

Tom Mitchell

**President and CEO
Ontario Power Generation**

Notes for Remarks

**Ontario Power Summit
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Subject to change upon delivery

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NOTES FOR REMARKS

Good afternoon. It's a pleasure to be here to talk about Nuclear Energy in the Post GEA Era.

It's a timely issue.

The world is fundamentally retooling itself to become more sustainable. This is especially true with respect to energy.

It's not a question of "if" ...but of "when."

- Europe has been progressing in this area for many years;
- A number of U.S. states are adopting renewable energy quotas;
- Here in Canada, BC and Ontario have launched ambitious sustainable agendas -- backed by strong legislation like Ontario's Green Energy Act; and
- At the federal level, the government has announced plans to increase Canada's reliance on low and no-emitting fuels to 90 per cent by 2020.

The shift to sustainability is a huge undertaking with major environmental benefits and billions of dollars at stake.

So it's important to get it right.

We will not get it right *without* nuclear energy.

Nuclear is virtually free of emissions contributing to smog and climate change. Along with hydroelectric, it is the acknowledged "enabler" of sustainable energy.

The Ontario Government has called these sources the "foundation" on which to build "a strengthened renewables and conservation agenda."

So we in the nuclear industry have a big responsibility.

And I say "we" because OPG is very much a nuclear energy company.

In addition to our strong hydro and thermal operations, almost half the energy we produce comes from our nuclear plants.

So today I'm speaking to you primarily as the CEO of a nuclear company.

And my message is this.

The nuclear industry has to get it right too.

From safety...to operations...to project management...to communicating with our stakeholders openly and honestly. We have to “get it right” in *everything* we do.

Society will have no qualms about limiting our role if we don’t perform.

At the top of the list is safety.

The nuclear industry stands and falls on the safety performance of every reactor in the world.

So our commitment to safety has to be ironclad.

Society demands it.

And we demand it of ourselves.

Right now, the nuclear industry is among the safest industries in the world.

In the 40 plus years nuclear plants have operated in Canada, no member of the public has ever been harmed from radiation.

At OPG’s Darlington plant, we’ve gone over 6.5 million hours worked without a single lost time accident. That’s in a plant with more than 2,500 employees.

I’m sure Duncan [**Hawthorne, CEO Bruce Power**] and Tony [**De Vuono – Chief Technology Officer, AECL**] can point to strong safety stats from their companies too.

And that’s good.

But as an industry we have to constantly get better.

That’s why OPG, Bruce Power, AECL and other nuclear companies share expertise, information and lessons learned on safety.

That’s why we’re members of international organizations like the World Association of Nuclear Operators and Institute of Nuclear Power Operations and CANDU Owners Group.

That’s why we go to such lengths to embed safe behaviours and practices into our work cultures.

We know when it comes to nuclear safety – only continual improvement and excellence is the norm.

That’s what getting it right is about.

The same applies to the other areas I mentioned.

It's not good enough to be good.

We have to be great nuclear operators.

That means:

- operating our plants at high levels of reliability;
- bringing in planned outages on time and on budget;
- keeping our forced outage rates low; and
- having outstanding human performance.

We also have to be great project managers.

To be taken seriously as enablers of clean energy – let alone as nuclear generators -- we must deliver on the big capital projects.

Over the next several years, thousands of MW of nuclear capacity need to be refurbished or built in Ontario and Canada.

That's a huge undertaking.

At OPG we've announced the planning process to refurbish our Darlington plant.

We're continuing with the environmental assessment and site licensing application for new build nuclear at Darlington.

And we're currently involved in a massive vacuum building outage of our Pickering station. It's our biggest nuclear project of the year.

We have to get these big projects right.

Our entire industry does.

That means on time. On budget. Well planned. And well coordinated – so they don't collectively strain resources and supply chains.

Our stakeholders will be watching. So will our critics.

One way we can get it right is to build on the lessons of our previous projects.

We've done that at OPG.

We learned from the mistakes made during the restart of Pickering Unit 4.

We applied those learnings with success -- to the restart of Pickering Unit 1, on time, on budget.

We also applied them again - with the same success – to the safe storage of Pickering Units 2 and 3. This was a huge project lasting over four years.

In short, our industry must demonstrate it can execute. Execution equals opportunity.

I take no consolation when I hear of project delays at any nuclear project. Because I know they impact OPG, our future and the future of the industry.

Detailed, up-front plans are the key to success.
The other area important to nuclear is communications.

Our communications have to be informative.

They have to be open.

I believe people are hungry for the facts about nuclear. Unfortunately, sometimes disinformation gets in the way – and that can erode or perpetuate myths.

We have to set the record straight whenever we can.

Like the perception that nuclear power is too expensive.

I am here to tell you, it is not.

Yes, the capital costs are high.

But our unit costs are among the lowest of any fuel. Our reactors run 24/7. They are the work horses of the system and they last a very long time.

Our Pickering stations have been operating since the mid-1970s and '80s. We plan to keep them running for another decade. So far, they've produced more than 672TWh. Enough electricity to power all of Ontario for more than four years.

Nuclear waste is another issue that cries out for clarification. It continues to be viewed negatively by some people.

In reality, the management of nuclear waste is one of OPG's and the industry's great strengths.

We can also set the record straight about nuclear being an "old technology."

It isn't.

We're among the most innovative industries in the world.

Women and men who work in nuclear generation split atoms for a living. They safely manage radioactive materials. They safely manage high voltage and high pressure steam systems. They operate within some of the highest levels of precision in industry anywhere. Our employees are highly skilled and professional.

We also have some of the most advanced safety processes ever developed.

And reactor technology is constantly evolving and improving.

Some reactors now being developed are under 300MW. They are totally modular. Can be transported to their destination, rather than built on site. And cost a fraction of their larger counterparts. They're perfect for remote areas.

In short, nuclear is a dynamic and exciting industry.

We are also a valuable industry.

We make a huge economic contribution to Ontario and Canada.

It's estimated that nuclear is directly or indirectly responsible for over Canadian 70,000 jobs -- including spin-offs.

Annually, the industry contributes through federal and provincial taxes about \$1.5 billion.

Over 150 companies in Canada produce goods and services for Canada's nuclear industry.

Locally, we contribute jobs, growth and enhance the quality of life in the communities where we operate.

Indeed, the nuclear industry can play an important role in the government's "Open Ontario" plan.

Our environmental contribution is also strong. OPG's Darlington and Pickering plants, over the past 10 years, have avoided more than 470 million tonnes of CO₂. That's like taking 13 million cars off the road.

Our sites are leaders in habitat management and biodiversity.

Given our strengths as an industry, it's important that we also communicate in an open and transparent manner.

The public deserves nothing less.

OPG had a water release involving tritium last December at Darlington.

There was no danger to the public. But as soon as we discovered it, we informed the local community and media. And we kept them informed every step of the way as we addressed the issue.

The community and our regulator commended us for our openness.

Openness matters.

It builds trust.

And trust and confidence are the oxygen of the nuclear industry.

We cannot operate without them.

To recap what I've been saying....We're all in this together.

Society needs nuclear to create a sustainable energy future.

Nuclear will play a necessary role in driving sustainability. Along with hydro, it's the foundation for wind and solar.

This opportunity won't get handed to us. We have to earn it...through our individual and collective performance.

But nuclear is only one part of the equation. Virtually all energy sources must contribute to ensure success. I say this for a reason.

The next several years – especially from 2015 to 2025 -- will be very important to Ontario's energy future. I call this the "critical decade."

After 2014, coal will no longer be a generation source.

And thousands of MW of nuclear capacity will be taken off line for refurbishment or perhaps replaced with new nuclear.

We're on the verge of a great transition. Moving from a carbon world to a largely non-carbon world.

It's up to all of us to make this transition a success.

The clean energy sector has a major role to play. About 5,000 MW are to be supplied by clean energy producers over the next several years. The legislation is there. The agenda is set. The feed-in- tariffs are in place.

What's left is the actual execution. Wind, solar and other alternative energy companies must deliver.

As for Ontario's nuclear industry, our role is clear. We have to deliver.

On the nuclear front, OPG has to excel – in all the ways that I've mentioned.

Our recent track-record makes us effective players.

We have a strong safety record. We've achieved excellent performance – especially from our Darlington plant. And we are seeing steady improvement at Pickering.

We've earned the trust of our site communities. And we have extensive experience in planning, managing and executing large nuclear projects.

We have another strength.

We're realists about nuclear. Our approach is rational, business-based and in the best interests of the people of Ontario.

As our actions have shown, we're ready to make hard decision when it comes to our nuclear fleet.

We chose not to restart Pickering Units 2 and 3. We chose not to refurbish Pickering B. The business cases did not support these investments.

In addition to our nuclear strengths, we bring to the table a diversified portfolio of assets and projects to further ensure adequate supply.

These include nearly 7,000 MW of hydroelectric assets that we constantly maintain and enhance.

It also includes a number of new hydro initiatives. Collectively, these will add about 600 MW of clean, renewable hydropower to Ontario's supply.

And it includes our efforts to repower some of our coal-burning units with dispatchable, cleaner fuels such as renewable biomass. Biomass also has the potential to create a whole new industry in the Province – and the jobs and growth that go with it.

I believe our nuclear expertise – coupled with our diverse asset base -- makes OPG uniquely qualified to support Ontario's transition to a sustainable energy future.

We have excellent people. We have strong values. We have solid management.

With our energy colleagues in nuclear, wind and solar, OPG will do its part to ensure Ontario has the clean energy it needs to achieve its long-term goals as a society

We're all in this together. Together we will get it right and make it happen. Thank you.