

1 **UNDERTAKING J20.1**
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3 **Undertaking**
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5 To provide bill impacts for General service and large volume customers using data from
6 Toronto Hydro, Power Stream and Hydro One.
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12 **Response**
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14 OPG has been asked to file a bill impact analysis, similar to that prepared for residential
15 customers as part of Ex. I1-1-2 Table 1, but for medium and large volume customers
16 using data from Toronto Hydro, PowerStream, and Hydro One Networks. This analysis
17 is provided in Tables 1, 2, and 3 of Attachment 1 to this response.
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19 There is a difference in presentation between the residential customer bill impacts and
20 those provided for medium and large use customers as part of this response. OPG is
21 able to provide the analysis of the residential bill impact by relying on the OEB's bill
22 impact calculator (provided on the OEB's website¹). This tool calculates the customer
23 bill for all Ontario electricity distribution companies at an average residential
24 consumption level of 750kWh.
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26 A tool as described above does not exist for medium and large volume customers and
27 OPG, as a wholesale generator, does not have information at a customer class level. To
28 approximate a bill impact, OPG has manually extracted information from the draft rate
29 orders (which provide fuller calculation details not found in the final rate orders) of the
30 identified distribution companies. Each of these utilities has a unique makeup of
31 medium and large use customers and completes bill calculations in a way that is
32 representative of their customer base. The consumption level for the medium and large
33 use customers is different for each of these customer classifications depending on the
34 utility and the calculations are not comparable across the three utilities. OPG is unable
35 to calculate an average bill impact for medium and large volume customers, and must
36 complete the calculation independently for each utility requested.

¹ <http://www.ontarioenergyboard.ca/OEB/Consumers/Your+Utility+-+Bill+Calculator>

Table 1
 Annualized Bill Impact for Typical PowerStream Consumers 2017-2021

| Line No. | Description | Note | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | |
|---|--|------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|
| | | | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial |
| | | | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) |
| 1 | Typical Consumer Usage (kWh/Month) | 1 | 82,760 | 2,896,600 | 82,760 | 2,896,600 | 82,760 | 2,896,600 | 82,760 | 2,896,600 | 82,760 | 2,896,600 |
| 2 | Total Forecast Production (TWh) | 2 | 71.1 | 71.1 | 71.4 | 71.4 | 72.0 | 72.0 | 70.3 | 70.3 | 68.4 | 68.4 |
| 3 | OPG Portion of Consumer Usage | 3 | 51.7% | 51.7% | 51.9% | 51.9% | 52.3% | 52.3% | 51.1% | 51.1% | 49.7% | 49.7% |
| 4 | Consumer Usage of OPG Generation (kWh/Month) (line 1 x line 3) | | 42,748 | 1,496,182 | 42,972 | 1,504,021 | 43,306 | 1,515,713 | 42,301 | 1,480,541 | 41,115 | 1,439,034 |
| 5 | Typical Monthly Consumer Bill (\$) | 1 | 14,157 | 467,845 | 14,157 | 467,845 | 14,157 | 467,845 | 14,157 | 467,845 | 14,157 | 467,845 |
| EB-2013-0321/EB-2014-0370 to EB-2016-0152: | | | | | | | | | | | | |
| 6 | Increase in Weighted Average Payment Amounts (\$/MWh) | 4 | 1.52 | 1.52 | 1.56 | 1.56 | 1.60 | 1.60 | 1.64 | 1.64 | 1.68 | 1.68 |
| 7 | Percentage Increase in Consumer Bills (line 6 x (line 4/1000) / line 5) | | 0.46% | 0.49% | 0.47% | 0.50% | 0.49% | 0.52% | 0.49% | 0.52% | 0.49% | 0.52% |
| 8 | Dollar Increase in Consumer Bills (\$) (line 5 x line 7) | | 65.16 | 2,280.60 | 67.14 | 2,349.87 | 69.35 | 2,427.34 | 69.44 | 2,430.29 | 69.18 | 2,421.21 |

Notes:

- 1 Current Approved Rates and Usage (adjusted for line losses) are taken from the Powerstream EB-2015-0003 Draft Rate Order
 Medium/Large Business (EB-2015-0003 Draft Rate Order, Schedule B, Page 4): GS > 50 customer, consumption 80,000 kWh, loss factor 3.45%
 Large Industrial (EB-2015-0003 Draft Rate Order, Schedule B, Page 5): Large User customer, consumption 2,800,000 kWh, loss factor 3.45%
- 2 Ex.N3-1-1 Table 1, line 9.
- 3 Ex. N3-1-1_Table 1, Line 11
- 4 Ex. N3-1-1_Table 1, Line 8

Table 2
 Annualized Bill Impact for Typical Hydro One Networks Consumers 2017-2021

| Line No. | Description | Note | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | |
|---|--|------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|
| | | | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial |
| | | | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) |
| 1 | Typical Consumer Usage (kWh/Month) | 1 | 37,135 | 517,000 | 37,135 | 517,000 | 37,135 | 517,000 | 37,135 | 517,000 | 37,135 | 517,000 |
| 2 | Total Forecast Production (TWh) | 2 | 71.1 | 71.1 | 71.4 | 71.4 | 72.0 | 72.0 | 70.3 | 70.3 | 68.4 | 68.4 |
| 3 | OPG Portion of Consumer Usage | 3 | 51.7% | 51.7% | 51.9% | 51.9% | 52.3% | 52.3% | 51.1% | 51.1% | 49.7% | 49.7% |
| 4 | Consumer Usage of OPG Generation (kWh/Month) (line 1 x line 3) | | 19,181.4 | 267,046.3 | 19,281.9 | 268,445.4 | 19,431.8 | 270,532.3 | 18,980.8 | 264,254.6 | 18,448.7 | 256,846.1 |
| 5 | Typical Monthly Consumer Bill (\$) | 1 | 6,435 | 68,653 | 6,435 | 68,653 | 6,435 | 68,653 | 6,435 | 68,653 | 6,435 | 68,653 |
| EB-2013-0321/EB-2014-0370 to EB-2016-0152: | | | | | | | | | | | | |
| 6 | Increase in Weighted Average Payment Amounts (\$/MWh) | 4 | 1.52 | 1.52 | 1.56 | 1.56 | 1.60 | 1.60 | 1.64 | 1.64 | 1.68 | 1.68 |
| 7 | Percentage Increase in Consumer Bills (line 6 x (line 4/1000) / line 5) | | 0.45% | 0.59% | 0.47% | 0.61% | 0.48% | 0.63% | 0.48% | 0.63% | 0.48% | 0.63% |
| 8 | Dollar Increase in Consumer Bills (\$) (line 5 x line 7) | | 29.24 | 407.05 | 30.13 | 419.42 | 31.12 | 433.24 | 31.16 | 433.77 | 31.04 | 432.15 |

Notes:

- 1 Current Approved Rates and Usage (adjusted for line losses) are taken from the Powerstream EB-2013-0416 Draft Rate Order Medium/Large Business (EB-2013-0416 Draft Rate Order, Exhibit 7): Gsd customer, consumption 35,000 kWh, loss factor 6.1% Large Industrial (EB-2013-0416 Draft Rate Order, Exhibit 7): ST customer, consumption 500,000 kWh, loss factor 3.4%
- 2 Ex.N3-1-1 Table 1, line 9.
- 3 Ex. N3-1-1 Table 1, Line 11
- 4 Ex. N3-1-1 Table 1, Line 8

Table 3
 Annualized Bill Impact for Typical Toronto Hydro Consumers 2017-2021

| Line No. | Description | Note | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | |
|----------|--|------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|-----------------------|------------------|
| | | | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial | Medium/Large Business | Large Industrial |
| | | | (a) | (b) | (c) | (d) | (e) | (f) | (g) | (h) | (i) | (j) |
| 1 | Typical Consumer Usage (kWh/Month) | 1 | 155,640 | 4,584,150 | 155,640 | 4,584,150 | 155,640 | 4,584,150 | 155,640 | 4,584,150 | 155,640 | 4,584,150 |
| 2 | Total Forecast Production (TWh) | 2 | 71.1 | 71.1 | 71.4 | 71.4 | 72.0 | 72.0 | 70.3 | 70.3 | 68.4 | 68.4 |
| 3 | OPG Portion of Consumer Usage | 3 | 51.7% | 51.7% | 51.9% | 51.9% | 52.3% | 52.3% | 51.1% | 51.1% | 49.7% | 49.7% |
| 4 | Consumer Usage of OPG Generation (kWh/Month) (line 1 x line 3) | | 80,392.8 | 2,367,853.6 | 80,814.0 | 2,380,258.7 | 81,442.3 | 2,398,763.3 | 79,552.4 | 2,343,100.1 | 77,322.1 | 2,277,410.5 |
| 5 | Typical Monthly Consumer Bill (\$) | 1 | 27,003 | 771,057 | 27,003 | 771,057 | 27,003 | 771,057 | 27,003 | 771,057 | 27,003 | 771,057 |
| | EB-2013-0321/EB-2014-0370 to EB-2016-0152: | | | | | | | | | | | |
| 6 | Increase in Weighted Average Payment Amounts (\$/MWh) | 4 | 1.52 | 1.52 | 1.56 | 1.56 | 1.60 | 1.60 | 1.64 | 1.64 | 1.68 | 1.68 |
| 7 | Percentage Increase in Consumer Bills (line 6 x (line 4/1000) / line 5) | | 0.45% | 0.47% | 0.47% | 0.48% | 0.48% | 0.50% | 0.48% | 0.50% | 0.48% | 0.50% |
| 8 | Dollar Increase in Consumer Bills (\$) (line 5 x line 7) | | 122.54 | 3,609.28 | 126.26 | 3,718.89 | 130.43 | 3,841.50 | 130.58 | 3,846.16 | 130.10 | 3,831.79 |

Notes:

- 1 Current Approved Rates and Usage (adjusted for line losses) are taken from the Powerstream EB-2014-0116 Draft Rate Order
 Medium/Large Business (EB-2014-0116 Draft Rate Order, Schedule 4-2, Page 6): GS 50-999 customer, consumption 150,000 kWh, loss factor 3.76%
 Large Industrial (EB-2014-0116 Draft Rate Order, Schedule 4-2, Page 8): Large Use customer, consumption 4,500,000 kWh, loss factor 1.87%
- 2 Ex.N3-1-1 Table 1, line 9.
- 3 Ex. N3-1-1_Table 1, Line 11
- 4 Ex. N3-1-1_Table 1, Line 8

UNDERTAKING J20.6

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Undertaking

TO CONFIRM WHETHER THERE IS AN OM&A COMPONENT EMBEDDED IN THE REFERENCE AMOUNT APPROVED IN EB-2013-0321 FOR THE HYDRO CRVA

Response

OPG confirms that an annual average of \$0.1M in OM&A removal costs related to CRVA-eligible projects is embedded in the regulated hydroelectric base rates approved in EB-2013-0321.