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August 24, 2023

*Via email*

Minister Todd Smith &  
Gautam Jindal, Senior Policy Advisor  
Ontario Ministry of Energy  
77 Grenville Street, 7th floor  
Toronto, ON M7A 2C1

**ERO 019-7337: Proposal to amend Ontario Regulation 53/05 and/or create regulations under the Ontario Energy Board Act, 1998 to “rate regulate” certain pumped storage facilities**

Dear Minister Smith and Mr. Jindal,

We are writing with regard to the above request for submissions with regard to the proposed TCE Energy pumped storage project at Meaford, which is one of the two projects specified in this consultation request. We are surprised that the Ontario government would support this energy storage project which, when compared to the alternatives, such as an Oneida battery storage facility, has the following major shortcomings:

- is highly inefficient (70% vs 95-98% for battery storage – see below);
- uses outdated technology (at least 50 years old vs new high tech battery storage technology);
- will inevitably cause significantly more environmental harm (battery storage has almost no local environmental impact, whereas the attached environmental assessment of TEC’s project details its significant expected environmental impact); and, most importantly
- is more expensive per MW stored (Minimum of \$600,000/MWh for TCE\* vs ~\$500,000/MWh for battery storage), thereby offering a bad deal for Ontario taxpayers

\* It is also important to note that TCE has never built a pumped storage plant before and there is a generally poor track record (globally) of building similar (hydro) projects on budget (see below). There is therefore a risk that project cost overruns will push the cost per MWh much higher, whereas battery storage is a lower, known, proven cost structure. Also see comments below in this respect.

We therefore urge your ministry not to amend Ontario Regulation 53/05, and/or create regulations under the Ontario Energy Board Act, 1998 to “rate regulate” the proposed TCE pumped storage facility, until such time as you have thoroughly examined the pros and cons of this project, and have determined whether it is in fact a good deal for Ontario.

We have no comment on the proposed Ontario Power Generation Inc. and Northland Power Inc.'s Marmara PS proposal, except to note that it is a closed loop rather than open loop pumped storage proposal, which will therefore cause minimal environmental damage.

The Georgian Bay Association (GBA) is an umbrella organization for 18 community associations in Georgian Bay, representing approximately 3,000 families. We have been advocating on behalf of our land-owning members for over 100 years and estimate that we reach and influence around 30,000 residents of the Georgian Bay. Our mandate is to work with our water-based communities and other stakeholders to ensure the careful stewardship of the greater Georgian Bay environment.

We have some other comments and concerns as follows:

**Generally:**

The brevity of the comment solicitation period raises concerns as it might not allow for a thorough study and comprehensive comments on the matter. Additionally, the comment process lacks widespread publicity and accessibility, which is troubling.

Your ministry has initiated two concurrent processes – a life-cycle analysis requested by the IESO and a request to amend the regulation. This departure from the standard protocol is concerning, as the latter process seems to presuppose a positive outcome from the former. The conventional approach would involve completing the life-cycle analysis **before** considering the regulation amendment, contingent upon a favorable outcome. This implies that your ministry is aiming for a positive result without adequate documentation to support a decision to proceed. These process changes, particularly those related to the TC Energy proposal, appear designed to bypass the usual evaluation process, thereby limiting the potential for significant community and provincial input from the citizens of Ontario.

**Specifically with regard to TC Energy’s proposal:**

**Project Cost Dynamics:** An empirical study by Oxford University has illuminated a disconcerting trend where hydro projects exceed their initial cost estimates by a substantial margin (source: <https://www.bsg.ox.ac.uk/news/should-we-build-more-large-dams> ). It is prudent to note that TC Energy's preliminary projection of \$4.3 billion may not reflect the actual costs, which could potentially escalate to as much as \$10 billion. It is therefore worth evaluating the predictability of on-grid alternatives.

**Sustainability of Maintenance Expenses:** A comparative analysis of pumped storage facilities, exemplified by the Ludington Pumped Storage Plant, emphasizes the recurring and hefty maintenance and upgrade costs incurred over its operating life (source: [https://en.wikipedia.org/wiki/Ludington\\_Pumped\\_Storage\\_Power\\_Plant](https://en.wikipedia.org/wiki/Ludington_Pumped_Storage_Power_Plant) ). These expenses, occurring every decade or so, warrant thorough consideration due to their potential financial implications.

**Efficiency Metrics:** The differential energy efficiency of pumped storage (around 70%) and alternative storage technologies (as high as 95-98%) is significant and merits contemplation (source: <https://www.mdpi.com/2313-0105/8/9/124> ). The proposal's projected energy loss during conversion must be weighed against the performance of on-grid counterparts.

**Unquantified Externalities:** The budgeting of TC Energy's proposal at \$4.3 billion appears to lack adequate provision for addressing environmental concerns and potential disruptions to the Department of National Defence. The cumulative impact of such factors could influence the overall capital cost of the project.

In light of these observations, we urge a thorough and independent analysis of the proposal's potential ramifications before charting a course forward, and would advise that, from our research, we would expect you to find that far better alternatives can be utilized to achieve the energy storage required.

We would welcome the opportunity to discuss this matter in more detail and look forward to hearing from you in this respect.

Yours sincerely,

A handwritten signature in blue ink that reads "Rupert Kindersley". The signature is written in a cursive style with a horizontal line underneath the name.

**Rupert Kindersley**  
**Executive Director**