

Putting New Nuclear Builds in Perspective

Why the incident in Japan is not reason to cast a shadow on Ontario's plans

The recent earthquake and tsunami in Japan, which killed thousands and also affected nuclear reactors, have in some minds called into question the new nuclear builds in Ontario. While the current situation in Japan is important to consider in terms of how nuclear reactors withstand tsunamis, we should not let this incident unfairly discredit the entire nuclear energy industry.

Let us consider the following...

The 9.0 Sendai earthquake did not destroy the Fukushima plant. It was the tsunami that damaged the backup power system. The plant was virtually the only structure left standing following the quake, even though it was at the end of its 40 year life.

Ontario is not Japan. Our geological knowledge says that earthquakes of the magnitude (9.0) and tsunamis of the severity that Japan experienced are simply not going to happen here. Even despite this, our CANDU reactors are designed and built to withstand earthquakes with a magnitude stronger than those experienced in Ontario in the last 1000 years.

Nuclear energy in Ontario has had a faultless safety record for over 40 years. There has not been one accident or event known to have harmed human health or the environment in Ontario related to our safe, reliable and non-greenhouse gas emitting CANDU technology. Nuclear energy provides over 50% of Ontario's electricity demand. That means that our houses, schools and hospitals rely on nuclear energy to provide electricity to meet half of our needs.

Ontario's electricity system could experience instability without new nuclear. Coal is being phased out in Ontario. Electricity from gas is hard to site, as we have seen with the recent failure to obtain approval to site a plant in Oakville. Wind and solar are attractive for their low emissions, but they are intermittent sources of energy. The wind doesn't always blow and the sun doesn't always shine, and as such they can't provide Ontario with the baseload energy we need to keep the lights on day and night. Government officials have confirmed that Ontario is facing a looming gap in baseload electricity. This will surely be evident from 2018 onwards if nothing is done. Without new nuclear builds started now, our time will run out. In addition, nuclear is virtually emissions-free during operation. That's why new nuclear is a central feature of Ontario's Long Term Electricity Plan.

Alternatives to new nuclear would leave Ontario economically and environmentally disadvantaged.

Compared to the alternatives, nuclear is green and cost-effective. Nuclear energy produces virtually no greenhouse gases as a result of operations. If fossil fuels were used instead of our nuclear units, Canada would emit an additional 90 million tonnes of greenhouse gases every year.

What about the high cost of nuclear? The Organization of Economic Cooperation and Development has determined that the overall cost to the consumer of nuclear power over its entire life is similar to that of large-scale hydro, natural gas and coal, and much lower than wind and solar. Coal is being phased out in

Ontario. Of the alternatives, wind and solar energy are not only unreliable, but are also prohibitively high in cost. Gas fuel to power gas plants involves financial risk from variable fuel costs, and right now costs are trending upwards. Nuclear is an effective way to maintain cost control over our electricity bills.

Let us consider the events in Japan for what they are: an extremely severe earthquake, followed immediately by an extremely severe tsunami, killing thousands and affecting millions. The events at Fukushima, if we are indeed now through the worst, are overshadowed by the larger human disaster of the earthquake and tsunami. While they will no doubt hold lessons for electric power facilities worldwide, those lessons will be learned and incorporated in new facilities. At a time when environmental and economic concerns are more important than ever, let us not cast a shadow over new nuclear builds and forget the vast amounts of progress made in nuclear science and engineering that has given us safe, clean and reliable electricity for over 45 years.

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