

**EB-2016-0152 Issue 1.2 Are OPG's economic and business plan assumptions that impact the nuclear facilities appropriate?**

OPG has assembled a plan that assumes that most of the elements will inevitably be approved in the future even though most of those elements have not in fact been approved, and there is a great deal of evidence to suggest that they should not be approved. Their submission as it stands fails to deal with the most fundamental questions:

- 1) Is there a need in Ontario for refurbishment of the nuclear stations?
- 2) Is the nuclear option economically viable?
- 3) Is the nuclear option compatible with the commitments to achieve environmental sustainability?
- 4) All of the OPG nuclear stations are very old and will soon need to be replaced by new stations, at a cost that is so high that it could bankrupt the province.
- 5) The plan that has been proposed by OPG would obstruct Ontario's ability to implement alternatives that would be more economically and environmentally viable.

Most of the evidence presented by OPG is "out of context". It supports a plan that has not been approved by the Ontario government except for the refurbishment of Darlington Unit 2, and that does not answer any of the five questions outlined above.

The data related to the refurbishment of Units 1, 3 and 4 is purely unsupported speculation and should therefore be relegated to an appendix. In its place OPG should be instructed to provide answers to the fundamental questions outlined above.

Most of the issues raised by OEB staff jump to the same conclusion that OPG has chosen - that it should be taken for granted that the three unapproved refurbishments will be approved and that they somehow represent the best economic and environmental choice without a shred of evidence that those assumptions are valid.

Arguments over Unit 2 are moot. The refurbishment of Unit 2 has indeed been approved by the Ontario cabinet, the start of that refurbishment is imminent and it will be half completed before the OEB will issue its decisions with respect to EB-2016-0152. Unfortunately Ontario citizens will be saddled with the unnecessary cost of refurbishing and operating Unit 2 but it is too late to reverse that decision. However, it provides an opportunity for OPG and the OEB to compare the costs of Unit 2 vs. the cost of the alternatives (such as the cost of the exergy storage system that shifts the power demand instead of relying on high generation power capacity to meet peak demands). OPG should be instructed to provide such comparisons.

According to the IESO web site the government plans to issue a new Long Term Energy Plan next year. That plan will prominently deal with the same issues that are presently before the OEB in Application EB-2016-0152, and the two reviews will be conducted concurrently. The logical approach would be for the Board to deal with approvals for the OPG rates for hydro power and for Unit 2 but defer consideration of the rates for 2020 and thereafter until after the new LTEP has been determined. Both the Ontario and the Federal governments have undertaken to make major changes in their energy plans but neither has as yet assembled such a plan. That suggests that the OEB should set the rates for the period up to 2020 rather than the end of 2021 and defer the decision on subsequent rates until after the government has set its policy. In the meantime, exergy storage (and possibly other solutions) could offer significant relief on power costs even though there would be scant time to achieve deep market penetration over the coming three years so that potential (and the five questions) should be considered in the present review, and the OPG application should be modified to address the fundamental issues.

The federal government has today announced that it will require the provincial governments to apply a \$50/tonne "tax" (or C&T provision) on GHG by 2022. Ontario presently misrepresents the amount of GHG that results from its energy policies by failing to include the upstream emissions from fugitive methane that escapes from the collection lines plus the delayed emissions that come from gas that is released from the rock but is not collected via the extraction borehole. If those omissions are remedied and the money collected by that means is applied to exergy stores, which produce no GHG, then it should be sufficient to cover the cost of building the exergy stores. Such stores could be built by OPG or by any of the parties in the electricity supply chain, by building owners and constructors, or by third parties. The upshot is that the exergy stores would not add to the cost of electricity and they would shift much of the electricity demand away from peak periods to the nighttime period when electricity is abundantly available in Ontario. That should make it unnecessary to build Darlington Units 1, 3 and 5.

Sustainability-Journal.ca had suggested that the Board should provide for expert witnesses that could provide independent advice on the GHG "tax" and on the potential for using the resultant revenues to provide ratepayers with cheaper, more sustainable energy supply systems that produce no GHG. The Board did not adopt that suggestion but in light of the federal government's announcement it is now repeated for reconsideration by the Board. The presently proposed panel of experts do not appear to be qualified to provide expert evidence on these issues. Their testimony would relate to comparatively trivial concerns that are primarily relevant to OPG's case for perpetuating a questionable electricity supply system.

Sustainability-Journal.ca  
(Ron Tolmie)  
Kanata, ON  
(613) 271-9543