

**EB-2016-0152      Sustainability-Journal.ca Compendium for  
Panel 2Aii**

**Topic:** *What are the uncertainties in the DRP plan?*

In an ideal world a megaproject could be thought of as the assembly of Meccano Set components that all have standard dimensions and properties so you can expect to assemble them according to a pre-planned sequence, bundling similar sub-assemblies to make scheduling easier and generally proceeding according to a precise plan. In the real world life is rarely like that. We encounter problems in putting our planes and trains together like Bombardier have – or like some previous nuclear projects in Canada, France and Finland, for that matter.

In the real world big projects tend to become a non-stop series of unanticipated problems. Achieving success becomes a matter of how well you can handle disasters – and how well you can predict at least some of them.

OPG has built a giant rig that provides a means of physically checking the fit of new assemblies, and of training new employees as well. Is it possible to use that approach for ensuring that the mechanical bits all fit together?

In an engineering drawing the dimensions normally have a tolerance value right on the drawing. Do cost and scheduling plans within OPG normally have comparable +/- attributes?

The nuclear rates appear to have reached the highest value that the market will bear. Are there any measures (like selling assets) that might relieve the financial pressures for the refurbishment period?

The rate smoothing procedure and the government's plans for rate reductions via longer amortization appear to be in competition. Will they interfere with one another?

What are the plans for extracting Tritium from the heavy water? Will it be possible to increase the extraction frequency to the point where the EU standard of 100 Bequerels/litre could be met?

Do you anticipate staffing/training issues?

Will the metallurgy of the materials in the refurbished reactors be identical to the specs for the original systems?

The instrumentation for measuring the chemistry and the radio-chemistry is constantly evolving. Will OPG stick with the well established instrumentation or update those components?

If the Off Ramp choice is made for the later units will there be stranded assets, contract commitments, etc. to cope with?

Will there be any changes in the thermal, Tritium or other radionuclide releases to the air and lake?

Will the CNSC regulations be any different for the refurbished reactors?

Will the provincial and municipal regulations be different from those that were in force when the Darlington Station was built?

Is there a series of plots available for the population density as a function of distance from the station and covering the past 20 years?

If OPG were to run into financial or other problems who would be the backstop now that AECL is not likely to fill that role?

The energy markets in places like Alberta and some of the US states are in a state of flux. If they turned to nuclear power and attracted away OPG employees then what are the possible consequences for the DRP schedule?

Does the project planning software incorporate alarms that will give early warnings about bad trends that might otherwise go unnoticed?

What is OPG's level of concern about the public's attitude toward nuclear power?

Is the release of heat into the lake causing any significant long term water temperature changes or impact on the aquatic life forms?

Are invading species like mussels or Asiatic carp likely to pose problems for the cooling systems?

If there were an abrupt rise in inflation would that create a problem for the  
DRP?

Ditto for the development of a much cheaper electricity generation process?

What is your biggest worry (apart from the Leafs continuing to lose!)?

Ron Tolmie  
Sustainability-Journal.ca