

1 **UNDERTAKING J10.5**

2
3 **Undertaking**

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5 On a best efforts basis, to reconcile average age of hydro plants in LEI's study (66
6 years) with the average age used in Navigant's study (85 years).
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11 **Response**

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14 The following response was provided by LEI.
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16 The difference between the average age values in the two studies is mainly due to the
17 fact that LEI calculated a MW-weighted average age, whereas Navigant appears to
18 have used the median age of the facilities included in their study. As shown in the
19 attached spreadsheet, when LEI calculates a median age for OPG's facilities using the
20 data in its study, the result is a median of 87.5 years across the plants' individual ages.
21 This figure compares to Navigant's calculation of 84.5 years (shown on page 8 of
22 Navigant Hydro Benchmarking Study, dated August 17, 2015, filed as Exhibit A1-3-2,
23 Attachment 2).
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25 The attached Excel file shows LEI's calculation of the MW-weighted average age of
26 OPG's hydro fleet of 66 years shown in Figure 15 on page 27 of LEI's TFP Study (dated
27 February 19, 2016; filed as Exhibit A1-3-2, Attachment 1). For this undertaking, LEI
28 calculated a median across the plants' individual ages of 87.5 years.
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- 30 • Attachment 1: J10.5 – LEI calculated average age of OPG hydro plants
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Calculation of MW-weighted average age of OPG hydro plants

Prepared for:
Ontario Power Generation
in support of incentive rate-making for OPG's prescribed assets

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OPG Undertaking J10.5
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HYDROELECTRIC PLANT LISTING BY PLANT GROUP BY RIVER SYSTEM FOR LEI'S TFP STUDY

Data provided by OPG				LEI's calculations	
Plant name by OPG hydro group	Capacity (MW)	In-Service Year	Age (years)		Result
Niagara PG					
Welland Canal					
Decew Falls ND1	23	1898	118	MW-weighted average of plants' ages	66.1
Decew Falls NF23	144	1944	72		
Niagara River					
Sir Adam Beck I	427	1922	94	median	87.5
Sir Adam Beck II	1,499	1954	62		
Sir Adam Beck PGS	174	1957	59		
Ottawa-St. Lawrence PG					
Madawaska River					
Mountain Chute	170	1967	49		
Barrett Chute	176	1942	74		
Calabogie	5	1917	99		
Stewartville	182	1948	68		
Arnprior	82	1976	40		
Ottawa River					
Otto Holden	243	1952	64		
Des Joachims	429	1950	66		
Chenau	144	1950	66		
Chats Falls	96	1931	85		
St. Lawrence					
R.H. Saunders	1,045	1958	58		
Northwest PG					
Aguasabon River					
Aguasabon	51	1948	68		
Nipigon River					
Pine Portage	142	1950	66		
Cameron Falls	92	1921	95		
Alexander	69	1930	86		
Kaministiquia River					
Silver Falls	48	1959	57		
Kakabeka Falls	25	1906	110		
English River					
Manitou Falls	73	1956	60		
Caribou Falls	91	1958	58		
Winnipeg River (South Branch)					
Whitedog Falls	68	1958	58		
Northeast PG					
Abitibi River					
Abitibi Canyon	349	1933	83		
Otter Rapids	182	1961	55		
Matabitchuan River					
Matabitchuan	10	1910	106		
Montreal River					
Indian Chute	3	1924	92		
Lower Notch	274	1971	45		
Central Hydro PG					
Mississippi River					
High Falls	2.7	1920	96		
Rideau River					
Merrickville	1.7	1915	101		
Trent River					
Lakefield	1.8	1928	88		
Auburn	2	1911	105		
Seymour	5.7	1909	107		
Ranney Falls	10.4	1922	94		
Hagues Reach	3.6	1925	91		
Meyersberg	5.2	1924	92		
Sills Island	1.8	1900	116		
Frankford	2.6	1913	103		
Sidney	4.4	1911	105		
Beaver River					
Eugenia Falls	6.1	1915	101		
Muskoka River (South Branch)					
Trethewey Falls	1.8	1929	87		
Hanna Chute	1.4	1926	90		
South Falls	5.0	1907	109		
Muskoka (Musquash) River					
Ragged Rapids	8.3	1938	78		
Big Eddy	8.0	1941	75		
Severn River					
Big Chute	10.0	1993	23		
South River					
Elliot Chute	1.6	1929	87		
Bingham Chute	1.0	1923	93		
Nipissing	1.8	1909	107		
Sturgeon River					
Crystal Falls	8.4	1921	95		
Wanapitei River					
Stinson	5.4	1925	91		
Coniston	4.6	1905	111		
McVittie	2.8	1912	104		
TOTAL (not incl. sold plants and HESA)	6,422				

Notes: Data provided by OPG for the TFP Study. The plant list does not include HESA contracts and does not include plants that OPG has sold as of 2014, the last year of LEI's TFP Study.

UNDERTAKING J10.6

Undertaking

TO PROVIDE THE AMOUNT OF CRVA ELIGIBLE CAPITAL SPENDING IN 2016

Response

As this undertaking arose in relation to a discussion of CRVA-eligible in-service additions provided in response to Ex. L.11.1-15 SEC-095 and on pages 3 and 4 of Ex. K10.5 as prepared by SEC, OPG understands the request to be for CRVA in-service additions for 2016.

In 2016, OPG placed less than \$1M into service related to CRVA-eligible hydroelectric projects.