]

In 2000 the then-CEO of AECL indicated that he intended to retire, and a board set out to recruit on its own behalf a successor and recommend that appointment to the shareholder. At that time, we formed a committee of the board for that purpose. An executive search firm was retained and a position was advertised publicly in newspapers such as *The Globe and Mail*, *La Presse*, *Canada Gazette*, and elsewhere.

We received more than fifty applications, which we narrowed down to a short list of six. All were interviewed by the board, and Mr. Van Adel emerged as our first choice. Following our recommendation to the shareholder, Mr. Van Adel was appointed to a five-year term, which expires in January.

This process established by our company more than five years ago is now the process recommended by Treasury Board as a selection process to be followed. This year the board of AECL, following internal deliberations, came to the unanimous view that Mr. Van Adel's term should be renewed, based on the improved operations of AECL under his leadership, the clarity of the reporting to the board and the shareholders, the relationship that has been established with NRCan and the shareholder,

[Translation]

and his outstanding performance.

In conclusion, Mr. Chair, we confirm that Mr. Van Adel has the full support of the board and of executive management of AECL. We recommend his reappointment to the shareholder and this committee. Thank you. I'll now hand over to Mr. Van Adel.

•(1535)

[English]

**The Chair:** Thank you very much, Mr. Soublière.

Mr. Van Adel, will you continue?

**Mr. Robert Van Adel:** Yes. Thank you very much, Mr. Chairman.

Mr. Chair, vice-chairs, members of the committee, as I mentioned before, it's a great pleasure to be here today.

A little about my background: Before coming to AECL, I worked in the private sector for ten years. For part of that time, I was president of AGRA Engineering Inc., a global project engineering company and one of Canada's largest private sector engineering firms. Prior to AGRA, I was executive vice-president of the Export Development Corporation, a federal commercial crown corporation. I was responsible for the export credit financing risk-assessment insurance to support Canadian exporters. I worked in senior project financing, policy, and executive positions at EDC for about 17 years.

As the committee knows, there has recently been a sea of change in the outlook for nuclear energy, driven by the energy crunch, climate change, and economics. There are now 440 reactors in operation in 30 countries, with 26 reactors under construction. Forty new reactors are planned in China and India alone.

OECD nations, including Canada, are well on the road to a renaissance of safe, clean, economic, and reliable nuclear power. I'm very pleased to say that during my first five years as president and CEO, AECL has been at the forefront of this renaissance in Canada and internationally.

In terms of international sales, AECL leads the global competition with seven export reactor sales in the past 15 years. In 2003 we delivered two CANDU reactors ahead of schedule and under budget in China. This project broke records for construction, and AECL was awarded the honour of best foreign contractor by the Chinese government. The Chinese CANDU project created 16,000 high-quality person-years of work for Canadians. It was worth \$2 billion to 150 Canadian suppliers.

We sold a CANDU reactor to Romania in 2002 and are nearing completion of this project, which is worth \$400 million to Canadian companies. We expect to sell a third CANDU reactor to Romania next year. We've already done the feasibility work and are in discussions with Romanians today.

Over the past four months, Canada has signed major new contracts worth over \$1.4 billion to refurbish and life-extend CANDU power plants in New Brunswick and Ontario, ensuring the supply of essential electricity for our society and economy. These projects have not only increased AECL's value as a company but have secured the future for CANDU in Canada.

AECL is close to signing lucrative contracts to refurbish other CANDUs at home and around the world, a G-2 in Quebec within 2006, and in Korea and Argentina as well. Life-extending the fleet of 40 CANDU reactors in seven countries represents a profitable long-term business for AECL and our suppliers. In fact, refurbishments of this nature are as good as new sales for AECL's bottom line.

In terms of AECL itself, I'm proud to say that the company today is much more commercial in its orientation. I structured and reorganized AECL into a commercial and public policy business line, with clear profit and loss accounting. I cut overheads and costs. I also implemented an aggressive change management program to transform the culture from government lab to a responsive and aggressive technology company that can take on the best competition in the world and win.

I'm also proud to say that I've pushed the company aggressively to improve our nuclear operations and compliance practices. Our

reporting regime and relations with the nuclear regulator are much better and are improving daily.

In terms of crown corporation governance, AECL is now a leader. Treasury Board and the Auditor General have recognized us as such in terms of audit transparency and best practice for public sector corporate governance.

Finally, I'm pleased to say that during my term as president, AECL is now moving aggressively to deal with the country's legacy of nuclear waste via implementation of a 70-year waste management and decommissioning plan. Canada has taken a major step forward in responsibly and effectively dealing with a legacy of waste created back in the 1940s.

In terms of the way ahead, today's investments and extending the lives of CANDU power plants are leading to commitments to build new advanced CANDU reactors. For example, Ontario's premier has noted that Ontario will build new reactors if that is what the Ontario power authority recommends in December.

I believe that they will make that very recommendation. There is no other realistic alternative to nuclear in generating enormous amounts of new baseload power as coal is phased out, old plants are retired, and electricity demand grows despite conservation.

● (1540)

In conclusion, AECL today is in much better shape to take on the many refurbishments and new-build projects before us in collaboration with the strategic Canadian industry we lead.

Thank you for your attention. I'd now be pleased to answer any questions.

**The Chair:** Thank you, Mr. Van Adel.

Thank you, both.

We'll start with Brad, Serge, and then Marlene.

**Mr. Bradley Trost (Saskatoon—Humboldt, CPC):** Thank you very much for your presentation.

I like what you said, particularly—and you'll see exactly where I'm going here—where you said you split it into a commercial and a public policy division, which is always interesting, because whenever we get lobbied or talk to different people about AECL, we hear there are big subsidies piled on. It was a question that came when I was a candidate—I'm a rookie MP—that I want to have answered and figure out where we're going.

When it comes to the commercial wing of it, is it self-funding? Is it commercially viable on its own? Is the \$120 million, or whatever, from the federal treasury purely to the public policy side? How does that split? How does that divide? Where does the money from the treasury go, and what would be commercially viable with AECL if it were only a private company?

**Mr. Robert Van Adel:** I thank the honourable member for his question. It has a number of parts to it, but I'll try to answer it as simply as I can.

Starting with a brief explanation, you're quite correct in your assessment that AECL has two major components to it. There are actually three. We take one as being the commercial activity in which we sell services and product for a profit, for a positive return, and we conduct ourselves as a commercial entity and compete in the marketplace.

Then there are the national labs, what we call the nuclear platform, which contains a research reactor, the isotope production facilities, national labs, and all of that activity that has been there for many years and continues and supports the industry. That piece is notionally the public policy piece that should be covered by appropriations. I'll come back to that in a moment.

In addition to that, an important piece is the waste and decommissioning activity, where we take down and dispose of and store and put back to safe condition facilities such as buildings that have contamination reactors and the waste that is there from the past.

That whole appropriated area cost the Government of Canada, or AECL, including the investment in the ACR, the new development technology, which falls into that piece, about \$376 million a year. Of that amount, only about \$152 million comes from actual appropriations and funding from the Government of Canada currently. The balance is covered by AECL's commercial activities. That is, the profit we make on the commercial business goes to cross-subsidize the nuclear platform.

When you look at the total amount of that, we've been covering that with our financial capability. In other words, we cover that, and at the end we generate a return, a positive cash balance, which we maintain.

So in a nutshell, the commercial business itself, if it were extracted from the business, is highly profitable, self-contained, and has been throwing off about \$76 million in profit, despite the fact that our revenue has come down as one of the large projects has come up. We've increased and maintained our profitability.

**Mr. Bradley Trost:** I'm not sure how integrated these two wings are. You could in theory, at least, if it was a future government's public policy interest, hive off and privatize one wing of AECL—or is the public policy element so integrated for research purposes into the commercial that it would not be possible?

**Mr. Robert Van Adel:** I'd like to address that by first saying that the commercial activity of AECL and its stand-alone nature could be carved off and privatized.

There was a study done by Dr. Fred Gorbet and others on behalf of the Department of Finance and central agencies and NRCan to examine that question about two years ago. The conclusion was that AECL, or parts of AECL, or the commercial activity could indeed be privatized at some point. There was, in fact, investor interest at that time. But it was the opinion of the investigation or the recommendation that this activity be delayed for the future, because at that time the value of AECL was low, based on future potential, and if we waited for that potential to be realized, there would be a significant upside for the government.

Today, on a go-forward basis, you can extract the two, you can separate them, and you can contemplate privatization. But there's a lot of complexity around that when you look at new reactor build

and perhaps the program that would be launched in Ontario, where there may be an absolute requirement for the Government of Canada to maintain its ownership for a period of time.

● (1545)

**Mr. Bradley Trost:** Is my time up?

**The Chair:** You have a bit more, but be very brief, Brad.

**Mr. Bradley Trost:** I have a whole pile of questions, but on major challenges in terms of dealing with competition, etc., can you get a piece of the action in the United States with their new energy bill, and things like that? Deal with the major challenges in your industry, particularly competition and why you think we hopefully will beat Westinghouse, GE, etc.

**Mr. Robert Van Adel:** The question of competition, Mr. Chairman, appears at all levels in our activities. We are competing against FRAMATOME—which is the government-owned French reactor supplier—in our domestic market for services and for these refurbishment projects that I mentioned. We have so far won that competition on fair bases—that is, on the bases of price, quality, delivery, and our knowledge and capability.

On the international scene, we face competition for our current CANDU 6 reactor, but as I mentioned, AECL has actually sold more reactors than either the French or the Americans over the last decade. We've sold seven, the French five, and the Americans two, during this period of reduced reactor sales activity.

As we look to the future, the other suppliers are developing the next generation of reactor that will be cheaper, easier to build, and safer, among other things. AECL has its own version, the ACR or Advanced CANDU Reactor, which is a derivative product from our current technology and is very well placed to meet the international competition, particularly if we see a launch of that technology here in Ontario, as we might expect in the next few years.

**The Chair:** Thank you, Brad.

Serge, please, and then Marlene.

[*Translation*]

**Mr. Serge Cardin (Sherbrooke, BQ):** Thank you, Mr. Chairman.

Good afternoon, gentlemen. You've been with AECL for nearly five years. I assume you've adopted its policies as your own. As President and Chief Executive Officer, you are probably the cause of this open stance toward a much more commercial aspect. Since the 1970s, if my figures are still correct, nearly \$7 billion has been allocated to Atomic Energy of Canada. You used to separate your operations, but, in a competitive context, don't you risk having the WTO accuse you of financing production of CANDU reactors in the international market?

**Mr. Jean-Pierre Soublière:** That's a good question, Mr. Chairman. Because of their complexity, could the subsidies we receive hurt us in international free trade? I don't believe so because it's all really separated, but I'll let our CEO answer that question.

[English]

**Mr. Robert Van Adel:** Mr. Chairman, the question of subsidization has not really addressed or been a major part of the commercial development. Obviously the government has invested in the development of the CANDU technology over the years, but so have the French government and the U.S. government. In fact, today, if you look at the U.S. government's policy to drive new nuclear builds in the U.S. to meet the growing energy demand, but also to provide an alternative to fossil fuels, that drive from the U.S. government is being supported by funding from the U.S. government. The energy bill that recently passed in the United States has a major allocation to provide an incentive, to both the nuclear vendors as well as the operators, of several hundreds of millions of dollars to support new builds.

So there is subsidization in some form or another, either in the past or currently, associated with the industry. Therefore, we're not in any danger of being put at a disadvantage as a consequence of any action the Government of Canada has taken in the past.

• (1550)

[Translation]

**Mr. Serge Cardin:** As president, you try to ensure that the business becomes increasingly profitable, but do you believe that the major debate over nuclear energy is finished and has been thoroughly addressed? It's what could be considered an easy way to achieve greenhouse gas emission reduction objectives, but there's still the nuclear waste management issue. A report was recently published, and you surely must have read it. The corporation will have to manage that waste for hundreds, indeed thousands of years. The report contains a number of recommendations. How do you view that report, and what recommendations would you choose?

[English]

**Mr. Robert Van Adel:** Mr. Chairman, it's a very good question, because the whole issue of nuclear waste has been one of the things that keeps coming up: "Yes, but...", with respect to nuclear power. The Nuclear Waste Management Organization study, led by Elizabeth Dowdeswell, is just now delivering its final report. AECL wasn't a direct sponsor, but we have waste that is affected by that report, and we are contributing today to the fund that will ultimately support it and fund it to cover our own portion.

Our view is that this has been a wonderful and excellent opportunity for widespread public consultation on a very important matter. I believe that, while the critics will never be fully satisfied—those who are very much opposed—I think the mainstream public in Canada, and even some of the environmentalists, will agree that the recommendations made in that report are sound, based on science, and have achieved a level of public acceptance.

I can comment on the specifics if you wish, but perhaps that's a sufficient answer.

[Translation]

**Mr. Serge Cardin:** I have another question. You talk about producing more and more reactors in order to sell them. However, there are a lot of aging reactors in the world that we can't overhaul and that should be dismantled.

Wouldn't Atomic Energy of Canada be better off developing dismantling expertise? It could also be lucrative to promote the spread of atomic reactors in the world.

[English]

**Mr. Robert Van Adel:** I believe, at one level, that is precisely the business we're in. We see CANDU reactors coming to a point where their useful life of 25 or 30 years is running out, and we've developed the technology to retube or replace the core of these reactors in a way that allows them to carry on for another 25 or 30 years. We're effectively dealing with the problem of aging reactors that would then be decommissioned, at least in the CANDU fleet, by life-extending them for a length as long as their original life. That's a great new business opportunity for AECL and for Canadians. It's an export business as well, because not only are we doing it in Ontario, Quebec, and New Brunswick, right now, today, but we are currently negotiating with the Koreans. We expect to close a deal within the next six months to start refurbishing the first CANDU reactor we sold them. We have similar arrangements going with Argentina. So AECL is in that business.

We believe that business can expand, and even go to other technologies. So, yes, in addition to our reactor sales, which we'd like to have, this is a very important and strong business sign for AECL and one that we hope will continue to grow.

• (1555)

**The Chair:** Thank you, Mr. Van Adel.

Marlene, then John.

**Hon. Marlene Jennings (Notre-Dame-de-Grâce—Lachine, Lib.):** Thank you very much for your presentation. It's quite impressive.

I have a couple of questions, which will allow you to expand on answers you gave to previous questions.

First, you're talking about future business that you're expecting to sign. Some of it is refurbishing existing CANDU reactors to extend their life, and some is selling new reactors. In China, is there a possibility of future business? China has a major demand for energy, so is there a possibility of selling future new CANDUs?

Secondly, how does Canada measure up to other countries that use nuclear reactors as a source of energy? How do we measure up on the issue of dealing with our legacy wastes and the future wastes that are going to be created?

Finally, you talk about the sales that have been made—for instance, that the China CANDU project created 16,000 high-quality person-years of work for Canadians and was worth \$2 billion to 150 Canadian suppliers. With the contracts that you've actually signed, that are ongoing, over the life of those contracts, could you provide to this committee, through the chair, how many Canadian jobs and how many thousand person-years of work for Canadians those are securing, and what that means in the monetary sense for our Canadian companies? I think it's very important for Canadians who are watching this to know how important AECL is to the Canadian economy and to the high-quality jobs that we need.

Thank you.

**Mr. Robert Van Adel:** Mr. Chairman, there are three elements to that question, so I would like to try to be brief on each item and then elaborate if the honourable member would like me to do so.

In respect of China, it's a very complex market, but let me say that our strategy, supported by the Canadian government, was to sell two CANDU reactors, to build them on time and on budget. We did it ahead of time and below budget, and it was a world-class project. And then we had to operate the reactor for at least two years until the Chinese were satisfied that it would operate at the highest level. We just received the release, a few months ago, by the Chinese accepting the reactor, including the operating period. We have met the conditions set by the Chinese to prove ourselves in the market.

Now, there's a very complex environment as they look at how they're going to fill their need, and there has been some discussion about AECL being out of the market. The Chinese are telling us to stay tuned. They have a long-term program. CANDU is well placed, and we believe that there will be future sales, if not tomorrow then in the near enough future. In the meantime, the Chinese are keeping the relationship warm. They are signing technology cooperation agreements with us. We are staying in constant contact, and they're saying don't go away, stay tuned.

In terms of how we measure up in waste and disposal of our legacy and future obligations, I believe that on the future side the NWMO recommendations for deep underground storage over longer-term and interim storage in underground facilities is the right way to go. I believe that the funding for this is covered by the levy that's being imposed by the operators, which is building up a very large fund to cover the cost of this over time. I think that's the right approach, but Canadians will ultimately decide, and it's state of the art. That's what the U.S. and Finland and Japan and others are doing. So on that score, we're there.

In terms of legacy waste, we've been doing a reasonable job, but you saw recently that this last fiscal year we booked a very large liability with respect to the recognition of a new plan to go forward over the next seventy years to deal with the waste that AECL has under its surveillance, and that is going to take us to world-class state of the art.

So I believe that the Government of Canada, in making the decision to recognize that liability, has stepped up to the plate. We're very excited about that at AECL and see it as a win.

And finally, on the benefits to Canada, the jobs created and the sales, we have that data and we will provide it to the committee. In fact, CERI which is a well-known research institute, just did a very comprehensive independent study of the benefits today, in the past, and the long-term benefits from the CANDU program. It's quite exciting, very comprehensive, and I'll provide that to you.

**Hon. Marlene Jennings:** Thank you very much.

**The Chair:** John, and then Jerry, please.

**Mr. John Duncan (Vancouver Island North, CPC):** Thank you very much.

I know I'm not going to have enough time. Anyway, I think the public perception of AECL, and mine as well, based on talking to a lot of people, being a visitor to the Bruce Nuclear Plant and having talked to a number of people, is that AECL is important, is

characterized as having very important Canadian technology, but it's been sidelined to some degree by some difficulties, a poor business model, an advanced reactor of the wrong size, and poor post-construction performance. Those would be on the list.

I think it's true, we haven't sold a new reactor since the 1990s. So I have questions. We had some excitement generated in China. Why have we been shut out since Qinshan? We had some excitement generated on the eastern seaboard in the U.S. Why were we shut out? Is our ACR technology of the wrong size? Your paper seems to assume that Ontario would buy CANDU. Can we assume that?

And lastly, I have a comment. If, during your tenure, you can deal with the nuclear waste issue, I would assume probably in the Kincardine area, your legacy will be fulfilled.

• (1600)

**The Chair:** That's a good set of questions there.

Did you get them all down, Mr. Van Adel?

**Mr. Robert Van Adel:** I hope so, Mr. Chair. I'll try to be brief on each point.

The public perception of AECL has changed quite significantly. One of the challenges I accepted and took on when I joined was that AECL was at very much of a low point. I fully admit that. The industry was generally, but AECL had reached a low point. It had some reputational issues in Ontario—the industry did—but AECL was obviously painted by that, rightly or wrongly.

But internationally, as it turned out, we had a very good reputation. CANDU 6 has been a top performer around the world. I could provide you with some statistics, but AECL has built all six of its plants on time, on budget, and we're the only ones who have that track record internationally. As well, we've serviced those plants at a level that has delighted the international community.

So our reputation internationally needed to be brought home to Canada, where over the last several years OPG, Ontario Hydro, and others were providing many of the services to themselves that AECL was providing internationally. So our objective was, over the last five years, to re-establish our penetration and our support to the Canadian industry, as the Ontario government began to pull back on Ontario Hydro's mandate, which is now OPG.

So the door is open for us. For example, our service business in this time has gone from almost \$10 million to \$20 million a year in Canada to \$125 million and is forecast to grow, over the next five years, as high as \$350 million—and that doesn't include the refurbishments where we've been hired by the domestic industry to refurbish their plants. So I think our reputation is coming back. The reputation of the CANDU technology in Ontario was largely restored as a result of the Manley study, which was done about a year and a half ago, which found that it wasn't the technology; it was the management and other factors at Ontario Hydro. So we got out of that one with a pretty clear reputational issue.

Now, in terms of the new reactor sales, the viability of the ACR and so on, ACR is a product that is a derivative from the current technology, as opposed to a brand-new technology. However, it is 40% cheaper, can be built in approximately half the time, is much cheaper to operate, and has advanced safety and other issues, but all based on the CANDU success story, the CANDU 6 technology, which we've sold around the world.

Now, initially we had two offerings, the CANDU 700 series, which is about 750 to 800 megawatts, and the CANDU 1000, which is about 1250 megawatts. Ontario is gravitating towards the 1000 megawatt reactor, as are China and others, so AECL has put its emphasis on the 1000. So we have the reactor at the right size to meet Ontario's requirements in the international market, and we could spend a lot of time on why we're better or at least as good as the competition, but I can come back to that. I believe we have addressed the size issues fully and the reputational issues.

And on the nuclear waste aspects in relation to Kincardine, that's not AECL's responsibility, of course, but Bruce Power's, which is responsible with OPG and the Ontario government for dealing with the waste on the sites themselves. We're very excited about the steps they've taken recently to move to more permanent solutions, so I think this augurs well for the industry.

• (1605)

**Mr. John Duncan:** On the Ontario question, can we assume that if Ontario buys new, it will be CANDU?

**Mr. Robert Van Adel:** Well, that's certainly my assumption, in that our business plan contemplates that. Now, we've been working extremely hard to convince Ontario and the utilities, but primarily the Government of Ontario, which is ultimately going to make these decisions, that it should be a CANDU solution. We have a couple of things really going for us in this regard.

First of all, there's the obvious current investment in the CANDU technology Ontario has already made. By refurbishing the reactors in the manner we're doing today—these retubings and life extensions we're doing at Bruce Power—as those come forward, it means that Ontario has already made the decision to extend the life of its CANDU fleet for another 30 to 35 years, so they're betting on CANDU. As to new sales, the gap in Ontario, which drives new power sales, is coming very close, and as that gap gets closer the only technology that can get to the market in time is the CANDU technology, either our current technology combined or ultimately our ACR or a combination of the two, and that's what we're talking to Ontario about, Mr. Chairman.

**The Chair:** Thank you, John and Mr. Van Adel.

Now on to Jerry, Paul, and Michael.

**Hon. Jerry Pickard (Chatham-Kent—Essex, Lib.):** Mr. Van Adel, it's a pleasure to have you here today.

In relationship to where you stand with competitors—and you mentioned competitors—I noted you sold a reactor to Romania in 2002, but could you give me a better picture of where you stand in relationship to your competitors in terms of the last ten years? How many reactors have you sold? How many reactors have they sold?

**Mr. Robert Van Adel:** I have an interesting chart, which I can give to the committee, that shows reactor sales over the last 30 to 40

years, internationally—export sales as opposed to domestic. Those peaked in the late eighties, and then there was a decline in the orders for new power. There was the dash to gas and the belief that conservation and other things would fill the gap that nuclear used to provide.

It soon became apparent towards the end of the nineties, and more recently in the last two or three years, that nuclear had to be a part of the go-forward mix, for reasons that we can elaborate on, but I'm sure you're aware of them. During that period, then, between the slowdown and the time that we see new orders coming now or on the horizon, AECL has actually outperformed the competition, as I mentioned before.

Of export reactor sales worldwide, AECL has sold seven reactors in that period. The giant FRAMATOME, France's government-owned and sponsored national champion, has sold five, which is two less than us. And the United States, with a combination of Westinghouse and GE, sold two, and those were to Taiwan, where there were very close political ties.

It may be a little-known fact that AECL has out-performed the competition in new reactor sales. Someone said there hadn't been a reactor sale since the nineties. We sold a reactor in Romania in 2002, and we're negotiating another one right now.

So I think we've done very well.

**Hon. Jerry Pickard:** AECL is doing very well.

**Mr. Robert Van Adel:** I think we are.

**Hon. Jerry Pickard:** When I look at the role of nuclear power going forward, it is a critical one. How do you see the mix of nuclear power versus other fossil fuels, hydro power, and other variables that are in the mix?

**Mr. Robert Van Adel:** Let's look at Ontario, where it's a very hot topic today. Between now and 2025, about 70% of the installed capacity in Ontario will be retired—both domestic and nuclear plants—and if you look at the way in which Ontario is planning to fill that gap, there is a combination of factors. One is as much hydro as they can get that remains, and that's run-of-the-river in smaller projects. Kanawha, for example, is \$5 billion to bring 12,000 megawatts down from a very long distance.

So there's hydro, gas, keeping gas as a smaller portion than was originally imagined; refurbished CANDU reactors; alternatives, including wind and others; and conservation. When you add all those together, there is still a very significant gap, and it is that gap that argues for new-build nuclear as the cheapest, most effective greenhouse gas friendly and environmentally friendly long-term solution.



That's where Ontario is converging. And the premier has made statements that they recognize that and they are looking seriously at new-build now. That would leave nuclear new-build and refurbishment at between 30% and 50% for Ontario.

Similar mixes exist around the world. But just to simplify it, in the U.K. and other markets, and the United States, what people are saying generally is let's replace existing nuclear with new nuclear, and let's keep the percentage at the same level. And in some countries they're going to grow it dramatically.

Thank you, Mr. Chair.

• (1610)

**Hon. Jerry Pickard:** I know you're quite active in New Brunswick, in Quebec. Certainly the latest one for Ontario—and you mentioned it a few minutes ago—is the Bruce Peninsula. What is your involvement there, and what kinds of jobs is it creating?

Some of our other members might possibly be interested as well in your involvement in British Columbia, in Quebec, and how the jobs translate in those provinces through your work.

**The Chair:** Thank you, Jerry.

**Mr. Robert Van Adel:** Mr. Chairman, I think the first part of that was New Brunswick and our involvement in the Point Lepreau project, which we recently signed. That's a \$600 million contract for the AECL portion. We are the general contractor responsible for project management overall, and for retubing and refurbishing that reactor. That puts AECL in a complete partnership with New Brunswick Power to execute that project. So in that sense, they're very dependent on AECL to do this job for them, and we're partners.

If you look at the Bruce job, for example, we're refurbishing two CANDU reactors there in the same manner I described, where we go in and retube. AECL has been contracted to do the retubing part, which is the essence of these things. Again, those contracts together are worth about \$600 million, but the project itself is \$2.4 billion. In this case, Bruce Power is doing much more itself than NB Power is. AECL is a critical player—we have the largest contract—and the project is built around our activity, but there are many other players across Canada, large companies.

In fact, in the case of Quebec and job creation, we've been partnering with SNC-Lavalin as a designated partner. We brought them into the market in Ontario. As a consequence, SNC-Lavalin has a \$500-million contract as part of the Bruce Power refurbishments. I believe they would agree that was as a result of AECL reaching out to establish a partnership.

So across Canada, we have established a supply chain in a similar manner, and there are jobs created in every province as a result of nuclear power. For example, Sulzer Pumps in B.C. has had tens of millions of dollars of benefit from the sale of pumps every time we get engaged.

**Hon. Jerry Pickard:** To conclude, could I ask one last quick question?

All Canadians realize that those contracts employ hundreds, if not thousands, of people. I guess I'm looking at the employment numbers as well, if you happen to have them. If not, could you

supply the committee with them? I think they're critical for all of us to know.

**The Chair:** Thank you, Jerry.

Do you have them now, or could you send them along, Mr. Van Adel?

**Mr. Robert Van Adel:** We will do that in respect to each project we have. As well, as I mentioned earlier to the honourable member, there's the CERI study, which has great detail on the benefits to Canada, including the jobs created from each project. Yes, as the chairman reminds me, I have the statistics in relation to each project, but they're a bit scattered around. So I'd rather provide them to the committee that way.

**The Chair:** That would be fine.

Paul and Michael, and I think we'll conclude with that.

Paul.

• (1615)

[*Translation*]

**Mr. Paul Crête (Montmagny—L'Islet—Kamouraska—Rivière-du-Loup, BQ):** Thank you, Mr. Chairman.

Mr. Cardin asked you a question, and it seems to me the answer wasn't complete. That's also true of certain points raised by Mr. Pickard.

To your knowledge, has anyone in Canada assessed the suitability of using nuclear energy rather than renewable resources, like solar, geothermal and wind energy?

You said that it's short a certain percentage in order to meet demand. I'd like you to explain to us why we should opt for an energy source that produces nuclear waste rather than other renewal resources that don't produce waste and are not environmentally harmful in any way.

[*English*]

**Mr. Robert Van Adel:** Mr. Chairman, the comparison between nuclear and other sources of energy, including renewables such as wind, solar, and so on, has been done quite extensively. Certainly the Ontario government has engaged independent consultants to give them advice. I focus on Ontario, because there is an emerging energy crisis in terms of the need to address the future.

The comparison is driven by cost and economics these days. Wind, solar, and other alternatives that are being introduced in Ontario are generating a price in the order of \$80 a kilowatt, let's say, whereas gas is currently somewhere around 7¢ or 8¢. The refurbishment at Bruce comes in at \$62. So nuclear compares to renewables at a base cost of less than 7¢ or \$70, depending on how

[*Translation*]

**Mr. Paul Crête:** Does that cost include all environmental impacts?

In our society, the price of gas is based on the litre, but if we paid the actual costs, which include the impact on our society, we'd probably find that they're quite a bit higher than what we pay at the pump.

[English]

**Mr. Robert Van Adel:** Those comparisons I'm talking about are based on what we call the LUEC, or levelized unit energy costs. It's the cost of operations, taking into account the capital cost, the financing, and other costs of constructing and building the reactors. It also takes into account all of the long-term operating costs. It takes into account waste disposal and management. It takes into account decommissioning and the ultimate return to greenfield of the plant. So those are the comparisons. They include all of those.

Again, it's an overwhelmingly favourable argument in terms of the economics of nuclear today. The belief is, as I mentioned before, that through the work done by NWMO, Canada will move to an international standard for a solution for long-term waste disposal.

[Translation]

**Mr. Paul Crête:** With respect to nuclear waste, after all the consultations that have been conducted, are you going to promote a model in which each province will have to take over management of its own waste? Is it possible for waste to be stored in provinces that don't produce any? For example, Ontario has major development plans. In 20, 30 or 40 years, will its waste be stored in Manitoba, Quebec or another province? In that way, it would have the advantage of energy, and the others the disadvantage of managing its waste.

[English]

**Mr. Robert Van Adel:** Mr. Chairman, I can express an opinion about that, but I'm really not the primary source. It's neither my decision, nor is AECL a primary.... But I can express a view. I believe that the NWMO study or report is favouring a repository for high-level waste that would be central. Where that might be located would be a matter of negotiation. Obviously it could be Ontario, it could be New Brunswick, it could be somewhere.... But they are favouring a central site. That's what they've done in other countries, including the U.S., at Yucca Mountain and so on.

So, yes, that is what is being favoured by way of recommendation.

• (1620)

[Translation]

**Mr. Paul Crête:** Would it be possible to visit the Yucca Mountain project? When I went to the National Conference of State Legislatures, the association of parliamentarians of the U.S. states, there was documentation on this subject. The model shows that it's 10 to 20 years ahead of us. A centre like that already exists. Is it possible to visit it and to see how it operates?

[English]

**The Chair:** Thank you, Paul.

**Mr. Robert Van Adel:** Mr. Chairman, that facility is under development. It's in the planning stage; it's not physically constructed. I believe it is possible to do so, but I'm not exactly familiar.... AECL of course does actually have people working on that site in the United States. We have expertise that the United States is acquiring from us to look at long-term storage of fuel.

I think it's a question that others might better answer.

**The Chair:** Merci, Paul.

I have Michael and a short question from John. Does anybody else have a question and want to go on the list?

Okay, Michael.

**Mr. Michael Chong (Wellington—Halton Hills, CPC):** Thank you, Mr. Chair.

Thank you, Mr. Van Adel, for appearing in front of our committee.

I'm surprised nobody else has brought this up yet, but I'm very concerned, as a committee member on a committee that has oversight over your crown corporation, about what's been going on. We had a \$2.3-billion charge to the federal treasury that was announced just a matter of weeks ago. That's a big chunk of money. It gives me a big cause for concern. I'm wondering if you could maybe talk to that and tell us a bit about that charge. Furthermore, can you assure this committee that at some future date AECL won't be conducting another study to reassess its waste management and decommissioning strategies and that we're not going to end up here a year or two from now, or three or four years from now with another multi-billion-dollar charge to the taxpayer?

So that's my first question.

**Mr. Robert Van Adel:** Mr. Chairman, I thank the honourable member for the question. It gives me an opportunity to explain a little about that charge of \$2.3 billion.

The waste disposal activities and decommissioning activities of AECL are governed by the CNSC, the oversight body. As part of the site licence, the CNSC has approved a plan for AECL that really expires along with the site licence, which is coming up for renewal.

Over the last couple of years we've been working with the CNSC, central agencies in Ottawa, NRCan, and others to take a look at the current plan for waste and decommissioning and the funding that is associated with it. The plan was previously a 100-year plan that forecast activities and tried to put costs against them in the future. It then brought back the costs as a net present value and added that to AECL's books. It went from \$430 million to some \$900 million, based on some accounting adjustments.

Over the last two years we've developed a comprehensive plan that brings forward many of the activities that were planned to be done in the out years. It brings them forward and also recognizes that things like building a processing facility for vitrification of certain types of waste weren't as fully costed into the plan as they should have been.

We've in effect taken what I consider to be a very positive step to put an extremely realistic plan in place. It might well change over the next 70 years. It has actually now been moved from 100 years to a 70-year forecast, but it will change from time to time.

I believe that it's a more comprehensive plan. It's one that has been reviewed by all the outside independent experts. It has been reviewed by the CNSC, and I believe it will be approved. It has already had preliminary acceptance, including the environmental assessment plan and so on that goes with it.

I think this is good news. Even the environmental community in Canada is saying good things about this, because it is a recognition of the obligation that we have in going forward.

**Mr. Michael Chong:** Mr. Chair, could I ask what assurances we have? We have this new period of 70 years for the new amended plan. What assurances do we have that there won't be another review in two or three years, and we're suddenly down to 30 years, and that's the new standard, and we've suddenly got another multi-billion-dollar charge? What can you tell this committee to reassure us that this won't happen again? How much confidence do you have in this new plan, so that we won't end up here in a couple of years with another multi-billion-dollar charge?

• (1625)

**Mr. Robert Van Adel:** Mr. Chairman, obviously, for a 70-year plan that involves technology applications, we're going to see technology improvements and developments in the next 70 years, and they would be applied. As the plan gets out towards the end of the 70-year period, it becomes a little softer, but it is still strong.

**Mr. Michael Chong:** I'm not as concerned about 70 years from now; I'm more concerned about the next five to ten years. What's the chance of us sitting here again in the next five years or so, having another plan that has been revisited because higher standards were overlooked or new international standards weren't being followed, and we need to have a new plan in place, which means additional hundreds of millions or billions of dollars in charges? Obviously, 70 years from now is a long time. I'm more concerned about the likelihood of this plan changing in the next five years.

**Mr. Robert Van Adel:** Mr. Chairman, I apologize for answering the second half of my question first. I was trying to draw a comparison.

In effect, the specific answer to the question is that the firmest and hardest part of the plan is the early years. The next five to ten to fifteen years are very hard-wired. Those projects take a long time. Once you start them, they're not done overnight. We make the commitment today, and in some cases it's going to take us ten to fifteen years to do the things we plan to do.

That's pretty hard-wired, and it's firm. I'm highly confident in those plans.

**Mr. Michael Chong:** Thank you.

The last question I have is on a related issue of potential charges, and that has to do with the MDS Nordion project for medical isotopes. I would like to know how much that project has gone over budget.

On your consolidated balance sheet for the year ending March 31 of this calendar year, in the liabilities section of the balance sheet, have provisions been made within the liabilities listed there for charges that may be accrued to AECL for cost overruns in this project? How much are those charges in the liabilities section of the balance sheet?

As it stands today, I'd like to know how much this project has gone over budget and what portion for AECL is part of the portion that has gone over budget.

**The Chair:** Respond as best you can.

**Mr. Robert Van Adel:** Mr. Chairman, I would first say that we are still in the mediation process with MDS Nordion, as I mentioned to the committee before. We expect and hope it will be concluded by the end of this month.

Under the current terms of that agreement overseen by Mr. Justice Stephen Goudge, of the Court of Appeal for Ontario, we have signed agreements with MDS Nordion and with the mediator not to disclose the details of that discussion or any information that might prejudice those discussions. So to a certain extent, I'm constrained.

**The Chair:** With respect, then, Michael, we have to respect the agreement that AECL has.

Let John have a short question, and then we're going to wind up.

**Mr. John Duncan:** Maybe this question is a little bit redundant, but I don't think so. I'm asking it for clarification.

When it comes to nuclear waste management, I think there's some fuzziness or some doubt in terms of who is actually responsible for the national plan, who is responsible on an operational basis, what role AECL plays exactly in all of that, and where you have the complete authority and where you have shared authority or partnerships. It would be very helpful to paint a picture dealing with that context—certainly for me, in any case, and I'm the guy asking the questions.

• (1630)

**The Chair:** Thank you, John.

We'll finish with the response to that. We can always invite these folks back for estimates, and I think we're getting into that area.

We had agreed to an hour, so we'll let you wind up with that, Mr. Van Adel.

**Mr. Robert Van Adel:** Thank you, Mr. Chairman.

On the responsibilities of AECL with respect to waste, there are several levels of waste. There's low-level waste, which includes gloves and materials and so on that would become radioactive for a short period of time, all the way up to nuclear fuel, which is one of the highest-level wastes.

AECL is responsible for all of the waste that is contained within its own sites and pertains to its own operations. Those are licensed sites, and part of the licence imposes on us an obligation to manage those wastes. They are our responsibility, and therefore the liability appears on our books as well, but we do that on behalf of the Government of Canada. The Government of Canada, in the end, owns those wastes that AECL oversees.

There are other sites that AECL does not own, nor do we have specific responsibility. Those would include, for example, the remediation program at Port Hope, where AECL employees are actually working under the direction of NRCAN to do work there. We're participating there, but the federal government again has that responsibility and it's vested with NRCAN.

At the provincial level, the provinces own the waste and so on generated from nuclear sites, at nuclear operations. Ontario Hydro or OPG owns them for Ontario, and that's a provincial responsibility. AECL does not have any responsibility whatsoever for those activities.

**The Chair:** Thank you, Mr. Van Adel.

**Mr. Michael Chong:** On a point of order, Mr. Chair, if the committee is willing to allow me to ask one very short question, then I have no further need to have the witnesses appear in front of us. But if I can't ask that question, I'm going to ask the committee to have the witnesses reappear at another time.

**The Chair:** I'll ask.

Are there any objections to Michael having a last, short question?

**Some hon. members:** No.

**The Chair:** Okay, you can ask one last, short question, Michael.

**Mr. Michael Chong:** I understand your previous answer to me, and I respect that.

My question is about the \$2.3 billion charge that the federal treasury took to recapitalize AECL's balance sheet. Is it strictly related to the decommissioning and waste management provisions, or does it also include moneys for other liabilities on the balance sheet?

**Mr. Robert Van Adel:** It is strictly for the waste and decommissioning activity. It pertains to nothing else. It's completely segregated and will be managed that way.

**The Chair:** Thank you.

Thank you for your cooperation, everyone.

I think we can deal with the business of the day.

Marlene, I ask you to propose a motion.

[*Translation*]

**Hon. Marlene Jennings:** Mr. Chair and committee members, I move that the committee approve the nomination of

Robert G. Van Adel to the position of President and Chief Executive Officer of Atomic Energy of Canada Ltd.

[*English*]

**The Chair:** All in favour?

(Motion agreed to)

**The Chair:** Congratulations, Mr. Van Adel.

[*Translation*]

**Hon. Marlene Jennings:** Following the adoption of that motion, I'd like to introduce another motion, that the Chair report to the House that this Committee has examined the qualifications and competence of Robert G. Van Adel as President and Chief Executive Officer of Atomic Energy of Canada Ltd.

[*English*]

**The Chair:** According to the clerk, it's not required. The notation in the minutes is sufficient to carry this file forward.

[*Translation*]

**Hon. Marlene Jennings:** We don't need a motion for that?

[*English*]

**The Chair:** You don't need it for a report.

[*Translation*]

**Hon. Marlene Jennings:** All right.

[*English*]

**The Chair:** That saves us one little step. I'm assured that a notation in the minutes is sufficient.

Thank you, colleagues.

Congratulations, Mr. Van Adel. I thank you and Mr. Soublière for being here.

We're adjourned until tomorrow morning at 9 o'clock to deal with Bill C-55.







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