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Sustainability-Journal.ca

OPG is seeking the Ontario Energy Board's approval for an increase in its future payment amounts for some of its power generation facilities, most notably its hydro generation stations and its nuclear power stations. Sustainability-Journal.ca has opposed such an increase on the grounds that it will unnecessarily increase the price of power for the public.

All of the OPG facilities in question presently employ energy storage. In the case of the run-of-the-river hydro facilities that storage is achieved by providing ponding upstream of the turbines and for the nuclear stations it is provided by the thermal storage capacity of the steam cycle generators. If the energy storage capacity of such systems is increased then they will be able to handle larger loads during peak demand periods, or conversely the size of the future facilities could be reduced to meet the loads, thus reducing both the capital costs of the systems and the fees charged for their power output, which in both cases is determined by those capital costs, not the fuelling cost.

In its response of April 15 OPG has stated: "OPG has no plans to build such energy storage facilities, nor has it filed any evidence on the subject. Accordingly the issue should not be included on the Issues List." Sustainability-Journal.ca would like to present evidence and arguments that show how this not a reasonable position as it has led to excessive power costs for the public and is a principal driving factor in OPG's proposal for price increases. The potential for achieving cost reductions via incorporating more energy storage is very large and should lead to a trend to lower power prices rather than the requested increases.

The OEB may of course not agree with the arguments to be presented by Sustainability-Journal.ca but the issue is fundamental and we believe that it deserves a hearing.

The OPG response goes on to suggest that storage considerations should be included in the Energy Ministry's reviews of the energy supply mix. Storage is not a source of energy so it only indirectly influences the energy mix choices. Its principal impact is on the pricing of power, for which the OEB is the regulatory agency.

In its advice of April 15 the Board staff have suggested that the Board might:

1) consider any regulatory barriers that are impeding the use of storage. The primary regulatory barrier is of course the reluctance of the regulatory agency (the OEB) to even consider the issue.

2) the Energy Ministry has stated that it wants to include 50 MW of storage in the procurement plans of the electricity supply organizations. Why then is OPG opposed to that directive?

3) the IESO has issued an RFP that asks for proposals (up to 10 MW) for energy storage but the terms of the RFP preclude the use of distributed storage by setting an excessively high limit on the minimum size of the distributed energy stores. The concept relies on the use of many but smaller stores. Moreover, 10 MW would amount to only about 0.05% of OPG's power output so it would have no significant impact on the pricing issue that is before the Board.

4) the implication of 1) to 3) is that storage is a brand new issue that needs to go through an R&D stage

before it is ready for any serious application. The Ontario generation agencies are indeed very late in considering the storage option, for which examples have existed for many decades (actually, centuries), including Ontario examples of exergy storage systems that have been implemented over the past decade. The rationale that implementation of storage systems should be deferred is really just another impediment that is being thrown up in contradiction to the Ministry's directive.

In addition to reducing the cost of power, storage systems would radically reduce GHG emissions, save lives, provide sustainability and resilience, etc. (including dealing with last night's power outage in Toronto). One of those ancillary advantages is that the generation from the run-of-the-river hydro stations could be substantially increased without needing any generator revisions if demand-side stores were used. The Board staff mutated the Sustainability-Journal.ca storage issue to limit it to just that particular application, which is valuable in its own right but it does not deal with the potential to achieve radical price reductions in the price of power if storage is applied more generally.

We submit that the Board should at least consider the evidence and arguments related to the use of storage because they are fundamental to the merits of the application before the Board.

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