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March 22, 2021

Ontario Energy Board
2300 Yonge Street
Suite 2700
Toronto, Ontario M4P 1E4

Attention: Christine Long, Board Registrar

Dear Ms. Long:

**Re: Ontario Sustainable Energy Association's ("OSEA") Interrogatories
Ontario Power Generation Inc. - 2022-2026 Payment Amount Application
Board File No. EB-2020-290**

Please see attached OSEA's interrogatories in the above-noted matter pursuant to Procedural Order No. 1, dated February 17, 2021.

Yours truly,



Raeya Jackiw

cc: Dan Goldberger, OSEA
Travis Lusney, Power Advisory LLC
Brady Yauch, Power Advisory LLC

Document #: 1920560

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act*, 1998,
S.O. 1998, c. 15, Sch. B, as amended;

AND IN THE MATTER OF the Ontario Energy Board's
proceeding on Ontario Power Generation Inc.'s ("OPG") 2022-
2026 Payment Amount Application

INTERROGATORIES OF ONTARIO SUSTAINABLE ENERGY ASSOCIATION ("OSEA")

March 22, 2021

OSEA IR 1

Reference: Exhibit A1-11-1, Attachment 1, Surplus Baseload Study

- 1 Please provide the installed MWs of OPG's hydroelectric facilities, by Independent Electricity System Operator ("IESO") zones and using IESO categories:
 - a) Baseload
 - b) Run-of-River
 - c) Intermediate
 - d) Peaking
- 2 Please provide annual average output, by hour, for the four classifications of hydroelectric facilities listed above for the 10 IESO Zones.
- 3 Please provide annual hourly generation from 2014 to 2020 for OPG's Pump Generating Station ("PGS") at the Beck hydroelectric complex.
- 4 Please discuss the impact of the Niagara tunnel on storage capabilities or usage of the PGS facility at the Beck hydroelectric complex, if any.
- 5 Please provide the percentage of offers at OPG's hydroelectric facilities that are below Gross Revenue Charge ("GRC") from 2014 to present.

- 6 Please provide an estimate of Surplus Baseload Generation (“SBG”) in 2020 that was directly related to delaying the refurbishment of Darlington Unit 3.
- 7 Please provide final SBG spill volumes in 2020.
- 8 Has OPG undertaken an analysis comparing the system-wide benefits to ratepayers of using PGS uneconomically (i.e. time-shifting at a loss) compared to SBG cost-recovery? For example, would it be better value for ratepayers to make OPG financially whole on uneconomic time-shifting compared to the full regulated rate earned through SBG volumes?
 - a) If yes, please provide that analysis.
- 9 Please provide an analysis of the percentage of hydroelectric offers that are below GRC during hours of SBG.
 - a) Has this percentage changed over time?
- 10 Please provide spill volumes as a percentage of total output for OPG’s contracted versus regulated hydroelectric assets.
- 11 Is OPG made financially whole to the same extent for SBG at its contracted hydroelectric facilities compared to its rate-regulated facilities?
- 12 Has OPG undertaken an analysis on specific, hydro-based capital investments that would increase the storage capabilities of its hydroelectric facilities?
 - a) If yes, please provide that analysis.

OSEA IR 2

Reference: Exhibit A1-11-1, Attachment 1, Surplus Baseload Study

Preamble: In July 2020, the Market Surveillance Panel (“MSP”) published its semi-annual monitoring report. In that report, the MSP concluded that it appears that OPG had reduced the amount of “time-shifting” of energy at its regulated hydroelectric facilities.¹

- 1 Please provide any presentations or research that OPG has undertaken in response to the MSP monitoring report or meetings with the MSP.
- 2 Does OPG agree with the MSP’s analysis?

¹ Market Surveillance Panel Monitoring Report 32: Monitoring Report on the IESO-Administered Electricity Markets dated July 16, 2020 at pg. 5, retrieved from: <https://www.oeb.ca/sites/default/files/msp-monitoring-report-20200716.pdf>.

- 3 Please provide any analysis OPG has undertaken that demonstrates that OPG's time-shifting of energy at hydroelectric facilities has not diminished over time.

OSEA IR 3

Reference: Exhibit A1-11-1, Attachment 1, Surplus Baseload Study

Preamble: Hydroelectric facilities can invoke safety, environmental and legal ("SEAL") reasons for limiting dispatch from the IESO. Invoking SEAL can reduce the flexibility of the hydroelectric fleet.

- 1 Please provide the number of instances that OPG invoked SEAL at its rate-regulated hydro facilities from 2014-2020.

OSEA IR 4

Reference: Exhibit A1-11-1, Attachment 1, Surplus Baseload Study, Page 23 of 25

Preamble: OPG states that "From a physical perspective, OPG could attempt to shift some hydroelectric unit outages to periods of high water flows, which historically have coincided with a presence of SBG conditions. OPG expects that such change will have an overall negative impact as it will remove hydroelectric energy from the system. As SBG conditions typically occur in hours with low demand, hydroelectric energy continues to contribute to a cost efficient dispatch of resources over the balance of the day. The removal of incremental hydroelectric energy as a result of additional outages during freshet would be expected to create a need for replacement energy, leading to additional system cost."

- 1 Has OPG undertaken any analysis to substantiate this claim?
 - a) For example, has OPG analyzed what other resources were available to provide energy outside of rate-regulated hydro in hours of SBG?

OSEA IR 5

Reference: Exhibit II-1-1, Page 2

- 1 Please provide a detailed explanation for why Return on Equity ("ROE") was well above OEB-approved thresholds in 2019 and 2020.

OSEA IR 6

Reference: Exhibit 11-1-1, Table 1

- 1 Please provide this table without rate-smoothing.
- 2 Please provide this table using IESO's updated demand forecasts.

OSEA IR 7

Reference: Exhibit 11-3-2, page 5

- 1 Please confirm that OPG is planning to add 200 MW of new hydroelectric capacity over the 2022-2026 term and that overall output is expected to be higher than previous forecasts.

OSEA IR 8

Reference: Exhibit 11-3-2, page 8, Chart 3

- 1 Did OPG estimate other electricity costs that it will incur when selecting the level of rate-smoothing?
- 2 If yes, please provide that analysis.

OSEA IR 9

Reference: Exhibit A2-2-1, page 8

- 1 Please provide a detailed breakdown of annual costs that OPG is incurring related to Small Modular Reactors ("SMRs").
- 2 Please provide a summary of external funding committed to or received for SMRs (e.g., provincial or federal grants, loans, etc.).

OSEA IR 10

Exhibit A2-2-1, page 9

- 1 Please provide any analysis that OPG has undertaken or provided to ratings agencies related to the impact of rate smoothing on OPG's borrowing costs.
- 2 Please provide any analysis OPG has provided the provincial government on the impact of rate smoothing on OPG's borrowing costs.

OSEA IR 11

Reference: Exhibit A2-2-5, page 16

- 1 Please provide a detailed estimate of the amount of money that is expected to be added to the Pickering closing deferral account over the 2022-2026 timeframe.

OSEA IR 12

Reference: Exhibit H1-1-1, page 9

Preamble: In the MSP's January 2021 monitoring report, the Panel highlighted the reduction in Operating Reserve ("OR") offers from hydroelectric facilities in Ontario.²

- 1 Please provide the total OR offer volumes from OPG's rate regulated assets from 2014 to 2020.

Document #: 1920387

² Market Surveillance Panel Report 34: Monitoring Report on the IESO-Administered Electricity Markets dated January 2021, retrieved from: <https://www.oeb.ca/sites/default/files/msp-monitoring-report-202101.pdf>.