

Draft remarks for Deputy Minister of Energy

Nuclear Industry Seminar 2008

Going the distance – Nuclear Energy in the New Age

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Thank you for the invitation to take part in this annual session.

In particular, I'd like to acknowledge the OPG's Pierre Charlebois for his long-standing leadership in this province's nuclear energy sector.

I'm sure this year's conference has given you an opportunity to discuss the development of nuclear power in Canada and around the world.

Today, I'd like to narrow the focus and talk to you about nuclear power in Ontario.

Since the first unit at the Pickering station came into service in 1971, nuclear power has been a critical component of Ontario's energy system.

Today, Ontario has an installed nuclear capacity of 14,000 megawatts, which provided the province with 52 per cent of its electricity in 2007, or 80.9 terawatt hours out of a total of 156.4.

As most of you in this room know, Ontario's nuclear fleet is aging. To keep that fleet running well, this province will need to embark on a significant new investment cycle.

Realistically, the question is not **whether** that investment will happen, but rather **how** and **where** it will be made.

But before we talk about what's ahead, let's stop and look back for a minute.

A short number of years ago, Ontario's energy policy was under great stress.

In the 1990s, there was an active discussion about the volume of energy Ontario needed, and whether that energy would best be generated by projects under public control or by private investors responding to market signals.

Ontario policy makers had tried both models. The public model had a legacy of cost overruns and, by 2002, the market model had proven to be unsustainable.

There was also another issue gaining prominence in the '90s, not just in Ontario, but across Canada and around the world – climate change, caused in part by the greenhouse gases created by burning fossil fuels.

Something needed to be done.

Since then, Ontario has made a systematic effort to stabilize energy policy.

The province has now moved beyond the monopoly versus market debate, into a sustainable hybrid model – a mixture of public and private – that responds to price signals and efficiently dispatches energy.

And the province has constructed a model for energy decision-making that balances political direction with

professional planning, one that will provide Ontario with clean, stable, affordable electricity for the next two decades and beyond.

Under this model, an energy planning body was created. The Ontario Power Authority was directed to develop a 20-year energy plan for the province, using overall targets established by the government.

Once developed, that plan would be reviewed by the independent Ontario Energy Board, which would determine whether the plan met the government's direction in a prudent and cost effective manner.

Today, that plan is with the board, and its decision is expected in early 2009.

On the environmental front, most provinces in Canada now have some type of climate change action plan. In Ontario, it's called GO Green.

Ontario's energy plan plays a pivotal role in GO Green, by closing the supply gap in a way that cuts this province's greenhouse gas emissions.

The plan places a heavy emphasis on conservation and demand management, and a new value on green power. It also contains a commitment to shutting down coal-fired plants.

There has been other progress too:

Close to 3,400 megawatts of new capacity has come on line in recent years. And more than 4,600 MW of new supply is scheduled to come on line over the next 18-month period.

The government has been working on those projects in concert with many agencies, utilities and other partners.

Some of you are here today: Ontario Power Generation, Hydro One, Bruce Power and the Power Workers Union.

I'm confident that good work will continue.

Now let's turn our attention to nuclear, since that is why we are all here today.

As I said earlier, to keep Ontario's system stable and affordable, its nuclear fleet needs to remain reliable.

To maintain today's level of 14,000 MW of installed capacity, the province needs to build some new reactors and refurbish others over the next 15 years.

That baseline capacity will also help:

- Meet Ontario's growing energy demands
- Decrease greenhouse gas emissions and reduce the province's carbon footprint
- Allow Ontario to continue to develop and invest in other renewable technologies

Nuclear power works for this province. The upfront capital costs are offset by stable operating performance and a low greenhouse gas footprint.

Look back at Ontario's history of nuclear generation: This province has a 40-year track record.

Ontario's nuclear industry has grown to become an important part of this province's economic base.

And we are not the only jurisdiction upgrading its nuclear fleet.

More than 30 reactors are under construction around the world right now, many in countries working to improve and expand their nuclear capacity, including Finland, France, Japan, South Korea and China.

Worldwide, there are 439 operating reactors in 30 countries, supplying just over 15 per cent of the world's electricity.

Here in Ontario, the government needs to make careful, thoughtful decisions about which nuclear technology to choose and where to build new reactors.

To analyze those choices, the Ontario government has been working in conjunction with leading international consultants McKinsey & Company. Ontario Power Generation and Bruce Power have also been working on a joint technical analysis.

And, as most of you know, both the OPG and Bruce Power have begun an environmental assessment process at the Darlington and Bruce sites in anticipation of this new build.

The Minister of Energy has talked about continuing to ensure a competitive process as the government moves ahead on an appropriate technology choice.

I'll leave any announcements to the Minister, but I will say that we are on track and are continuing to work toward a decision by year-end.

I want to emphasize that there has been – and will continue to be – a sensible commercial approach to all decisions regarding Ontario’s nuclear fleet.

The plan to refurbish our nuclear fleet is necessary and important, but I do want to emphasize that in a real way, this work is evolutionary rather than revolutionary.

There is a revolution happening on two fronts:

First, through the OPA, we’ve had the courage to develop a long-term system plan – and put it front of Ontario’s regulator for all to critique and improve.

Second, the heart of the proposed plan is integration – it’s reflected in its name, the ***Integrated*** Power System Plan.

Included in it are a series of evolutionary changes – including those to the nuclear piece – that combine to signal a revolutionary shift in Ontario’s energy system in terms of planning, pricing and risk allocation.

The interconnectedness of the plan means we can’t talk about the nuclear piece in isolation. Conservation, demand management and an increased emphasis on renewable energy are also central.

Let’s take a brief look at those other core areas now.

The most efficient way to cut Ontario’s carbon footprint, and to keep prices down, is to use less electricity and shift use away from times of peak demand.

That’s why the energy plan strongly emphasizes conservation and demand management.

The plan contains an ambitious conservation goal: a 6,300 MW reduction in peak demand by 2025.

As part of that goal, the government has said it wants to:

- Reduce peak demand by 1,350 MW across the province by the end of 2007
- Save another 1,350 MW by 2010 and a further 3,600 MW by 2025.

Ontario's Chief Energy Conservation Officer is expected to report on whether that 2007 target has been met by the middle of 2008.

There has been a concerted effort to change the way Ontarians think about using electricity, by bringing a conservation culture to the province.

That includes measures such as incentive programs, efficiency improvements and consumer tools like pricing and smart meters.

And lastly, Ontario's energy plan focuses on developing renewable sources of power such as wind, solar and biomass, and bringing them on line.

This government has contracted for 2,300 megawatts of new renewable power. More than 500 MW of that is up and running.

Ontario Power Generation is also adding the equivalent of 200 MW of new capacity to the Niagara Falls plant, the most significant investment in this resource in decades.

Here's just one green milestone:

Ontario used to be one of the least installed jurisdictions in Canada in wind power. It is now one of the first, with more than 500 MW of installed capacity. That 500 MW was surpassed just last month, when Ravenswood wind farm near Grand Bend opened for business, with the help of the government's Renewable Energy Standard Offer Program.

But making new renewable sources of energy an important part of Ontario's energy mix means more than developing and building these projects. It also means integrating them into the power system.

Ontario's energy plan will enhance the province's transmission system in ways that will address just such a modified generation mix, as well as issues of load growth and providing access to interconnected electricity markets.

Those include:

- Plans to alleviate transmission overloads in the Greater Toronto Area, including northern York Region, and in the Kitchener-Waterloo-Cambridge-Guelph areas.
- A number of enabler lines to connect generation from renewable sources on Manitoulin Island, Bruce Peninsula, East Lake Huron, East Lake Superior and Little Jackfish, to be built between 2012 and 2015.
- Development work to enhance system reliability between 2012 and 2020.

That's just a snapshot of where Ontario's energy system is today, and where it is headed tomorrow.

Let me conclude by saying I appreciate the opportunity to speak with all of you today.

I want to confirm the province's intention to bring a businesslike approach to developing Ontario's energy plan.

A sustainable plan that concentrates on conservation and renewable energy.

A sensible plan that recognizes the reality of nuclear – evolution is necessary to retain Ontario's capacity.

An integrated plan that focuses on generation – for generations to come.

Thank you.