Energy Probe Interrogatory #49

Interrogatory

Reference:
Exhibit E2, Tab 1, Schedule 1, Tables 1, and 2; Exhibit E2, Tab1, Schedule 2. Table 1b

a) Please provide a schedule that shows for the historic period 2015-2020:
   - The installed Nuclear Capacity Gross (MW)
   - The Net nuclear capacity and capacity factors (MW) (all outages included)
   - The Annual Production (TWh)
   - The ratio of Production to Gross and Net capacity
   - The annual Nuclear Revenue Requirement ($)
   - Cost per MW of Gross and Net Capacity.

b) Please provide the same schedule for the 2021-2026 IRM period.

Response

OPG, and the nuclear industry at large, does not calculate a number of the metrics requested. Accurately doing so would require recalculating our historical metrics and changing our forecasting model, something that would require extensive effort and cannot be done in a reasonable amount of time.

OPG believes that the information that is being sought is available through industry standard metrics for capacity, capability and cost. In particular, OPG has provided its Net Capacity Factor, Unit Capability Factor, and Total Generating Cost metrics in Chart 1 below. OPG does not use installed gross or net capacity in its performance metrics.

The Unit Capability factor measures the amount of energy that the units(s) generated over a period of time, based on gross production adjusted for any losses outside OPG's control (such as transmission or demand limitations), as a percentage of the amount of energy that would have been produced over the same period had the unit(s) produced maximum generation. The metrics are provided as actuals for the 2015-2020 period and on a forecast basis for the 2021-2026 and are adjusted for the impact of units undergoing refurbishment.

Chart 1 - Yearly Production Metrics

	Actual						Forecast					
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Installed Gross Nuclear Capacity (MW)	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	6,980	5,896	3,736
Installed Net Nuclear Capacity (MW)	6,606	6,606	6,606	6,606	6,606	6,606	6,606	6,606	6,606	6,606	5,576	3,512
Net Capacity Factor (%)	77.0	81.0	81.3	81.8	86.9	83.7	76.7	77.2	77.6	79.1	80.9	87.6
Annual Production (TWh)	44.5	45.6	40.7	40.9	43.5	43.9	38.3	33.2	30.8	33.3	30.2	21.5
Unit Capability Factor (%)	78.0	82.7	82.4	83.5	87.5	84.5	78.2	78.5	79.0	82.8	82.5	89.4
Nuclear Revenue Requirement ($M)	2,834 [1]	2,834 [2]	2,970	2,970	2,970	2,970	2970	3611	3541	3644	3325	2551
Pickering Total Generating Cost per MWh ($/MWh)[3]	46.81 [4]	52.72 [4]	48.47	46.83	39.78	47.94	45.31	47.49	42.12	37.62	23.48	-
Darlington Total Generating Cost per MWh ($/MWh)[3]	40.21 [4]	35.06 [4]	39.01	39.60	37.90	32.23	58.15	45.83	60.24	42.92	59.81	40.75

[1] 2015 reflects the average of 2014/2015 Revenue requirement which was the basis for EB-2013-0321 Nuclear base payment amounts

[2] EB 2016-0152 PAO Appendix C table 1 line 1

[3] TGC per MWh values shown in the table are normalized. See L-F2-01-STAFF-196 for further Value for Money metrics.

[4] TGC per MWh values for 2015 & 2016, normalization was retroactively applied.