

Speaking Notes

for

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Standing Committee on Natural Resources

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Good afternoon Mr. Chairman and Members of the Committee.

On behalf of the 71,000 people who work in Canada's nuclear industry – from the workers at our Triumf nuclear research facility in British Columbia, from the SLOWPOKE-2 Facility at the University of Alberta, from Cameco and Areva uranium mining operations, the Saskatchewan Research Council, all our power plant workers and researchers in Ontario, Quebec and New Brunswick.

We commend the people of Japan, who have shown both amazing resilience and fortitude since the devastating earthquake and tsunami almost two weeks ago.

Let me start by saying that, while there is no such thing as absolute safety, Canada's fleet of reactors **are safe**. Each structure is designed and built to seismic standards – despite being located on areas with low seismic activity and virtually no risk of tsunami.

Safety has always been – and continues to be - the number one priority for our industry. The nuclear safety culture goes beyond geographical boundaries. It is truly global.

Our industry is based on worldwide learning and continuous improvements based on a worldwide body of engineering experience.

As a result of the Japanese nuclear incident, the federal regulator, The Canadian Nuclear Safety Commission, is reviewing the safety cases for all

of Canada's nuclear facilities, as is normal practice when events occur in the nuclear industry.

The process of continuous improvement never stops.

We are proud of our safety record, but we are never complacent. The tragedy in Japan will of course be examined thoroughly for lessons we can apply to safety here in Canada – and around the world.

My colleague, Mr. Duncan Hawthorne, will be speaking to you about this in more detail in a few minutes.

Let me turn to the broader subject of Energy Security.

Nuclear energy is an important part of Canada's diversified electricity supply mix.

Nuclear energy provides 24-hour baseload power. It produces 15% of Canada's electricity and over 50% of Ontario's.

The major advantage of nuclear power is that it produces massive amounts of energy over a very long period of time. With continuous advances in engineering and learning, we can expect to get up to 60 years of life from our plants.

Challenges and Benefits

However, as with any fuel source, there are challenges and rewards.

Our industry's cost structure consists of high capital costs and low fuel costs. I'll talk about the advantages of low fuel costs in a minute.

First, let's consider the benefits of those capital investments. They are the same benefits that come from all large, well-thought-out industrial infrastructure projects. The most important one being jobs. These projects also generate revenues and taxes for communities, with benefits to supply chains across the country.

With respect to jobs, a July 2010 report by the Canadian Manufacturers & Exporters showed that just two projects alone—the refurbishment of nuclear facilities at Bruce and Darlington—will support 25,000 high-wage jobs for a decade, injecting \$5 billion annually into Ontario's economy, and leaving us with better infrastructure that will serve our households and industries for another generation.

We must also consider the low operating costs of a nuclear power plant. Once a plant is producing energy, it requires little fuel – and uranium costs are subject to very little volatility, so nuclear investments expose us to very little risk from fuel price changes.

According to studies conducted by the Organization for Economic Cooperation and Development – the OECD -- the overall cost to the

consumer of nuclear power over the life of a nuclear power plant is similar to that of large-scale hydro, natural gas and coal, and much lower than wind and solar.

And that's before we start putting a price on carbon emissions. You can imagine what happens then: Every dollar that's put on a ton of carbon makes the economics of nuclear more and more competitive.

Our industry has very few external costs, meaning that we impose few costs on society, or on the environment, that we aren't accountable for ourselves. That's because we occupy small pieces of real estate, we release virtually no emissions into the broader environment, and we produce spent fuel and other radioactive materials that are very small in volume, very strictly monitored, that we mostly keep and manage ourselves.

In fact, we are the only industry that can really say we know exactly where all our waste is. Our national and international regulators make sure we do. And, to us, it's not pure waste. It's fuel that one day may be recycled. Our industry is committed to keeping abreast of international developments in reprocessing and alternative waste management technologies.

As a result, we account for the full costs of packaging, managing, storing and disposing of these materials. Which means that those costs are built into and covered by the price of nuclear power today.

Environment

On an environmental front, I've mentioned that the power being produced is virtually emissions free.

If we did not have the nuclear power plants we have in Canada today, and instead relied on fossil-based electricity for that output, our country would generate an additional 90 million tonnes of greenhouse gases every year. That would add about 12 percent to our annual greenhouse gas emissions.

Further replacing fossil-based energy with nuclear energy can have a very positive impact as we strive to lessen our country's, and the world's, carbon footprint.

Nuclear's low emissions, low fuel costs, and low real estate needs were already attractive to many countries before we started talking about either capping carbon emissions, or putting a price on them.

As energy demands increase and we move towards a carbon-constrained world, nuclear energy has a role to play in Canada and abroad. As developing countries look to sustainable and renewable fuel sources, nuclear is a clear choice. It is virtually emissions free, is affordable and can help create jobs at home and in developing countries that will stimulate an economy rooted in innovation and research.

R&D

Now let me talk about innovation. It's a subject I know you all care about, because it drives productivity and ultimately, improvements in our standards of living.

Most of us have an appreciation for research and development, and how important the international exchange of talent and knowledge is in these advances. Let me talk briefly about some of the more specific benefits of nuclear research and development.

Nuclear R&D – particularly our larger facilities that can do neutron beam testing -- supports materials and product improvements, medical products and services, training and development of scientists and engineers, and other activities of high value to an advanced economy. This benefits industries far beyond the nuclear sector alone.

It particularly contributes to the health sciences. To mention just one example, scientists are studying nanostructures to design carriers for therapeutic agents that can target cancer, Alzheimer's disease and more.

These advances are not just enjoyed in Canada. They are enjoyed everywhere in the world where we sell our products.

Nuclear Medicine

Let me touch on one final field within our industry of which Canadians can very proud. Nuclear medicine. This field got its worldwide start in Canada in 1951 with the first uses of cobalt-60 radioisotopes to treat cancer. Canada has continued to lead in this area for six decades.

Canadian-produced medical isotopes are used in over 50,000 procedures every day, worldwide, with 5,000 of those in Canada. Every day.

Medical isotopes are used in targeted cancer treatments, for medical imaging, and Canada supplies over half of that market worldwide. These images enable physicians to diagnose and treat all kinds of diseases including cardiac conditions and several types of cancers.

Canada also supplies three-quarters of the world's Cobalt-60, which is a sterilizing agent. Cobalt-60 is used to sterilize nearly half of the world's single-use medical supplies and devices—things like bandages, catheters and syringes.

There are clear benefits from nuclear technology in terms of lives saved or extended, illnesses and infections avoided. And Canada is connected to a worldwide system of expertise that delivers those benefits consistently, and with excellence.

Conclusion

With each passing year, the global community of people who care about the environment have more and more in common with the global community of people who provide nuclear power generation. Those who are continually striving to improve its safety, its economics, and its environmental performance.

With that, I want to thank you again for inviting me to be here this afternoon.