

Tom Mitchell

**President and CEO
Ontario Power Generation**

To the Ontario Energy Network

**December 19, 2011
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Subject to change upon delivery

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NOTES FOR REMARKS

Good afternoon. It's great to be here.

This is my third appearance before the Ontario Energy Network.

Which means you either like hearing about OPG...or Rick Mercer was unavailable.

When I was here a year ago, I talked about the importance of delivering value to our customers.

Other speakers at the OEN have also spoken on this topic – Laura Formusa of Hydro One and Rosemarie Leclair of the Ontario Energy Board.

It's not always easy to demonstrate value in today's environment.

These are challenging times.

Slow growth, high unemployment and increasing levels of debt and deficit are negatively affecting economies around the world.

Here in Ontario, Premier McGuinty has made it very clear that fiscal restraint must be the order of the day for government and its agencies.

In terms of our industry, the challenges have been equally strong.

The price of electricity....the need to renew our energy infrastructure....concern over the Fukushima nuclear crisis.....

These things weigh on people's minds.

Against this backdrop, people want and deserve value from the energy organizations that serve them.

They want us to be efficient.

They want us to be safe.

They want us to contribute to economic growth and opportunity.

And I think they want and expect a certain amount of leadership from us as well.

This is especially true of public institutions like OPG.

We are owned by the people of Ontario -- by you.

YOU ARE OUR SHAREHOLDERS.

We should be able to prove to you every single day that you are getting the best bang for your buck from our operations.

We've certainly tried to do that this past year.

And while I think we can always do better, I believe we've made advances in some important areas.

Fukushima

One of these areas is nuclear.

And I plan to talk a lot about nuclear today, because as I look back on 2011, I think nuclear energy was one of the dominant issues of the year.

And the reason for that can be summed up in one word....

“Fukushima.”

Fukushima was THE event to impact our industry this past year. No question.

This in no way is meant to detract from the sufferings of the Japanese people. They endured enormous losses as a result of the earthquake and subsequent tsunami – the natural events which caused Fukushima

I know.

I was there.

I saw the impact in Japan.

And I've met personally with senior managers of the Tokyo Electric Power Company – the company that operates the Fukushima plant.

The natural events that led up to Fukushima are a sobering reminder of how enormously powerful the forces of nature can be.

On March 11, a massive earthquake – 9.0 on the Richter scale -- occurred off the northeast coast of Japan, triggering an equally massive tidal wave.

Thousands were killed.

Property, services and infrastructure were destroyed on a widespread scale.

Damage was in the billions of dollars.

As for the tsunami, it was so powerful that in some places the waves penetrated several miles inland – sweeping everything before them.

In the path of these awesome forces was the 6-unit Fukushima Daiichi Nuclear Power Plant.

Three of its units were shutdown for outages. The other three units were operating.

As the quake was detected, the units automatically shut down – performing as they were intended to do.

Then, about an hour later, waves as high as 14-meters flooded the site.

That's about the size of a four-story building.

This disabled all but one of the plant's in-service emergency diesel generators that provided power to cool the shut down units.

With little back-up power on site – and all off-site power disabled by the quake – the units could not be adequately cooled, and significant core damage occurred.

That is a very brief recounting of the event.

What sometimes gets lost in the telling of this story is that the operating units at Fukushima – as I said -- DID EXACTLY WHAT THEY WERE SUPPOSED TO DO.

They shut down as soon as the earthquake was detected.

The problem came when the tsunami hit the plant – and caused the loss of back-up power.

(And by the way, it was good to see the report from Japan last week that the affected units have reached “cold shutdown” and are now stable.)

It was an external event that caused Fukushima.

If the tsunami hadn't happened, there would not have been a nuclear crisis.

And I think it's important that people understand that.

To me, one of the big lessons of Fukushima is that it validates the basic "Defence in Depth" approach used by the nuclear industry for years.

We have multiple, independent safety systems and processes protecting the public and the reactor core from harm.

These include:

- diverse ways to power equipment...
- diverse ways to add water...and most important,
- well trained, well prepared employees who know what to do when something happens.

Fukushima did nothing to undermine the fundamental soundness of this basic safety approach of defense in depth.

What Fukushima did do was this:

It has reinforced and improved the industry's focus on externally-caused situations.

Nuclear accidents like Three Mile Island and Chernobyl occurred as a result of issues and events taking place inside the plant. And the nuclear industry has developed very effective tools to address and manage these issues.

Fukushima, on the other hand, has taught us to put added emphasis on events caused from outside the plant – specifically those caused by natural disasters.

For example...Soon after the disaster struck, OPG like other nuclear operators worldwide, launched a thorough assessment of our own systems and operations to confirm their safety. This included our own back-up power systems.

We specifically looked at the ability of our nuclear plants to withstand any potential natural disasters that might occur in Ontario's environment.

Our overall conclusion was that our nuclear plants are safe and our systems are robust enough to withstand significant emergencies.

But we didn't stop there.

We identified opportunities where we can improve....and we took steps to implement those improvements.

The bottom line is that we're addressing even the most UNLIKELY and IMPROBABLE events that could conceivably affect our nuclear plants – including flooding, earthquakes and the emergencies they create.

Our independent safety regulator, the CNSC, has also been active.

It issued a report in October confirming that Canadian nuclear power plants are safe and pose very small risk to the health and safety of the public and the environment.

Meanwhile, at the international level the nuclear industry conducted its own assessments of Fukushima.

One of these was under the World Association of Nuclear Operators (WANO), the world's foremost nuclear safety organization of operators.

Last April, I was asked by WANO to chair and lead a special post-Fukushima commission. It consisted of 14 commissioners from eight countries.

Our mandate was to make recommendations on how WANO could improve its programs and structure in the wake of the disaster.

This was an honour for me.

But more important -- it was also an honour for Canada and Ontario.

It said a lot about the high regard in which Canada is held in the international nuclear community.

As commission chair, I worked with some of the most respected nuclear professionals in the world.

These are people with, collectively, hundreds of years of operational experience – responsible for a significant proportion of the world's operating reactors.

After six months of focused effort, we presented our findings before 600 of the world's top nuclear leaders at WANO's Biennial General Meeting in Shenzhen, China. That was in October.

We told WANO that nuclear operators worldwide have to change.

We also told WANO that Fukushima has opened up a whole new dimension for our industry to consider -- one that demands not just accident prevention but also event mitigation.

Our findings included the recommendation that WANO should expand the scope of its programs to include lessons from Fukushima.

We also advised that WANO should take a more active role in promoting and implementing a worldwide and integrated nuclear industry event response strategy.

I'm happy to say that the Commission's recommendations were unanimously approved by the WANO delegates at the China meeting.

And I am personally committed that OPG does its part to ensure these recommendations are implemented.

The Value of Nuclear Energy

I'm aware I've spent a lot of time talking about Fukushima.

But it illustrates an important truth.

No industry – no industry -- takes safety more seriously than the nuclear energy industry.

And no industry is more committed to addressing and learning from its events and crises.

OPG shares this commitment.

We believe nuclear has real value for Ontario.

Nuclear is safe.

The technology works.

It has virtually no emissions that contribute to smog or global warming.

Its operational costs are low.

Darlington Refurbishment

This is why we're busy planning the refurbishment of our strong performing Darlington nuclear plant – which provides almost 20 per cent of Ontario's electricity.

Refurbishment will enable Darlington to continue to provide Ontarians with safe, reliable, cost effective power for decades to come.

Not to mention the billions of dollars this project will contribute to Ontario's economy in the form of jobs and business for local and provincial companies.

Nuclear New Build

The value of nuclear is also why we're involved in preparations for two proposed new nuclear units at our Darlington site.

We're going ahead with the federal approvals process for the environmental assessment for the new units, consistent with Ontario's Long Term Energy Plan.

Qinshan

Last but not least, we're committed to nuclear because this is an industry that is always trying to get better – always trying to improve its performance by learning from each other.

One way we do this is by sharing information and expertise with other operators.

A good example is OPG's involvement with the Qinshan nuclear generating station in China.

The operators at Qinshan have been tracking Darlington's strong performance, and they invited OPG to Qinshan to help improve the plant's performance.

In turn, we've been aware at OPG that Qinshan has done a lot of good work on fuel optimization. So we can learn from them too.

It's a classic "win-win" situation, and it illustrates nicely the benefits of sharing nuclear expertise.

I'm proud of our strong commitment to nuclear.

It fits with our focus on value -- in the broadest sense of the word.

Along with hydroelectric, nuclear provides a secure foundation on which Ontario can build a strong, robust and diverse electricity system going forward.

Hydroelectric

And since I've mentioned hydroelectric, let me expand on the subject for a moment.

Hydroelectric power is one of Ontario's most important and valuable asset classes.

It's the power that built Ontario.

It's the power that continues to help build Ontario.

To preserve and enhance the great contribution hydropower makes, OPG is engaged in some of the largest hydro development projects ever undertaken in the province.

These initiatives represent hundreds of MWs of additional clean, renewable energy.

They include the Niagara Tunnel in southern Ontario.

They also include major projects in northern Ontario, like:

- the redevelopment of our hydro stations on the Upper Mattagami River and
- the massive Lower Mattagami River project – the largest hydro construction project the North has seen in 40 years.

Other hydro projects are also being planned – including possible expansion of our pumped storage capability.

All these projects represent billions of dollars of infrastructure investment by OPG and hundreds of good jobs for Ontarians.

They also contribute to strong economic relationships with First Nations – who partner with us on many of these projects.

Plus...hydro is one of the cleanest, most affordable energy sources in Ontario.

Thermal

And while I'm at it, let's not forget OPG's thermal operations – because they deliver value too.

And let me say that I'm proud of the way OPG has handled the coal phase out mandated by the government. As a publicly-operated utility we have worked to deliver on changing expectations.

Following the government's directive to stop burning coal by the end of 2014, we put together a plan and developed a schedule that we have adhered to and implemented.

In short, we have delivered...and we will deliver.

What's more, we're doing it in a way that allows us to preserve the flexibility and value that our thermal units provide to Ontario.

We're doing this by exploring the possibility of repowering some of these units with cleaner biomass and natural gas fuels.

Our biomass initiative has the potential to help develop a whole new industry in Ontario.

As for natural gas, OPG has a strong track record in developing gas generation – especially in partnership with others. We are ready and willing to expand our role if requested.

So yes, Ontario needs nuclear and the value it provides. And it needs hydroelectric.

But we also need thermal. Because in a modern, sophisticated energy system like ours, we need a strong capability to quickly deliver flexible, dispatchable power. And that's what thermal does best.

At the beginning of my speech, I talked about the value proposition for Ontarians: safety, efficiency, growth, opportunity.

I've touched on a few areas today where we are trying to deliver on that goal.

Ontario's Low-Cost Generator

But there's one other area I want to mention where OPG delivers value.

And that's as Ontario's low-cost generator of choice.

Consumers pay less for power from OPG than they do from any other generator in the province. Every generator in Ontario receives a price for their power higher than ours.

I'm not complaining, mind you.

We have a moderating effect on Ontario's electricity prices, and that's something I am proud to acknowledge.

Without this moderating effect, prices would be higher.

I'm also proud of the fact that every dollar of net income that we earn – every dollar -- stays here in Ontario...to be reinvested in energy infrastructure...and contribute to the social and economic fabric of the province.

This is what a public power company should do.

We're also taking steps to further enhance efficiency, cost-control and financial strength.

To this end, we have launched a major business transformation initiative.

As I mentioned a few weeks ago at the Toronto Board of Trade, it includes a leaner senior management structure and a more simplified corporate framework – one example being the merger of our hydro and thermal businesses.

We believe a transformed OPG, with a sustainable cost structure, will:

- help us attract more investment for generation and repowering projects,
- allow us to continue to moderate electricity prices,
- help secure our position as low-cost generator, and ultimately
- deliver more value to Ontarians.

Conclusion

In closing, let me leave you with a final thought to ponder over the holidays and into the New Year.

Ontario's energy system is one of the best in the world.

It's diversified.

It's well-established.

It has a history and legacy of service second to none.

It has been there for Ontario, and Ontario has been the better for it.

Within this system, there is a definite role for a public power company like OPG.

And it is an important role...an enabling role – a role that complements the roles played by other members of our energy sector.

Our energy system is now in the process of fundamentally transforming itself into a system that will increasingly be more modern, cleaner and more efficient.

This is a challenge.

But it also is very, very exciting.

The thing that makes it most exciting for me is the opportunity it gives all of us to deliver real value to Ontarians – our customers – and to keep them at the centre of everything we do.

If we do that, we will continue to be a great industry and a credit to this Province....

Thank you.