

1                                   **COMPARISON OF NON-ENERGY REVENUES**  
2                                   **NUCLEAR**

3  
4   **1.0    PURPOSE**

5   This evidence presents period-over-period comparisons of nuclear non-energy revenues.  
6

7   **2.0    OVERVIEW**

8   This evidence supports the approvals OPG is seeking with respect to non-energy revenues  
9   from its nuclear facilities. Exhibit G2-1-2 Table 1 presents year-over-year comparisons of  
10   nuclear non-energy revenues.  
11

12   **3.0    PERIOD-OVER-PERIOD CHANGES - TEST YEARS**

13   **2017 Plan versus 2016 Budget**

14   Planned nuclear non-energy revenue for 2017 is \$31.7M, an increase of \$7.6M over 2016  
15   budgeted nuclear non-energy revenue, primarily due to higher revenues from heavy water  
16   sales and processing.  
17

18   **2018 Plan versus 2017 Plan**

19   Planned nuclear non-energy revenue for 2018 is \$22.0M, a decrease of \$9.7M over 2017  
20   planned nuclear non-energy revenue, primarily due to OPG's exit from the sale of surplus  
21   heavy water due to the depletion of inventory and marginally higher direct costs offset slightly  
22   by increased ancillary services revenues due to inflation.  
23

24   **2019 Plan versus 2018 Plan**

25   Planned nuclear non-energy revenue for 2019 is \$22.7M, an increase of \$0.7M over 2018  
26   planned nuclear non-energy revenue, primarily due to marginally higher direct costs offset  
27   slightly by increased ancillary services revenues due to inflation.  
28

1 **2020 Plan versus 2019 Plan**

2 Planned nuclear non-energy revenue for 2020 is \$22.2M, a decrease of \$0.6M over 2019  
3 planned nuclear non-energy revenue, primarily due to marginally higher direct costs offset  
4 slightly by increased ancillary services revenues due to inflation.

5

6 **2021 Plan versus 2020 Plan**

7 Planned nuclear non-energy revenue for 2021 is \$22.9M, an increase of \$0.8M over 2020  
8 planned nuclear non-energy revenue, primarily due to increased ancillary services revenue  
9 as a result of inflation.

10

11 **4.0 PERIOD-OVER-PERIOD CHANGES - BRIDGE YEAR**

12 **2016 Budget versus 2015 Actual**

13 Budgeted nuclear non-energy revenue for 2016 is \$24.1M, a decrease of \$9.1M over 2015  
14 actual nuclear non-energy revenue, primarily due to lower revenues from heavy water sales  
15 and processing as a result of an unplanned outage of the Darlington Tritium Removal Facility  
16 (“DTRF”) limiting processing services as well as increased competition for isotope sales  
17 offset slightly by increased ancillary services revenues.

18

19 **5.0 PERIOD-OVER-PERIOD CHANGES - HISTORICAL YEARS**

20 **2015 Actual versus 2015 OEB Approved**

21 Actual nuclear non-energy revenue for 2015 is \$33.2M, a decrease of \$4.5M over 2015 OEB  
22 Approved nuclear non-energy revenues, reflecting the OEB adjustment to the total approved  
23 nuclear non-energy revenues, no sales of Helium 3 and slightly lower revenues from ancillary  
24 services offset by higher revenues from sales of heavy water and processing services and  
25 isotopes.

26

27 **2015 Actual versus 2014 Actual**

28 Actual nuclear non-energy revenue for 2015 is \$33.2M, an increase of \$1.9M over 2014  
29 Actual nuclear non-energy revenue, primarily due to higher revenues from sales of heavy  
30 water and processing services and isotopes offset by slightly higher direct costs and slightly  
31 lower revenues from the sale of ancillary services.

1     **2014 Actual versus 2014 OEB Approved**

2     Actual nuclear non-energy revenue for 2014 is \$31.2M, a decrease of \$6.4M over 2014 OEB  
3     Approved nuclear non-energy revenue reflecting the OEB adjustment to the total approved  
4     nuclear non-energy revenues, lower revenues from heavy water sales and processing due to  
5     high customer inventory, competition and reduced performance of the DTRF offset by slightly  
6     higher revenues from isotope sales and ancillary services.

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8     **2014 Actual versus 2013 Actual**

9     Actual nuclear non-energy revenue for 2014 is \$31.2M, a decrease of \$0.2M over 2013  
10    actual nuclear non-energy revenue primarily due to lower revenues from heavy water sales  
11    due to competition offset by higher revenues from isotope sales and slightly higher sales of  
12    ancillary services.

13

14    **2013 Actual versus 2013 Budget**

15    Actual nuclear non-energy revenue for 2013 is \$31.0M, an increase of \$7.3M over 2013  
16    budgeted nuclear non-energy revenue, primarily due to higher demand for heavy water as  
17    customers anticipated OPG's exit from the market and unplanned heavy water services  
18    projects in France and Japan offset by lower isotope sales revenue due to operational issues  
19    that delayed planned shipments.

Table 1  
 Comparison of Other Revenues - Nuclear (\$M)

Line No.	Business Unit	2013 Budget	(c)-(a) Change	2013 Actual	(g)-(c) Change	2014 OEB Approved <sup>1</sup>	(g)-(e) Change	2014 Actual	(k)-(g) Change	2015 OEB Approved <sup>1</sup>	(k)-(i) Change	2015 Actual
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
<b>NGD-Related Revenues:</b>												
1	Heavy Water Sales & Processing <sup>2</sup>	17.8	10.4	28.2	(6.7)	27.4	(5.9)	21.5	3.4	15.4	9.5	24.9
2	Isotope Sales (Cobalt 60 + Tritium)	11.1	(4.1)	7.0	5.7	11.6	1.1	12.7	0.8	11.9	1.6	13.5
3	Inspection & Maintenance Services	0.0	0.0	0.0	0.4	0.0	0.4	0.4	(0.4)	0.0	0.0	0.0
4	Helium-3 Sales	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.0	(4.0)	0.0
5	<b>Total NGD-Related Revenues</b> (lines 1 through 4)	<b>29.0</b>	<b>6.2</b>	<b>35.2</b>	<b>(0.6)</b>	<b>39.0</b>	<b>(4.4)</b>	<b>34.6</b>	<b>3.8</b>	<b>31.3</b>	<b>7.1</b>	<b>38.4</b>
6	<b>NGD-Related Direct Costs</b>	<b>7.2</b>	<b>(1.3)</b>	<b>5.9</b>	<b>0.0</b>	<b>6.8</b>	<b>(0.9)</b>	<b>5.9</b>	<b>0.8</b>	<b>7.8</b>	<b>(1.1)</b>	<b>6.7</b>
7	<b>NGD-Related Contribution Margin</b> (line 5 - line 6)	<b>21.7</b>	<b>7.6</b>	<b>29.3</b>	<b>(0.6)</b>	<b>32.2</b>	<b>(3.5)</b>	<b>28.7</b>	<b>2.9</b>	<b>23.5</b>	<b>8.1</b>	<b>31.6</b>
8	Ancillary Services <sup>3</sup>	1.9	(0.2)	1.7	0.7	1.9	0.5	2.4	(0.9)	1.9	(0.4)	1.5
9	Other	0.1	(0.1)	0.0	0.1	0.1	0.0	0.1	(0.1)	0.1	(0.1)	0.0
10	Adjustment <sup>1</sup>	0.0	0.0	0.0	0.0	3.4	(3.4)	0.0	0.0	12.1	(12.1)	0.0
11	<b>Total</b> (line 7 + line 8 + line 9 + line 10)	<b>23.7</b>	<b>7.3</b>	<b>31.0</b>	<b>0.2</b>	<b>37.6</b>	<b>(6.4)</b>	<b>31.2</b>	<b>1.9</b>	<b>37.6</b>	<b>(4.5)</b>	<b>33.2</b>

Line No.	Business Unit	2015 Actual	(c)-(a) Change	2016 Budget	(e)-(c) Change	2017 Plan	(g)-(e) Change	2018 Plan	(i)-(g) Change	2019 Plan	(k)-(i) Change	2020 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)
<b>NGD-Related Revenues:</b>												
12	Heavy Water Sales & Processing <sup>2</sup>	24.9	(6.9)	18.0	7.4	25.4						
13	Isotope Sales (Cobalt 60 + Tritium)	13.5	(0.9)	12.6	0.0	12.6						
14	Inspection & Maintenance Services	0.0	0.0	0.0	0.0	0.0						
15	Helium-3 Sales	0.0	0.0	0.0	0.0	0.0						
16	<b>Total NGD-Related Revenues</b> (lines 12 through 15)	<b>38.4</b>	<b>(7.8)</b>	<b>30.6</b>	<b>7.5</b>	<b>38.0</b>	<b>(9.3)</b>	<b>28.7</b>	<b>0.0</b>	<b>28.7</b>	<b>0.0</b>	<b>28.7</b>
17	<b>NGD-Related Direct Costs</b>	<b>6.7</b>	<b>1.5</b>	<b>8.3</b>	<b>(0.1)</b>	<b>8.1</b>	<b>0.4</b>	<b>8.6</b>	<b>(0.7)</b>	<b>7.9</b>	<b>0.6</b>	<b>8.5</b>
18	<b>NGD-Related Contribution Margin</b> (line 16 - line 17)	<b>31.6</b>	<b>(9.3)</b>	<b>22.3</b>	<b>7.6</b>	<b>29.9</b>	<b>(9.7)</b>	<b>20.1</b>	<b>0.7</b>	<b>20.8</b>	<b>(0.6)</b>	<b>20.2</b>
19	Ancillary Services <sup>3</sup>	1.5	0.2	1.8	0.0	1.8	0.0	1.8	0.0	1.9	0.0	1.9
20	Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	<b>Total</b> (line 18 + line 19 + line 20)	<b>33.2</b>	<b>(9.1)</b>	<b>24.1</b>	<b>7.6</b>	<b>31.7</b>	<b>(9.7)</b>	<b>22.0</b>	<b>0.7</b>	<b>22.7</b>	<b>(0.6)</b>	<b>22.2</b>

Line No.	Business Unit	2020 Plan	(c)-(a) Change	2021 Plan
		(a)	(b)	(c)
<b>NGD-Related Revenues:</b>				
22	Heavy Water Sales & Processing <sup>2</sup>			
23	Isotope Sales (Cobalt 60 + Tritium)			
24	Inspection & Maintenance Services			
25	Helium-3 Sales			
26	<b>Total NGD-Related Revenues</b> (lines 22 through 25)	<b>28.7</b>	<b>0.0</b>	<b>28.7</b>
27	<b>NGD-Related Direct Costs</b>	<b>8.5</b>	<b>(0.7)</b>	<b>7.8</b>
28	<b>NGD-Related Contribution Margin</b> (line 26 - line 27)	<b>20.2</b>	<b>0.7</b>	<b>21.0</b>
29	Ancillary Services <sup>3</sup>	1.9	0.0	2.0
30	Other	0.0	0.0	0.0
31	<b>Total</b> (line 28 + line 29 + line 30)	<b>22.2</b>	<b>0.8</b>	<b>22.9</b>

Notes:

- OEB Approved 2014 and 2015 total Nuclear Other Revenues are \$37.6M per EB-2013-0321 Decision with Reasons, p. 66. OEB Approved adjustments were applied to the 2014 Plan and 2015 Plan Total Nuclear Other Revenue amounts shown in EB-2013-0321 Decision with Reasons, Table 17 (p. 65).
- Starting in 2011, Other Revenues included in the determination of the revenue requirement are adjusted for sharing of 50 percent of forecasted net revenue from sales of heavy water per the OEB Decision in EB-2010-0008 and continued per OEB Decision in EB-2013-0321.

Table to Note 2 - 50% Share of Net Revenues from Heavy Water Sales (\$M)

Line No.		2013 Actual	2014 Actual	2015 Actual	2016 Plan	2017 Plan	2018 Plan	2019 Plan	2020 Plan	2021 Plan
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)
1a	50% Share of Net Revenues from Heavy Water Sales									

3 Ancillary Services related to the nuclear facilities are discussed in Ex. G2-1-1.