

UNDERTAKING JT1.8

Undertaking

TO ADVISE THE DIFFERENCE BETWEEN THE P50 IN THE STUDY ON COMPENSATION COSTS, COMPARED TO THE ACTUAL INTERNAL OPG LABOUR COSTS THAT ARE SOUGHT FOR RECOVERY IN THIS VARIANCE ACCOUNT, ON A BEST-EFFORTS BASIS; TO INCLUDE CALCULATIONS OR ASSUMPTIONS USED.

Response

Below OPG provides a response prepared by Towers Watson (“WTW”) with respect to OPG labour costs over 2020-2022 recorded as part of the Nuclear Development Variance Account balances sought for disposition in this Application, as set out at Ex. H1-1-1, Table 20 and further detailed in Ex. L-H-Staff-05 and Ex. JT1.7.

The following response has been prepared by WTW:

Charts 1 and 1.1 below provide an estimate of the dollar difference, by year, between total remuneration, excluding and including Hydro One shares, respectively, for each of PWU, Society and Management employee groups and the market 50th percentile (“P50”)¹ for these groups for the OPG labour amounts recorded in the Nuclear Development Variance Account.²

Chart 1: Estimated Dollar Difference between Total Remuneration – OPG and Market P50 (excluding Hydro One shares)

	PWU (\$Thousands)			Society (\$Thousands)			Management (\$Thousands)			Overall (\$Thousands)		
	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance
2020			\$2			\$215			(\$369)			(\$151)
2021			\$6			\$954			(\$804)			\$156
2022			\$0			\$0			(\$15)			(\$14)

Note: differences in the variance column are due to rounding.

¹ Market 50th percentile (P50) as determined in the 2019 Total Compensation Benchmarking Study filed at EB-2020-0290, Ex. F4-3-2, Attachment 2.

² Temporary employees and Society-represented Extended Temporary Employees were not included in the 2019 Total Compensation Benchmarking Study.

Chart 1.1: Estimated Dollar Difference between Total Remuneration – OPG and Market P50 (including Hydro One shares)

	PWU (\$Thousands)			Society (\$Thousands)			Management (\$Thousands)			Overall (\$Thousands)		
	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance
2020			\$2			\$234			(\$369)			(\$132)
2021			\$6			\$1,034			(\$804)			\$237
2022			\$0			\$0			(\$15)			(\$14)

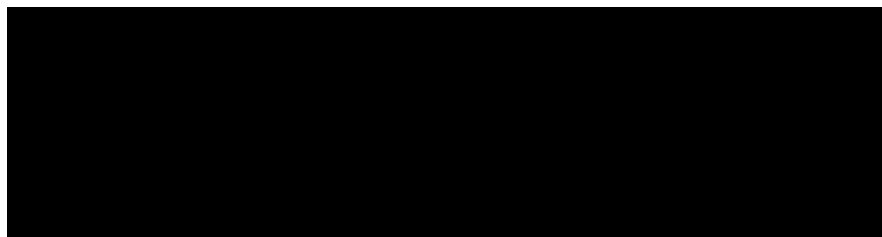
Note: differences in the variance column are due to rounding.

To respond to this undertaking, WTW used a consistent methodology and assumptions as set out in EB-2020-0290, Ex. L-F4-03-SEC-149 and EB-2020-0290, Ex. JTX4.18. Namely, for each applicable year, the market values and OPG information reflected in the results of WTW's 2019 compensation benchmarking report provided in EB-2020-0290 were adjusted, and corresponding dollar differences calculated, based on the following steps and assumptions:

- Update the OPG benchmark data based on changes in salary assumed in OPG's applicable business plan underpinning the EB-2020-0290 application, as provided in Chart 2 below;
- Adjust the market benchmark data based on future wage/salary increases determined by WTW, as provided in Chart 2 below; and
- Proportionately adjust the resulting dollar differences to reflect the number of full-time equivalent employees within PWU, Society and Management groups underpinning the OPG labour amounts recorded in the Nuclear Development Variance Account, as provided by OPG. Chart 3 below provides the number of such PWU, Society and Management full-time equivalent employees.

OPG salary and market salary movement assumptions from 2019 to the applicable years are the ones used in the previous analysis provided in EB-2020-2090, Ex. L-F4-03-SEC-149 and EB-2020-0290, Ex. JTX4.18.

Chart 2: Salary Increase Assumptions for OPG and the Market



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Chart 3: Number of Full-time Equivalent Employees for the Identified Projects

Representation	OPG Headcount (FTE)		
	2020	2021	2022
PWU - Regular	0.1	0.3	0.0
PWU - Term	0.0	0.0	0.0
Total PWU	0.1	0.3	0.0
Society - Regular	10.3	42.7	0.1
Management	12.5	26.1	0.8
Total	22.9	69.1	0.9

Consistent with EB-2020-0290, WTW notes that in the total remuneration calculation, total direct compensation reflects the cost of the employer providing the target level of compensation, while pension and benefits values represent the estimated employer provided value. The pension and benefit values may not align directly with the cost for OPG to provide these programs; therefore, WTW suggests caution in using total remuneration, which reflects a mix of cost and value, to assess OPG's overall cost competitiveness relative to the market 50th percentile.

1 **UNDERTAKING JT1.9**

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3 **Undertaking**

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5 WITH REFERENCE TO H-1-1-1, TABLE 15, THE NUCLEAR CAPACITY
6 REFURBISHMENT VARIANCE ACCOUNT, TO CONFIRM HOW MUCH OF THE
7 COSTS ARE INTERNAL OPG LABOUR; TO CONFIRM THE DIFFERENCE
8 BETWEEN THE P50 IN THE COMPENSATION STUDY PROVIDED IN THE 290
9 PROCEEDING AND THOSE INTERNAL LABOUR COSTS.

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12 **Response**

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14 Below OPG provides a response prepared by Towers Watson (“WTW”) with respect to
15 non-capital OPG labour costs for the nuclear projects and initiatives recorded as part
16 of the Capacity Refurbishment Variance Account balances sought for disposition in
17 this Application, as set out at Ex. H1-1-1, Table 15, except Pickering Extended
18 Operations.¹ As explained at Ex. H1-1-1, p. 20, the Pickering Extended Operations
19 initiative was completed within the total cost budget approved in EB-2016-0152. The
20 labour costs within this total cost forecast formed part of the total compensation costs
21 sought as part of that application, and as approved by the OEB with applicable
22 adjustments including consideration of OPG’s Total Compensation Benchmarking
23 Study results filed in that proceeding.² As such, OPG has not performed further
24 analysis on the Pickering Extended Operations amounts as part of this undertaking
25 response.

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27 The following response has been prepared by WTW:

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29 Charts 1 and 1.1 1 below provide an estimate of the dollar difference, by year, between
30 total remuneration, excluding and including Hydro One shares, respectively, for each
31 of PWU, Society and Management employee groups and the market 50th percentile
32 (“P50”)³ for these groups for the non-capital OPG labour amounts recorded in the
33 Capacity Refurbishment Variance Account for the following projects and initiatives
34 identified at Ex. H1-1-1, Table 15: Fuel Channel Life Extension (“FCLE”) Project, FCLE
35 Related Ongoing Costs, Darlington Annulus Spacer Life Management Project, and
36 Darlington U3 Fuel Channel Component Retrieval Project.⁴

¹ There were no non-capital OPG labour costs incurred for the Darlington Steam Generator Primary Moisture Separator Replacement project.

² EB-2016-0152, Decision and Order, section 5.9.

³ Market 50th percentile (P50) as determined in the 2019 Total Compensation Benchmarking Study filed at EB-2020-0290, Ex. F4-3-2, Attachment 2.

⁴ Temporary employees and Society-represented Extended Temporary Employees were not included in the 2019 Total Compensation Benchmarking Study.

Chart 1: Estimated Dollar Difference between Total Remuneration – OPG and Market P50 (excluding Hydro One shares)

	PWU (\$Thousands)			Society (\$Thousands)			Management (\$Thousands)			Overall (\$Thousands)		
	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance
2020			\$5			\$235			(\$34)			\$206
2021			(\$65)			\$155			(\$17)			\$73
2022			(\$47)			\$101			(\$43)			\$11

Note: differences in the variance column are due to rounding.

Chart 1.1: Estimated Dollar Difference between Total Remuneration – OPG and Market P50 (including Hydro One shares)

	PWU (\$Thousands)			Society (\$Thousands)			Management (\$Thousands)			Overall (\$Thousands)		
	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance
2020			\$24			\$256			(\$34)			\$246
2021			(\$55)			\$168			(\$17)			\$96
2022			(\$36)			\$110			(\$43)			\$32

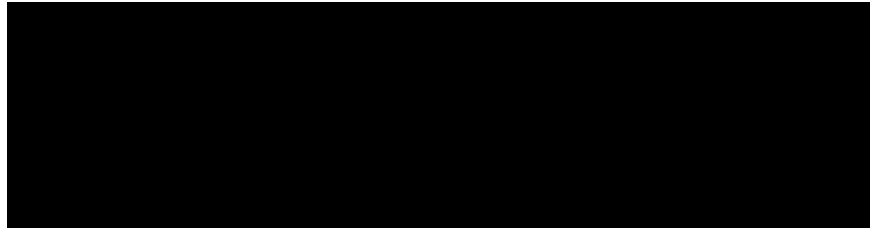
Note: differences in the variance column are due to rounding.

To respond to this undertaking, WTW used a consistent methodology and assumptions as set out in EB-2020-0290, Ex. L-F4-03-SEC-149 and EB-2020-0290, Ex. JTX4.18. Namely, for each applicable year, the market values and OPG information reflected in the results of WTW's 2019 compensation benchmarking report provided in EB-2020-0290 were adjusted, and corresponding dollar differences calculated, based on the following steps and assumptions:

- Update the OPG benchmark data based on changes in salary assumed in OPG's applicable business plan underpinning the EB-2020-0290 application, as provided in Chart 2 below;
- Adjust the market benchmark data based on future wage/salary increases determined by WTW, as provided in Chart 2 below; and
- Proportionately adjust the resulting dollar differences to reflect the number of full-time equivalent employees within PWU, Society and Management groups underpinning the non-capital OPG labour amounts recorded in the Capacity Refurbishment Variance Account for the projects listed above, as provided by OPG. Chart 3 below provides the number of such PWU, Society and Management full-time equivalent employees.

OPG salary and market salary movement assumptions from 2019 to the applicable years are the ones used in the previous analysis in EB-2020-2090, Ex. L-F4-03-SEC-149 and EB-2020-0290, Ex. JTX4.18.

1 **Chart 2: Salary Increase Assumptions for OPG and the Market**
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 5 **Chart 3: Number of Full-time Equivalent Employees for the Identified Projects**
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Representation	OPG Headcount (FTE)												TOTAL		
	FCLE Project			FCLE Related Ongoing Costs			Darlington Annulus Spacer Project			Darlington U3 Project					
	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022	2020	2021	2022
PWU - Regular	0.0	0.0	0.0	7.2	3.2	1.2	0.0	0.0	0.0	0.0	0.1	0.7	7.3	3.4	1.9
PWU - Term	0.0	0.0	0.0	2.6	2.5	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	2.5	2.0
Total PWU	0.0	0.0	0.0	9.9	5.7	3.1	0.0	0.0	0.0	0.0	0.1	0.7	9.9	5.8	3.8
Society - Regular	1.5	1.3	1.0	7.8	4.4	0.9	1.9	1.2	1.2	0.1	0.1	0.2	11.3	6.9	3.2
Management	0.7	0.3	0.1	0.4	0.0	0.2	0.0	0.3	0.3	0.0	0.0	0.0	1.2	0.5	0.5
Total	2.2	1.6	1.0	18.1	10.0	4.2	1.9	1.5	1.5	0.1	0.2	0.9	22.4	13.3	7.6

7 **Note:** differences in the total row are due to rounding.
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10 Consistent with EB-2020-0290, WTW notes that in the total remuneration calculation,
 11 total direct compensation reflects the cost of the employer providing the target level of
 12 compensation, while pension and benefits values represent the estimated employer
 13 provided value. The pension and benefit values may not align directly with the cost for
 14 OPG to provide these programs; therefore, WTW suggests caution in using total
 15 remuneration, which reflects a mix of cost and value, to assess OPG's overall cost
 16 competitiveness relative to the market P50.

UNDERTAKING JT1.10

Undertaking

WITH REFERENCE TO H-1-1-1, TABLE 7, NON-CAPITAL COSTS, TO CONFIRM HOW MUCH IS OPG LABOUR COSTS; TO COMPARE BETWEEN THE P50 IN THE COMPENSATION STUDY IN THE 290 PROCEEDING, AND THE INTERNAL LABOUR COST FOR WHICH RECOVERY IS SOUGHT IN THIS PROCEEDING.

Response

Below OPG provides a response prepared by Towers Watson (“WTW”) with respect to non-capital OPG labour costs for regulated hydroelectric projects recorded as part of the Capacity Refurbishment Variance Account balances sought for disposition in this Application, as set out at Ex. H1-1-1, Tables 7 and 7a.¹ The information is provided for 2020 only as that is the sole year in which non-capital OPG labour costs were captured as part of the above Capacity Refurbishment Variance Account balances.

The following response has been prepared by WTW:

Charts 1 and 1.1 below provide an estimate of the dollar difference, by year, between total remuneration, excluding and including Hydro One shares, respectively, for each of PWU, Society and Management employee groups and the market 50th percentile (“P50”)² for these groups for the non-capital OPG labour amounts recorded in the Capacity Refurbishment Variance Account for the following projects identified at Ex. H1-1-1, Table 7a: Abitibi Canyon Generating Station – Unit G5 Stator Winding Replacement and Sir Adam Beck I Generating Station – Unit G5 Major Overhaul.³

Chart 1: Estimated Dollar Difference between Total Remuneration – OPG and Market P50 (excluding Hydro One shares)

	PWU (\$Thousands)			Society (\$Thousands)			Overall (\$Thousands)		
	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance
2020			\$38			\$0			\$39

¹ OPG labour costs were incurred for the Abitibi Canyon Generating Station – Unit G5 Stator Winding Replacement and Sir Adam Beck I Generating Station – Unit G5 Major Overhaul projects only.

² Market 50th percentile (P50) as determined in the 2019 Total Compensation Benchmarking Study filed at EB-2020-0290, Ex. F4-3-2, Attachment 2.

³ Temporary employees and Society-represented Extended Temporary Employees were not included in the 2019 Total Compensation Benchmarking Study.

Chart 1.1: Estimated Dollar Difference between Total Remuneration – OPG and Market P50 (including Hydro One shares)

	PWU (\$Thousands)			Society (\$Thousands)			Overall (\$Thousands)		
	OPG	Market	\$ Variance	OPG	Market	\$ Variance	OPG	Market	\$ Variance
2020			\$43			\$0			\$43

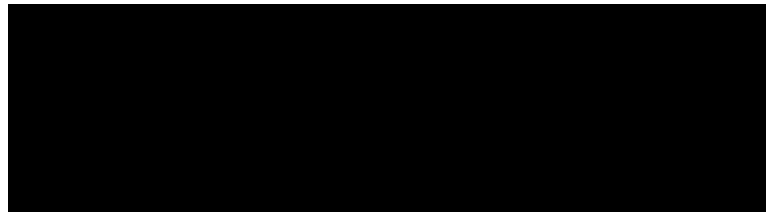
Note: differences in the variance column are due to rounding.

To respond to this undertaking, WTW used a consistent methodology and assumptions as set out in EB-2020-0290, Ex. L-F4-03-SEC-149 and EB-2020-0290, Ex. JTX4.18. Namely, for each applicable year, the market values and OPG information reflected in the results of WTW's 2019 compensation benchmarking report provided in EB-2020-0290 were adjusted, and corresponding dollar differences calculated, based on the following steps and assumptions:

- Update the OPG benchmark data based on changes in salary assumed in OPG's applicable business plan underpinning the EB-2020-0290 application, as provided in Chart 2 below;
- Adjust the market benchmark data based on future wage/salary increases determined by WTW, as provided in Chart 2 below; and
- Proportionately adjust the resulting dollar differences to reflect the number of full-time equivalent employees within PWU, Society and Management groups underpinning the non-capital OPG labour amounts recorded in the Capacity Refurbishment Variance Account for the projects listed above, as provided by OPG. Chart 3 below provides the number of such PWU, Society and Management full-time equivalent employees.

OPG salary and market salary movement assumptions from 2019 to the applicable years are the ones used in the previous analysis provided in EB-2020-2090, Ex. L-F4-03-SEC-149 and EB-2020-0290, Ex. JTX4.18.

Chart 2: Salary Increase Assumptions for OPG and the Market



1 **Chart 3: Number of Full-time Equivalent Employees for the Identified Projects**

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Representation	OPG Headcount (FTE)		
	Abitibi - Unit G5	SAB - Unit G5	TOTAL
PWU - Regular	1.2	0.7	1.9
PWU - Term	0.0	0.0	0.0
Total PWU	1.2	0.7	1.9
Society - Regular	0.0	0.0	0.0
Total	1.2	0.7	1.9

3 **Note:** differences in the total row are due to rounding.

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6 Consistent with EB-2020-0290, WTW notes that in the total remuneration calculation,
7 total direct compensation reflects the cost of the employer providing the target level of
8 compensation, while pension and benefits values represent the estimated employer
9 provided value. The pension and benefit values may not align directly with the cost for
10 OPG to provide these programs; therefore, WTW suggests caution in using total
11 remuneration, which reflects a mix of cost and value, to assess OPG's overall cost
12 competitiveness relative to the market P50.