

UNDERTAKING JT1.17

Undertaking

Provide a representative sample of the health condition report in regards to SEC-41 as well as the plant-level health reports that exist for all of those projects.

Response

Further to the information provided in Ex. L-D1-SEC-041 and the testimony referenced at Tr. Tech Conf., May 27, 2026, pp. 122-125, in this response OPG provides additional context as to both the historical and current health monitoring processes used to assess the condition of the regulated hydroelectric assets.

Prior to 2022, OPG primarily assessed the condition of its assets through Plant Condition Assessments (“PCAs”): periodic analyses of the physical condition of hydroelectric facilities, equipment, and physical processes, including recommendations for potential investments to address identified conditions. Due to the time required to complete a PCA and the number of stations in OPG’s hydroelectric fleet, PCAs were completed periodically¹ on a risk-informed basis, taking into consideration factors such as, but not limited to, the date of the last PCA, stations with increased risk as identified through the annual Engineering Risk Assessment Program, and the list of projects scheduled for completion. The last PCA was completed in 2023.

Beginning in 2022, OPG’s Renewable Generation business unit (“RG”) began implementing an asset condition monitoring process using equipment monitoring software. This approach leverages digital and online tools to provide a more current and standardized snapshot of equipment health (as described in Ex. L-D1-SEC-041, Attachment 1). A summary of the tool output for the major project scope areas is provided in Ex. L-D1-SEC-041, Attachment 3. The process also includes the implementation of cross-functional Plant Health Committee forums, which provide a cross-sectional view of equipment health and risk for a station. This process allows for improved equipment health by focusing on proactive identification and prioritization of plant health risks with oversight from multiple workgroups. Representative samples of Plant Health Committee reports are provided in Attachment 1 (confidential) and Attachment 2 (confidential).

The applicable documentation supporting the need and/or scope for each project listed in Ex. L-D1-SEC-041 is summarized in Chart 1. As the projects span a timeframe of over 10 years, the assessment provided may be a summary of a PCA for older projects (see below), a specific equipment test, or a report that assessed asset condition prior

¹ As noted in Ex. JT1.18, PCAs were completed for all 54 regulated hydroelectric stations.

1 to the start of the project. These documents identified the need for the investment,
2 however the final scope of work would be determined through the process as outlined
3 in Exhibit D2-1-1, Section 3.0.

4
5 Specific to PCAs, as referenced in Ex. L-D1-Staff-309, these assessments were
6 conducted at the plant level for all major components and were not specific to any
7 project. For these assessments, OPG has provided summaries of the condition of the
8 major assets in scope of such projects, as per the applicable PCA. Due to the limited
9 timeframe for preparing the undertaking response, OPG utilized a generative artificial
10 intelligence (AI) tool to prepare these condition summaries. OPG confirms that the
11 summaries were verified by its engineers without the use of the generative AI tool.

12
13 In its Procedural Order No. 5, issued May 1, 2026, the OEB noted:

14
15 As the Class 4 estimate has been superseded by the Class 3
16 estimate, and the Class 3 estimate is part of the evidentiary record
17 that remains on the public record, the OEB finds that the Class 4
18 estimate is not relevant to the OEB's consideration of the issues in
19 this proceeding and consistent with the Practice Direction Part 11.

20
21 As such, and as noted in Ex. L-D1-Staff-309, any estimated costs in the condition
22 assessment documentation referenced in Chart 1 are not relevant; they are considered
23 high-level engineering estimates at the time of such documentation (i.e., not conducted
24 in accordance with Association of Advancement of Cost Engineering International
25 principles) and should not be used for the basis of comparison to future project
26 estimates or actual project performance. Furthermore, for those projects still in the
27 development or definition phases as identified in Chart 1, further analysis will be
28 conducted as the projects refine scope (Ex. D1-1-2, p. 6).

29
30 In responding to this undertaking, OPG has not provided further documentation for the
31 following projects as all amounts associated with these projects were reviewed and
32 approved by the OEB in EB-2023-0336.²

- 33
34 • Project #80543 Sir Adam Beck Pump GS – Reservoir Refurbishment (refer to
35 Ex. D1-1-2, p. 10)
36 • Project #80649 Sir Adam Beck I GS – G10 Major Overhaul & Upgrade (refer to
37 Ex. D1-1-2, p. 22)
38 • Project #80851 DeCew Falls 2 Generating Station – G2 Overhaul & Upgrade
39 (refer to Ex. D1-1-2, p. 22)

² EB-2023-0336, OEB's Decision and Order (June 13, 2024), Issue 4 at page 14. The referenced evidence related to Issue 4, specifically Ex. L-H-CCC-02, confirmed that OPG sought approval of all regulated hydroelectric projects in-service amounts between January 1, 2016 and December 31, 2021 that gave rise to capital-related additions recorded in the Capacity Refurbishment Variance Account, as set out in EB-2023-0336, Ex. H1-1-1.

- Project #82777 Sir Adam Beck 1 GS – Unit G5 Upgrade (refer to Ex. D1-1-2, pp. 23-24).

OPG has also not provided condition assessments for Project #80581 Ranney Falls GS Expansion Project or Project #84185 Sir Adam Beck GS G1/G2 Replacement as these projects were not initiated to address asset condition, but in order to add generating capacity to the existing generating stations.

Chart 1 – Condition Assessment Documentation

Project	Phase	Relevant Assessment	Reference
82089 Calabogie Generating Station - Redevelopment	Closed	Summary of PCA	Attachment 3
		Condition Assessment of the Forebay Intake Pier Structures	Attachment 4
		Calabogie GS - Dam Safety Periodic Review of Associated Hydraulic Structures	Attachment 5
89252 Sir Adam Beck 1 - Canal Isolation Preparedness Phase 1 (SAB1 CIP1)	Definition	Closure Structure - Design Review and Condition Assessment of Concrete Structure and Sectional Isolation Gates	Attachment 6
83155 Abitibi Canyon Generating Station - G2 Capital Upgrades/HG	Closed	Initiation Phase Report	Attachment 7
83194 Frederick House Lake Dam Upgrades	Execution - In-Service	Frederick House Control Dam Condition Assessment	Attachment 8
83495 R.H. Saunders Generating Station - G9 Capital Refurbishment	Execution - In-Service	Pre-Overhaul Condition Assessment (2019-2035 Overhauls)	Attachment 9
84494 Chenaux Generating Station - Limerick Island	Execution - In-Service	Limerick Sluice Hoist Assessment	Attachment 10

Project	Phase	Relevant Assessment	Reference
Superstructure Sluice Gate Hoist			
82543 Otter Rapids Generating Station G2 Capital Upgrade	Execution - In-Service	Initiation Phase Report	Attachment 11
82087 Coniston/Stinson Generating Stations Redevelopment	Execution	Summary of Coniston PCA	Attachment 12
		Summary of Stinson PCA	Attachment 13
		Coniston Generating Station, G1, G2 and G3 Turbine Condition Memo	Attachment 14
		Stinson Generating Station, Unit Condition Memo	Attachment 15
86386 Kakabeka Falls Generating Station Redevelopment	Execution	Kakabeka Falls GS Development Condition Assessment Report	Provided at Ex. L- D1-Staff-309, Attachment 5
87768 Sir Adam Beck 2 Generating Station - G20/G19 Refurbishment	Execution	Pre-Overhaul Condition Assessment (2021-2037 Overhauls)	Attachment 16
86387 Matabitchuan Generating Station Redevelopment	Execution	Summary of PCA	Attachment 17
86587 R.H. Saunders Generating Station - G12 Capital Refurbishment	Execution	Pre-Overhaul Condition Assessment (2019-2035 Overhauls)	Attachment 9
82542 Otter Rapids Generating Station - G1 Capital Upgrade	Execution	Initiation Phase Report	Attachment 18
83148 Abitibi Canyon Generating Station	Development	Summary of PCA	Attachment 19

Project	Phase	Relevant Assessment	Reference
- G1 Capital Upgrades			
89505 Abitibi Canyon Generating Station - Concrete Repair Zone 7	In-Service	Initiation Phase Report	Attachment 20
89354 Otto Holden Generation Station - Refurbish Stop Log Sluice Piers	Definition	OTO82327/OTO-0035: East Powerhouse Wall, Stoplog Sluiceways and Associated Works	Attachment 21
82391 Alexander Generating Station - G1 Capital Refurbishment	Development	Summary of PCA	Attachment 22
83833 Silver Falls Generating Station - Surge Tank Replacement	Planning	Silver Falls GS – Surge Tank Condition Assessment	Attachment 23
86792 Alexander Generating Station - G2 Capital Refurbishment	Definition	Summary of PCA	Attachment 24
86793 Alexander Generating Station - G3 Capital Refurbishment	Development	Summary of PCA	Attachment 25
86860 Manitou Falls Generating Station - G3 Capital Refurbishment	Planning	Summary of PCA Field Visit Report - Manitou G3 Generator Inspection	Attachment 26 Attachment 27
87217 Aguasabon Generating Station - Aguasabon Dam Rehabilitation of Hayes Lake Main Dam	Planning	Hays Lake Dam Detailed Inspection and Condition Assessment	Attachment 28
86364 Sir Adam Beck 1 Generating Station - Station Service Upgrade	Definition	Initiation Phase Report	Attachment 29

Project	Phase	Relevant Assessment	Reference
86372 Sir Adam Beck 1 Generating Station - G6 G8 Refurbishment	Execution	Summary of PCA Sir Adam Beck I GS Life Cycle Plan	Attachment 30 Attachment 31
86570 Sir Adam Beck 1 Generating Station - G4 Refurbishment	Execution	Summary of PCA Sir Adam Beck I GS Life Cycle Plan	Attachment 32 Attachment 31
87356 Sir Adam Beck 2 Generating Station - G18 G17 Refurbishment	Development	Pre-Overhaul Condition Assessment (2021-2037 Overhauls)	Attachment 16
87357 Sir Adam Beck 2 Generating Station - G14 G13 Refurbishment	Development	Pre-Overhaul Condition Assessment (2021-2037 Overhauls)	Attachment 16
86937 SAU - G16 Capital Refurbishment	Execution	Pre-Overhaul Condition Assessment (2019-2035 Overhauls)	Attachment 9
87362 Sir Adam Beck 2 Generating Station - 230kV Conductor Replacement	Development	230kV Lines and Towers Assessment Reports	Attachment 33
82328 Otto Holden Generating Station - Concrete Mitigation	Closed	PCA Summary Laboratory Testing and Petrographic Analysis of Concrete Cores Otto Holden GS	Attachment 34 Attachment 35