CAPITAL STRUCTURE AND RETURN ON EQUITY

1.0 PURPOSE

This evidence describes the methodology that OPG has used to determine its capital structure and return on equity ("ROE") for the test period. It also summarizes the capitalization and cost of capital for 2010 – 2013.

2.0 OVERVIEW

OPG is seeking approval of the test period cost of capital as presented in Ex. C1-1-1, Tables 1 and 2. In determining the cost of capital, OPG has applied the capital structure of 47 per cent equity and 53 per cent debt approved by the OEB in EB-2007-0905 and EB-2010-0008.

OPG's application incorporates an ROE of 8.98 per cent for 2014 and 2015 as this is the latest rate published by the OEB pursuant to the ROE formula set out in *Report of the Board on the Cost of Capital for Ontario's Regulated Utilities, December 2009, EB-2009-0084* ("Cost of Capital Report"). OPG proposes to use the methodology approved by the OEB in EB-2010-0008 to establish the ROE for 2014 and 2015 that would be used in the payment amounts order resulting from this application.

The debt components of OPG's cost of capital are determined using the methodologies approved by the OEB in EB-2007-0905 and EB-2010-0008. These are described in Ex. C1-1-2 and Ex. C1-1-3 for long and short term debt, respectively.

3.0 CAPITAL STRUCTURE

For the test period, OPG has applied the deemed capital structure of 47 per cent equity and 53 per cent debt approved by the OEB in EB-2007-0905 and EB-2010-0008.

OPG is not proposing any changes to its capital structure as there have been no significant changes in the risks faced by OPG's regulated asset portfolio that are not otherwise addressed by proposals to establish new variance and/or deferral accounts as described in Ex. H1-3-1. The debt component of OPG's capital structure is determined using the methodologies approved by the OEB in EB-2007-0905 and EB-2010-0008. These are described in Ex. C1-1-2 and Ex. C1-1-3 for long-term and short-term debt, respectively.

OPG has applied this capitalization to the rate base described in Exhibit B, as adjusted to reflect the application of the “lesser of Asset Retirement Costs and Unfunded Nuclear Liabilities” provision applied by the OEB in EB-2007-0905 and in EB-2010-0008. The rate base for the 2014 - 2015 test period includes the hydroelectric facilities that will be subject to rate regulation by the OEB. The capitalization and cost of capital for the 2010 to 2015 period is summarized in Ex. C1-1-1, Tables 1 - 6.

4.0 RETURN ON COMMON EQUITY

OPG’s current payment amounts incorporate a return on equity of 9.43 per cent for 2011 and 9.55 per cent for 2012 as provided in the EB-2010-0008 Payment Amounts Order, Appendix A, Tables 4b and 5b.

4.1 Forecast Return on Equity for the Test Period

OPG’s application incorporates an ROE of 8.98 per cent for 2014 and 2015 as this is the latest rate published by the OEB pursuant to the ROE formula as set out in the Cost of Capital Report. OPG proposes to use the same methodology approved by the OEB in EB-2010-0008 (Decision with Reasons, pp. 121-123) to establish the ROE for 2014 and 2015, as described below:

- Separate ROEs are established for each year of the test period;
- For the first year of the test period (2014), the ROE will be set using data available for the three months prior to the effective date of the payment amounts order, in accordance with the OEB’s Cost of Capital Report; and,
- For the second year of that test period (2015), the ROE will be set at the same time as the first year but using data from Global Insight instead of the *Consensus Forecasts* used by the OEB because the *Consensus Forecasts* data is only projected for 12 months.

4.2 Return on Equity for Historical and Bridge Periods

The EB-2010-0008 Decision with Reasons (p. 151) established a requirement for OPG to file "an analysis of the actual annual regulatory return, after tax on rate base, both dollars and percentages, for the regulated business and a comparison with the regulatory return included in the payment amounts by June 30th of each year." OPG filed this information for 2010 to 2012.

The chart below presents the regulatory earnings before tax (i.e., pre-tax return on equity), regulatory income taxes, and after-tax return on equity for each of 2010 - 2012.

Chart 1: Summary of Regulatory Return

Year/ Actg Basis	Regulatory Earnings Before Tax	Less: Income Tax Ex. F4-2-1 Table 4, line 29	Less: Income Tax Variances in Deferral and Variance Acts	ROE ($) Ex. C1-1-1 Tables 4-6, line 5	ROE (%) Ex. C1-1-1 Tables 4-6, line 5
2010 CGAAP	$169.6M	$29.9M	$3.0M	$136.7M	4.71%
2011 USGAAP	$168.0M	$8.1M	$30.8M	$129.1M	4.47%
2012 USGAAP	$195.2M	$41.7M	$19.6M	$133.9M	4.73%

The actual ROE presented above is determined using the reconciliation approach as described in EB-2007-0905, Ex. C1-2-1 and applied in EB-2010-0008, Ex. C1-1-1.

The reconciliation approach starts with the financial results for OPG's prescribed assets calculated in accordance with Generally Accepted Accounting Principles ("GAAP").[1,2] The accounting earnings for the prescribed assets for 2010, 2011 and 2012 are adjusted to reflect differences between accounting earnings for the prescribed assets and regulatory earnings. To the extent that OPG's accounting treatment and regulatory treatment differ, the accounting numbers are removed, and the regulatory amounts are included. This provides a consistent basis for comparing historic and forecast regulatory earnings. The regulatory earnings for the prescribed assets in 2010 through 2012 are used as the basis for determining the stand-alone income tax amounts for these years as provided in Ex. F4-2-1 Table 4.

OPG previously reported 2011 return information on a Canadian GAAP basis, the same basis upon which payment amounts were established in EB-2010-0008. OPG provides this information on a USGAAP basis in this application, as this is the basis upon which all historical information for 2011 is presented. Earnings before tax under USGAAP and Canadian GAAP are reconciled in Ex. F4-2-1 Table 4, note 2.

For the 2013 bridge year, OPG has calculated a forecast ROE based on the 2013 budget information. The 2013 forecast ROE is $94.4M[3] or 2.82% per cent shown in Ex. I1-1-1, Table 5 The forecast 2013 regulatory earnings before tax in Ex. I1-1-1, Table 5, line 20 is used as the basis for determining the forecast income tax expense for the year, as shown in Ex. F4-2-1, Table 5.

---

[1] The financial results for 2010 and 2011 were reported, in accordance with Canadian GAAP, in the audited consolidated financial statements for OPG's prescribed assets filed in EB-2012-0002 Ex. A3-1-1, Attachment 2). The audit of the results for 2012 (in accordance with USGAAP) was not complete at the time of filing this Application. OPG will file the 2012 audited financial statements for the prescribed facilities after the audit is complete. The calculation of historical financial results for the prescribed facilities is discussed in Ex. A2-1-1.

[2] The payment amounts in effect during 2010 and 2011 were determined on the basis of Canadian GAAP in EB-2007-0905 and EB-2010-0008, respectively. The OEB approved the use of USGAAP for regulatory accounting, reporting and ratemaking purposes for OPG effective January 1, 2012, as per the EB-2012-0002 Payment Amounts Order issued on April 18, 2013. Therefore, historical ROE information for 2010 and 2011 was reported under Canadian GAAP. The Impact for USGAAP Deferral Account established by the OEB recorded, up to December 31, 2012, the financial impacts of OPG's transition to and implementation of USGAAP from January 1, 2012. The balance of the deferral account as at December 31, 2012 was considered and the financial impacts accepted for recovery in EB-2012-0002; therefore, reconciliation between CGAAP and USGAAP is not required.

[3] Ex I1-1-1, Table 5: Regulatory EBT of $88.4M plus income tax recovery of $24.6M minus income tax variances recorded in deferral and variances accounts in 2013 of $18.6M

Table 1
Capitalization and Cost of Capital
Summary of Capitalization and Cost of Capital
Calendar Year Ending December 31, 2015

Line No.	Capitalization	Note	Principal ($M)	Component (%)	Cost Rate (%)	Cost of Capital ($M)
			(a)	(b)	(c)	(d)
	Capitalization and Return on Capital:					
1	**Short-term Debt**	1	192.2	1.9%	2.89%	9.0
2	**Existing/Planned Long-Term Debt**	2	3,481.6	34.9%	4.86%	169.2
3	**Other Long-Term Debt Provision**	3	1,606.6	16.1%	4.86%	78.1
4	**Total Debt**	4	5,280.4	53.0%	4.85%	256.2
5	**Common Equity**	4	4,682.6	47.0%	8.98%	420.5
6	**Rate Base Financed by Capital Structure**	5	9,963.0	88.4%	6.79%	676.7
7	**Adjustment for Lesser of UNL or ARC**	5, 6	1,308.8	11.6%	5.37%	70.3
8	**Rate Base**	7	11,271.8	100%	6.63%	747.0

Notes:

1. Ex. C1-1-3 Table 2: Principal (line 13), Cost Rate (line 8), Cost of Capital (line 14).
2. Ex. C1-1-2 Table 7, line 47.
3. Debt required to balance capital structure with proposed rate base. See Ex. C1-1-2, Section 5.0. Cost rate is the same cost rate used for Existing/Planned Long-Term Debt (line 2) per EB-2010-0008 Decision with Reasons.
4. Capital Structure approved by the OEB in EB-2010-0008 as discussed in Ex. C1-1-1.
   Return on Equity reflects the last Cost of Capital Parameter Update reported by the OEB (Feb. 14, 2013).
5. The portion of rate base to be financed by the capital structure approved by the Board excludes the lesser of the forecast of the average unfunded liabilities (UNL) related to Pickering and Darlington, and the average unamortized asset retirement costs (ARC) included in fixed asset balances for Pickering and Darlington.
6. Principal from C2-1-1 Table 2, line 32. Weighted average accretion rate from Ex. C2-1-1, section 3.0.
7. Ex. B1-1-1 Table 1 (Prev. Reg. Hydro and Newly Reg. Hydro) and Ex. B1-1-1 Table 2 (Nuclear).

Table 2
Capitalization and Cost of Capital
Summary of Capitalization and Cost of Capital
Calendar Year Ending December 31, 2014

Line No.	Capitalization	Note	Principal ($M)	Component (%)	Cost Rate (%)	Cost of Capital ($M)
			(a)	(b)	(c)	(d)
	Capitalization and Return on Capital:					
1	**Short-term Debt**	1	192.2	1.9%	1.87%	7.0
2	**Existing/Planned Long-Term Debt**	2	3,372.7	33.9%	4.85%	163.6
3	**Other Long-Term Debt Provision**	3	1,712.1	17.2%	4.85%	83.0
4	**Total Debt**	4	5,277.0	53.0%	4.81%	253.6
5	**Common Equity**	4	4,679.6	47.0%	8.98%	420.2
6	**Rate Base Financed by Capital Structure**	5	9,956.7	87.8%	6.77%	673.9
7	**Adjustment for Lesser of UNL or ARC**	5, 6	1,389.5	12.2%	5.37%	74.6
8	**Rate Base**	7	11,346.1	100%	6.60%	748.5

Notes:

1 Ex. C1-1-3 Table 2: Principal (line 13), Cost Rate (line 8), Cost of Capital (line 14).

2 Ex. C1-1-2 Table 6, line 45.

3 Debt required to balance capital structure with proposed rate base. See Ex. C1-1-2, Section 5.0. Cost rate is the same cost rate used for Existing/Planned Long-Term Debt (line 2) per EB-2010-0008 Decision with Reasons.

4 Capital Structure approved by the OEB in EB-2010-0008 as discussed in Ex. C1-1-1.
Return on Equity reflects the last Cost of Capital Parameter Update reported by the OEB (Feb. 14, 2013).

5 The portion of rate base to be financed by the capital structure approved by the Board excludes the lesser of the forecast of the average unfunded liabilities (UNL) related to Pickering and Darlington, and the average unamortized asset retirement costs (ARC) included in fixed asset balances for Pickering and Darlington.

6 Principal from C2-1-1 Table 2, line 32. Weighted average accretion rate from Ex. C2-1-1, section 3.0.

7 Ex. B1-1-1 Table 1 (Prev. Reg. Hydro and Newly Reg. Hydro) and Ex. B1-1-1 Table 2 (Nuclear).

Table 3
Capitalization and Cost of Capital
Summary of Capitalization and Cost of Capital
Calendar Year Ending December 31, 2013

Line No.	Capitalization	Note	Principal ($M)	Component (%)	Cost Rate (%)	Cost of Capital ($M)
			(a)	(b)	(c)	(d)
	Capitalization and Return on Capital:					
1	**Short-term Debt**	1	59.5	0.8%	1.67%	4.3
2	**Existing/Planned Long-Term Debt**	2	2,398.1	33.7%	5.07%	121.7
3	**Other Long-Term Debt Provision**	3	1,314.7	18.5%	5.07%	66.7
4	**Total Debt**	4	3,772.2	53.0%	5.11%	192.7
5	**Common Equity**	4	3,345.2	47.0%	2.82%	94.4
6	**Rate Base Financed by Capital Structure**	5	7,117.4	82.9%	4.03%	287.1
7	**Adjustment for Lesser of UNL or ARC**	5, 6	1,470.2	17.1%	5.37%	78.9
8	**Rate Base**	7	8,587.6	100%	4.26%	366.0

Notes:

1. Ex. C1-1-3 Table 2: Principal (line 13), Cost Rate (line 8), Cost of Capital (line 14).
2. Ex. C1-1-2 Table 5, line 43.
3. Debt required to balance capital structure with proposed rate base. See Ex. C1-1-2, Section 5.0. Cost rate is the same cost rate used for Existing/Planned Long-Term Debt (line 2) per EB-2010-0008 Decision with Reasons.
4. Capital Structure approved by the OEB in EB-2010-0008 as discussed in Ex. C1-1-1. The Return on Equity forecast is detailed in Ex. I1-1-1 Table 5.
5. The portion of rate base to be financed by the capital structure approved by the Board excludes the lesser of the forecast of the average unfunded liabilities (UNL) related to Pickering and Darlington, and the average unamortized asset retirement costs (ARC) included in fixed asset balances for Pickering and Darlington.
6. Principal from C2-1-1 Table 2, line 32. Weighted average accretion rate from Ex. C2-1-1, section 3.0.
7. Ex. B1-1-1 Table 1 (Prev. Reg. Hydro) and Ex. B1-1-1 Table 2 (Nuclear). Newly regulated hydroelectric assets are not included in the Board Approved capitalization and Cost of Capital.

Table 4
Capitalization and Cost of Capital
Summary of Capitalization and Actual Cost of Capital
Calendar Year Ending December 31, 2012

Line No.	Capitalization	Note	Principal ($M)	Component (%)	Actual Cost Rate (%)	Cost of Capital ($M)
			(a)	(b)	(c)	(d)
	Achieved Capitalization and Return on Capital:					
1	**Short-term Debt**	1	7.2	0.1%	1.79%	3.4
2	**Existing Long-Term Debt**	2	2,287.6	38.0%	5.13%	117.3
3	**Other Long-Term Debt Provision**	3	898.9	14.9%	5.13%	46.1
4	**Total Debt**	4	3,193.7	53.0%	5.23%	166.9
5	**Common Equity**	4	2,832.2	47.0%	4.73%	133.9
6	**Rate Base Financed by Capital Structure**	5	6,025.9	76.5%	4.99%	300.8
7	**Adjustment for Lesser of UNL or ARC**	5, 6	1,851.1	23.5%	5.43%	100.5
8	**Rate Base**	7	7,876.9	100%	5.09%	401.3

Notes:

1 Ex. C1-1-3 Table 2: Principal (line 13), Cost Rate (line 8), Cost of Capital (line 14).

2 Ex. C1-1-2 Table 4, line 39.

3 Debt required to balance capital structure with proposed rate base. See Ex. C1-1-2, Section 5.0. Cost rate is the same cost rate used for Existing/Planned Long-Term Debt (line 2) per EB-2010-0008 Decision with Reasons.

4 Capital Structure approved by the OEB in EB-2010-0008 as discussed in Ex. C1-1-1. Return on Equity from Ex. F4-2-1 Table 4, line 1 less line 29, less $19.6M of income tax variances recorded in variance and deferral accounts (from Ex. C1-1-1 Chart 1).

5 The portion of rate base to be financed by the capital structure approved by the Board excludes the lesser of the forecast of the average unfunded liabilities (UNL) related to Pickering and Darlington, and the average unamortized asset retirement costs (ARC) included in fixed asset balances for Pickering and Darlington.

6 Principal from C2-1-1 Table 2, line 32. Weighted Average Accretion Rate from EB-2012-0002, Ex. L1-7 SEC-11, Chart 2.

7 Ex. B1-1-1 Table 1 (Prev. Reg. Hydro) and Ex. B1-1-1 Table 2 (Nuclear). Newly regulated hydroelectric assets are not included in the Board Approved capitalization and Cost of Capital.

Table 5
Capitalization and Cost of Capital
Summary of Capitalization and Actual Cost of Capital
Calendar Year Ending December 31, 2011

Line No.	Capitalization	Note	Principal ($M)	Component (%)	Actual Cost Rate (%)	Cost of Capital ($M)
			(a)	(b)	(c)	(d)
	Achieved Capitalization and Return on Capital:					
1	**Short-term Debt**	1	194.2	3.2%	1.78%	6.5
2	**Existing Long-Term Debt**	2	2,300.0	37.5%	5.23%	120.2
3	**Other Long-Term Debt Provision**	3	760.3	12.4%	5.23%	39.7
4	**Total Debt**	4	3,254.4	53.0%	5.12%	166.5
5	**Common Equity**	4	2,886.0	47.0%	4.47%	129.1
6	**Rate Base Financed by Capital Structure**	5	6,140.4	80.5%	4.81%	295.6
7	**Adjustment for Lesser of UNL or ARC**	5, 6	1,490.0	19.5%	5.58%	83.1
8	**Rate Base**	7	7,630.4	100%	4.96%	378.7

Notes:

1 Ex. C1-1-3 Table 2: Principal (line 13), Cost Rate (line 8), Cost of Capital (line 14).

2 Ex. C1-1-2 Table 3, line 37.

3 Debt required to balance capital structure with proposed rate base. See Ex. C1-1-2, Section 5.0. Cost rate is the same cost rate used for Existing/Planned Long-Term Debt (line 2) per EB-2010-0008 Decision with Reasons.

4 Capital Structure approved by the OEB in EB-2010-0008 as discussed in Ex. C1-1-1. Return on Equity from Ex. F4-2-1 Table 4, line 1 less line 29, less $30.8M of income tax variances recorded in variance and deferral accounts (from Ex. C1-1-1 Chart 1).

5 The portion of rate base to be financed by the capital structure approved by the Board excludes the lesser of the forecast of the average unfunded liabilities (UNL) related to Pickering and Darlington, and the average unamortized asset retirement costs (ARC) included in fixed asset balances for Pickering and Darlington.

6 Principal from C2-1-1 Table 2, line 32. Cost Rate from EB-2010-0008 Payment Amounts Order, Appendix A, Table 4b, line 7.

7 Ex. B1-1-1 Table 1 (Prev. Reg. Hydro) and Ex. B1-1-1 Table 2 (Nuclear). Newly regulated hydroelectric assets are not included in the Board Approved capitalization and Cost of Capital.

Table 6
Capitalization and Cost of Capital
Summary of Capitalization and Actual Cost of Capital
Calendar Year Ending December 31, 2010

Line No.	Capitalization	Note	Principal ($M)	Component (%)	Actual Cost Rate (%)	Cost of Capital ($M)
			(a)	(b)	(c)	(d)
	Achieved Capitalization and Return on Capital:					
1	**Short-term Debt**	1	195.1	3.2%	1.37%	5.0
2	**Existing Long-Term Debt**	2	2,128.4	34.5%	5.54%	117.8
3	**Other Long-Term Debt Provision**	3	949.6	15.4%	4.68%	44.5
4	**Total Debt**	4	3,273.1	53.0%	5.11%	167.3
5	**Common Equity**	4	2,902.6	47.0%	4.71%	136.7
6	**Rate Base Financed by Capital Structure**	5	6,175.6	80.3%	4.92%	304.0
7	**Adjustment for Lesser of UNL or ARC**	5, 6	1,517.6	19.7%	5.58%	84.7
8	**Rate Base**	7	7,693.3	100%	5.05%	388.6

Notes:

1 Ex. C1-1-3 Table 2: Principal (line 13), Cost Rate (line 8), Cost of Capital (line 14).

2 Ex. C1-1-2 Table 2, line 37.

3 Debt required to balance capital structure with proposed rate base. Prior to EB-2010-0008, OPG used the unweighted average cost of planned borrowing for the period as the cost rate. See Ex. C1-1-2 Table 2a, Note 19 for interest rate calculation.

4 Capital Structure approved by the OEB in EB-2010-0008 as discussed in Ex. C1-1-1. Return on Equity from Ex. F4-2-1 Table 4, line 1 less line 29, less $3.0M of income tax variances recorded in variance and deferral accounts (from Ex. C1-1-1 Chart 1).

5 The portion of rate base to be financed by the capital structure approved by the Board excludes the lesser of the forecast of the average unfunded liabilities (UNL) related to Pickering and Darlington, and the average unamortized asset retirement costs (ARC) included in fixed asset balances for Pickering and Darlington.

6 Principal from C2-1-1 Table 2, line 32. Cost Rate from EB-2010-0008, Ex. C1-1-1, Table 3, line 7.

7 Ex. B1-1-1 Table 1 (Prev. Reg. Hydro) and Ex. B1-1-1 Table 2 (Nuclear). Newly regulated hydroelectric assets are not included in the Board Approved capitalization and Cost of Capital.

COST OF LONG-TERM DEBT

1.0 PURPOSE

This evidence describes the methodology used to determine the long-term debt and associated cost for OPG's regulated operations for the test period. It also provides details of OPG's existing and planned long-term borrowing and associated costs for 2010 - 2015.

2.0 OVERVIEW

The long-term debt supporting OPG's regulated operations is comprised of existing and planned long-term debt issues plus a long-term debt provision required to reconcile OPG's regulated debt to its OEB-approved capital structure. The summary of capitalization for the test period is provided in Ex. C1-1-1 Tables 1 and 2.

OPG has used the same methodology to determine the regulated portion of existing and planned long-term debt as was approved by the OEB in EB-2007-0905 and EB-02010-0008.

3.0 METHODOLOGY

3.1 Project-Related Long-Term Debt Issues

OPG assigns all existing and planned project-related financing to regulated or unregulated operations based on whether the project is related to its regulated assets. For example, project-related financing associated with nuclear projects or projects at R.H. Saunders or at the Niagara Plant Group, is assigned to OPG's regulated operations. All project-related financing that is not associated with OPG's regulated assets is assigned to unregulated operations. OPG also forecasts its financing requirements for projects that are still in the design/assessment phase; however these financing requirements are not assigned to OPG's regulated operations unless, and until, they are specifically identified as a project in OPG's capital budget for its regulated operations.

3.2 Corporate Long-Term Debt Issues

The portfolio of long-term debt remaining after project-related financing has been directly assigned must be allocated to regulated and unregulated operations. For the test period, OPG has applied the allocation methodology approved by the OEB in EB-2007-0905 and EB-02010-0008.

Under this methodology, the book value of OPG's net fixed assets (gross fixed assets less accumulated depreciation plus construction work in progress) is used to allocate the remaining portfolio of long-term debt. The net fixed asset values are adjusted to remove asset values that were financed pursuant to project-specific arrangements, and nuclear liabilities (the lesser of OPG's asset retirement cost and unfunded nuclear liabilities). The adjusted relative net fixed asset ratio is then applied to OPG's portfolio of long-term debt to determine the amount of existing/planned debt to be included in the long-term debt component of OPG's capital structure for its regulated assets.

Consistent with the approach in EB-2007-0905 and EB-02010-0008, OPG has used information from its most recent audited financial statements (2012) to develop the allocation factor for 2013, 2014, and 2015. The use of audited 2012 financial information is appropriate because the ratio of regulated net fixed assets to corporate net fixed assets does not change significantly from year to year. The allocation ratio has decreased from the 55.5 per cent for 2009 (EB-2010-0008 Ex. C1-1-2, Table 1, line 13) to 52 per cent in 2012 (Ex. C1-1-2 Table 1, line 17) primarily as a result of financing the increase in construction-work-in-progress for OPG's unregulated operations. The allocation ratio for newly regulated hydroelectric operations has been stable over the 2010 to 2012 period at approximately 25 per cent (Ex. C1-1-2, Table 1 line 18).

The allocation ratio determined in Ex. C1-1-2 Table 1 has been calculated for 2010 - 2012 with (line 19) and without (line 17) the newly regulated hydroelectric facilities. As these facilities do not become regulated until 2014, the allocation ratio applied during 2010 to 2013 does not include newly regulated hydroelectric facilities.

For 2010 – 2012, the allocation ratio is based on actual year-end values for net fixed assets in the year in question. For example, the allocation ratio for 2010 is determined by comparing the regulated net fixed assets at December 31, 2010 as reflected in Ex. B1-1-1 Table 1[1] and 2) to the total net fixed assets reflected in OPG's 2010 audited financial statements. The allocation ratios without the newly regulated hydroelectric operations are used to allocate company-wide borrowing in Ex. C1-1-2 Table 2 (2010), Ex. C1-1-2 Table 3 (2011) and Ex. C1-1-2 Table 4 (2012). For 2014 and 2015, the allocation ratio includes the impact of newly regulated hydroelectric facilities in Ex. C1-1-2 Table 6 (2014) and Ex. C1-1-2 Table 7 (2015).

4.0 COST OF EXISTING AND PLANNED NEW DEBT ISSUES

4.1 Existing Debt Issues

OPG's debt continuity schedules (Ex. C1-1-2 Tables 2 through 4) provide the actual cost of debt issued and outstanding between January 1, 2010 and December 31, 2012.[2] The average remaining term of these long-term debt issues is approximately 8.4 years as at December 31, 2012.

Existing Ontario Electricity Financial Corporation ("OEFC") debt will be retired or refinanced at maturity depending on OPG's liquidity at that time. OPG does not plan to redeem the debt prior to its maturity since its agreements with the OEFC contain call provisions that make it more expensive to redeem the debt compared to the potential benefit of refinancing in a lower interest rate environment.

OPG's long-term debt outstanding at December 31, 2012, as reflected in OPG's audited financial statements, is $5,114M. This balance consisted of corporate debt held by the OEFC of $2,460M, and project-related debt held by the OEFC related to regulated operations of $1,025M. The remaining $1,629M of OPG's long-term debt obligation outstanding as of December 31, 2012 is OEFC and non-OEFC project-related financing associated with OPG's unregulated operations.

[1] Ex B1-1-1 Table 1 excludes newly regulated hydroelectric assets for the 2010 to 2013 period.
[2] Long-term debt outstanding prior to January 1, 2010 is detailed in EB-2010-0008 Ex C1-1-2 Tables 2 (2007), Table 3 (2008) and Table 4 (2009)

At December 31, 2010 almost all of OPG's long-term debt outstanding is of 10 year duration[3] (issues 16 to 23 and Niagara 1 to 14). In 2011 and 2012, OPG issued 30 year debt in the amount of $500M. This lengthened the term of OPG's debt portfolio to better match the term of the underlying assets, and reduced refinancing risk[4].

All corporate long-term debt issued in 2011, 2012 and 2013 (year to date actual information to June 30 and planned to December 31, 2013) has been refinancing of OEFC debt issues, as required. No new debt has been issued with either OEFC or in the external market. Project-related debt for OPG's regulated operations is limited to borrowing for the Niagara Tunnel under an agreement with the OEFC as described in section 4.4.

4.2 Interest Rate on Planned New Debt Issues

The rate of interest on OPG's debt is determined under the same methodology as described in EB-2007-0905 and EB-2010-0008. It is based on the prevailing benchmark Government of Canada bond for the corresponding term of the debt, as published by a verifiable market monitoring service on the day prior to the date funds are advanced, plus a credit margin determined five business days before the date funds are advanced. The credit margin is determined based on a sample of quotes for OPG's credit margin as provided by a selected group of Canadian banks. The credit margin will be the same for corporate and project-related debt as the credit margin evaluates OPG as a borrowing entity rather than the project. The interest rate for project-related debt will be the same as the interest rate for corporate debt issued on the same date for the same terms and conditions.

The cost of planned new and refinanced corporate debt and project-related debt for 2013, 2014 and 2015 is based on a forecast of the 10-year Long Canada Bond as published in April 2013 by Global Insight, a third party independent market source.

[3] Ex C1-1-2 Table 2, Corporate Borrowing Issues 16 to 23 and Project Financing Niagara 1 to 14
[4] Ex C1-1-2 Table 3a, Issue 26 ($150M) and Issue 27 ($150M) and ExC1-1-2 Table 4a Issue 28 ($200M)

Year	Q1	Q2	Q3	Q4
2013	1.87	2.10	2.38	2.39
2014	2.50	2.65	2.76	2.80
2015	2.87	3.05	3.22	3.44

The long-term interest rates forecast for the 10-year Government of Canada bonds are provided in Chart 1. As discussed below, a credit risk spread for OPG of 132 basis points is added to the Global Insight rates noted in Chart 1 to determine the forecast rate for OPG's OEFC debt in 2013, 2014 and 2015.

Chart 1
Forecast 10-year Long Canada Bond Rates

Year	Q1	Q2	Q3	Q4
2013	1.87	1.95	2.08	2.26
2014	2.40	2.54	2.64	2.67
2015	2.71	2.85	3.15	3.37

* Annual forecast

OPG's credit spread at the end of 2012 was 132 basis points and this spread has been used for 2013, 2014 and 2015.

As described in EB-2010-0008, OPG's interest rate hedging for Niagara Tunnel debt was completed by early January, 2010. It was undertaken to mitigate OPG's exposure to interest rate fluctuations. All of these hedge transactions have either been closed-out or settled by April 2013. The financial impact of the hedge transactions is amortized over the life of the underlying debt issue, in accordance with accounting requirements[5], and is reflected in the effective interest rate cost of the debt issue. To the extent a forecast debt issue is hedged and OPG does not ultimately require the underlying debt issue, the impact of the hedge transaction is charged to unregulated operations.

[5] Generally Accepted Accounting Principles of both Canada and the United States.

4.3 Planned Corporate Long-Term Debt Issues

The total amounts of planned debt issues are listed in Ex. C1-1-2 Table 5a (2013), Table 6a (2014), and Table 7a (2015). OPG plans to retire Issue 22 ($300M) and Issue 24 ($200M) at maturity on March 22, 2015 and September 22, 2015 respectively, as shown in Ex. C1-1-2 Table 7. No other debt issues reach maturity during the 2013 - 2015 period. Maturing and new debt issues are summarized in Chart 2 below.

Chart 2

Planned Corporate Long-Term Debt Retirements and Issues ($M)

	2013	2014	2015	Total
Debt Issues Maturing	0	0	500	500
New Debt Issues	400	300	500	1,200

4.4 Planned Project-Related Long-Term Debt Issues

OPG has an agreement with the OEFC to provide debt financing for the Niagara Tunnel project (“NTP”). This agreement allows OPG to issue notes each quarter with a term of up to 10 years to meet OPG’s financing obligations for this project. The agreement enables OPG to issue NTP debt until the end of 2014 as long as the cumulative debt issued does not exceed the cost of the project. OPG is planning to borrow $100M in 2013 as detailed in Ex. C1-1-2 Table 5a (Niagara 23 to Niagara 26). No further borrowing is planned beyond 2013.

OPG does not plan any other project-related financing for the regulated assets during the test period.

5.0 OTHER LONG-TERM DEBT

As discussed above, OPG finances long-term assets with long-term financing. Consistent with the methodology approved in EB-2007-0905 and EB-2010-0008, OPG has used a provision for long-term debt to reconcile the debt component of its regulated capital structure with the proposed rate base that financing supports. OPG’s other long-term debt provision is determined based on the following approach:

- The total debt for regulated operations is determined by applying OPG's proposed capital structure to its proposed regulated rate base.
- The actual and projected project-related and corporate long-term debt assigned or allocated to OPG's regulated operations is deducted.
- The actual and projected portion of short-term debt allocated to regulated operations is deducted. This calculation is described in Ex. C1-1-3.
- The result is the residual long-term debt. .

Consistent with the OEB's findings in EB-2010-0008, OPG has applied the rate for its existing and planned long-term debt to the other long term debt provision.

Table 1
Capitalization and Cost of Capital
Allocation of Existing Long-term Debt ($M)

Line No.	Asset	Note	Amount 2010	2011	2012
			(a)	(b)	(c)
	Company-Wide:				
1	**Net Fixed Assets**		12,117.2	12,797.9	12,398.9
2	**Adjusted Construction Work in Progress**		1,486.1	2,327.6	3,512.7
3	**Asset Values Using Project Financing**		(2,037.5)	(3,167.1)	(3,457.7)
4	**Adjusted Net Fixed Assets**		11,565.8	11,958.4	12,453.9
5	**Adjustment for Lesser of UNL or ARC**	1, 2	1,519.5	1,248.6	2,068.8
6	**Adjusted Net Fixed Funded Assets** (line 4 - line 5)		10,046.3	10,709.8	10,385.1
	Previously Regulated Operations:				
7	**Net Fixed Assets**	1, 3	6,878.1	7,191.2	6,668.8
8	**Adjusted Construction Work in Progress**	1	1,090.7	1,459.2	1,952.3
9	**Asset Values Using Project Financing**		(875.7)	(1,139.7)	(1,370.6)
10	**Adjusted Net Fixed Assets**		7,093.1	7,510.7	7,250.5
11	**Adjustment for Lesser of UNL or ARC**	1, 4	1,517.6	1,490.0	1,851.1
12	**Adjusted Net Fixed Funded Assets** (line 10 - line 11)		5,575.5	6,020.8	5,399.5
	Newly Regulated Operations:				
13	**Net Fixed Assets**	1, 5	2,514.4	2,526.6	2,511.9
14	**Adjusted Construction Work in Progress**		54.1	56.8	88.5
15	**Asset Values Using Project Financing**		0.0	0.0	0.0
16	**Adjusted Net Fixed Assets**		2,568.5	2,583.4	2,600.4
	Relative Ratios:				
17	**Previously Regulated/Company-Wide Net Fixed Assets** (line 12 / line 6)		55.50%	56.22%	51.99%
18	**Newly Regulated/Company-Wide Net Fixed Assets** (line 16 / line 6)		25.57%	24.12%	25.04%
19	**Total Regulated/Company-Wide Net Fixed Assets** (line 17 + line 18)		81.06%	80.34%	77.03%

Notes:

1 Reflects OEB direction to adjust the allocation of existing long-term debt to regulated operations to reflect the Board's Decision with respect to the unfunded nuclear liabilities (EB-2007-0905 Decision with Reasons, p. 165).

2 Methodology as reflected in the EB-2010-0008 Payment Amounts order. Company-wide adjustment is derived as follows:

Table to Note 2

Line No.	Company-Wide Lesser of UNL and ARC	2010	2011	2012
		(a)	(b)	(c)
	Company-Wide UNL:			
1a	C2-T1-S1 Table 2, line 22	1,719.8	1,605.5	2,016.9
2a	+ C2-T1-S1 Table 3, line 13	5,233.8	5,484.8	6,253.2
3a	- C2-T1-S1 Table 3, line 19	5,434.0	5,841.7	6,201.3
4a	= Company Wide UNL	1,519.5	1,248.6	2,068.8
	Company-Wide ARC:			
5a	C2-T1-S1 Table 2, line 31	1,517.6	1,490.0	1,851.1
6a	+ C2-T1-S1 Table 3, line 29	830.7	805.7	1,254.0
7a	= Company Wide ARC	2,348.3	2,295.6	3,105.0
8a	Lesser of UNL and ARC	1,519.5	1,248.6	2,068.8

3 Closing balances for Property, Plant and Equipment less Accumulated Depreciation and Amortization from Ex. B2-3-1 Table 1 less Ex. B2-4-1 Table 1 (Previously Regulated Hydroelectric, i.e. excluding Newly Regulated Hydroelectric) and Ex. B3-3-1 Table 1 less B3-4-1 Table 1 (Nuclear).

4 C2-1-1 Table 2, line 32.

5 Closing balances for Newly Regulated Hydroelectric of Property, Plant and Equipment at Ex. B2-3-1 Table 1 less accumulated depreciation and amortization at Ex. B2-4-1 Table 1.

Table 2
Capitalization and Cost of Capital
Summary of Existing Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2010

Line No.	Issue	Note	Weighted Principal* ($M)	Issue Date	Duration (years)	Maturity Date	Effective Rate (%)	Annual Cost ($M)
			(a)	(b)	(c)	(d)	(e)	(f)
	Company-Wide Borrowing							
	Issues 1 and 2 Redeemed During 2007							
	Issues 3 and 4 Redeemed During 2008							
	Issues 5 and 6 Redeemed During 2009						**(Note 18)**	
1	**Issue 7**	1,16	41.6			3/22/2010	6.60%	2.7
2	**Issue 8**	2,16	136.1			9/22/2010	6.60%	9.0
3	**Issue 9**	16	187.5			3/22/2011	6.65%	12.5
4	**Issue 10**	16	187.5			9/22/2011	6.65%	12.5
5	**Issue 11**	3	22.2	3/22/2005	5.0	3/22/2010	5.49%	1.2
6	**Issue 12**	4	33.3	3/22/2005	5.0	3/22/2010	5.71%	1.9
7	**Issue 13**	5	72.6	9/22/2005	5.0	9/22/2010	5.49%	4.0
8	**Issue 14**	6	108.9	9/22/2005	5.0	9/22/2010	5.71%	6.2
9	**Issue 15**	7	21.1	3/22/2005	5.0	3/22/2010	5.62%	1.2
10	**Issue 16**		400.0	4/29/2005	7.0	4/30/2012	5.72%	22.9
11	**Issue 17**		100.0	6/22/2007	10.0	6/22/2017	5.44%	5.4
12	**Issue 18**		200.0	9/24/2007	10.0	9/22/2017	5.53%	11.1
13	**Issue 19**		400.0	12/21/2007	9.8	9/22/2017	5.31%	21.2
14	**Issue 20**		200.0	3/22/2008	10.0	3/22/2018	5.35%	10.7
15	**Issue 21**		100.0	3/22/2009	10.0	3/22/2019	5.65%	5.7
16	**Issue 22**	8,19	233.4	3/22/2010	5.0	3/22/2015	3.56%	8.3
17	**Issue 23**	9,19	179.0	3/22/2010	10.0	3/22/2020	4.68%	8.4
18	**Issue 24**	10,19	54.8	9/22/2010	5.0	9/22/2015	3.24%	1.8
19	**Issue 25**	11,19	63.0	9/22/2010	10.0	9/22/2020	4.39%	2.8
20	**Total**		2,741.0				5.45%	149.4
	Regulated Portion of Company-Wide Borrowing							
21	**Allocation**	17	1,521.2				5.45%	82.9
	Project Financing--Regulated Projects							
22	**Niagara 1**		160.0	10/22/2006	10.0	10/22/2016	5.23%	8.4
23	**Niagara 2**		50.0	1/22/2007	10.0	1/22/2017	5.10%	2.5
24	**Niagara 3**		30.0	4/23/2007	10.0	4/22/2017	5.09%	1.5
25	**Niagara 4**		40.0	1/22/2008	10.0	1/22/2018	5.53%	2.2
26	**Niagara 5**		30.0	4/22/2008	10.0	4/22/2018	5.90%	1.8
27	**Niagara 6**		30.0	7/22/2008	10.0	7/22/2018	5.87%	1.8
28	**Niagara 7**		30.0	1/22/2009	10.0	1/22/2019	8.41%	2.5
29	**Niagara 8**		35.0	4/22/2009	10.0	4/22/2019	7.71%	2.7
30	**Niagara 9**		35.0	7/22/2009	10.0	7/22/2019	6.41%	2.2
31	**Niagara 10**		50.0	10/22/2009	10.0	10/22/2019	5.63%	2.8
32	**Niagara 11**	12,19	47.0	1/22/2010	10.0	1/22/2020	5.44%	2.6
33	**Niagara 12**	13,19	45.1	4/22/2010	10.0	4/22/2020	5.73%	2.6
34	**Niagara 13**	14,19	15.5	7/22/2010	10.0	7/22/2020	5.57%	0.9
35	**Niagara 14**	15,19	9.6	10/22/2010	10.0	10/22/2020	4.87%	0.5
36	**Total**		607.2				5.75%	34.9
	Total Regulated Long-Term Debt							
37	Line 21+36		2,128.4				5.54%	117.8

See Ex. C1-1-2 Table 2a for notes

* For debt issues that are issued or mature during the year the face value is reduced to reflect only that portion of the year the debt issue is financing the rate base.

Table 2a
Capitalization and Cost of Capital
Summary of Existing Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2010
Notes to Ex. C1-1-2, Table 2

	Issue	Issue/Redemption Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 7	3/22/2010	187.5	81.0	41.6
Note 2	Issue 8	9/22/2010	187.5	265.0	136.1
Note 3	Issue 11	3/22/2010	100.0	81.0	22.2
Note 4	Issue 12	3/22/2010	150.0	81.0	33.3
Note 5	Issue 13	9/22/2010	100.0	265.0	72.6
Note 6	Issue 14	9/22/2010	150.0	265.0	108.9
Note 7	Issue 15	3/22/2010	95.0	81.0	21.1
Note 8	Issue 22	3/22/2010	300.0	284.0	233.4
Note 9	Issue 23	3/22/2010	230.0	284.0	179.0
Note 10	Issue 24	9/22/2010	200.0	100.0	54.8
Note 11	Issue 25	9/22/2010	230.0	100.0	63.0
Note 12	Niagara 11	1/22/2010	50.0	343.0	47.0
Note 13	Niagara 12	4/22/2010	65.0	253.0	45.1
Note 14	Niagara 13	7/22/2010	35.0	162.0	15.5
Note 15	Niagara 14	10/22/2010	50.0	70.0	9.6

Note 16 Issues 7, 8, 9 and 10 are subordinated debt issues.

Note 17 Allocation ratio for 2010 described in Ex. C1-1-2 Table 1, line 17 (excludes Newly Regulated Hydroelectric net fixed assets).

Note 18 Includes related costs of issuance/redemption and the amortization of debt discount or premium.

Note 19 See below for effective interest rate.

New Issues	Effective Rate
Issue 22	3.56%
Issue 23	4.68%
Issue 24	3.24%
Issue 25	4.39%
Niagara 11	5.44%
Niagara 12	5.73%
Niagara 13	5.57%
Niagara 14	4.87%
Average Rate	4.68%

Numbers may not add due to rounding.

Table 3
Capitalization and Cost of Capital
Summary of Existing Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2011

Line No.	Issue	Note	Weighted Principal* ($M)	Issue/Redemption Date	Duration (years)	Maturity Date	Effective Rate (%)	Annual Cost ($M)
			(a)	(b)	(c)	(d)	(e)	(f)
	Company-Wide Borrowing							
	Issues 1 and 2 Redeemed During 2007							
	Issues 3 and 4 Redeemed During 2008							
	Issues 5 and 6 Redeemed During 2009							
	Issues 7, 8, 11, 12, 13, 14, 15 Redeemed During 2010						**(Note 10)**	
1	**Issue 9**	1	41.6			3/22/2011	6.65%	2.8
2	**Issue 10**	2	136.1			9/22/2011	6.65%	9.1
3	**Issue 16**		400.0	4/29/2005	7.0	4/30/2012	5.72%	22.9
4	**Issue 17**		100.0	6/22/2007	10.0	6/22/2017	5.44%	5.4
5	**Issue 18**		200.0	9/24/2007	10.0	9/22/2017	5.53%	11.1
6	**Issue 19**		400.0	12/21/2007	9.8	9/22/2017	5.31%	21.2
7	**Issue 20**		200.0	3/22/2008	10.0	3/22/2018	5.35%	10.7
8	**Issue 21**		100.0	3/22/2009	10.0	3/22/2019	5.65%	5.7
9	**Issue 22**		300.0	3/22/2010	5.0	3/22/2015	3.56%	10.7
10	**Issue 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
11	**Issue 24**		200.0	9/22/2010	5.0	9/22/2015	3.24%	6.5
12	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
13	**Issue 26**	3,11	116.7	3/22/2011	30.0	3/22/2041	5.40%	6.3
14	**Issue 27**	4,11	41.1	9/22/2011	30.0	9/22/2041	4.74%	1.9
15	**Total**		2,695.5				5.01%	135.0
	Regulated Portion of Company-Wide Borrowing							
16	Allocation	9	1,515.4				5.01%	75.9
	Project Financing--Regulated Projects							
17	**Niagara 1**		160.0	10/22/2006	10.0	10/22/2016	5.23%	8.4
18	**Niagara 2**		50.0	1/22/2007	10.0	1/22/2017	5.10%	2.5
20	**Niagara 3**		30.0	4/23/2007	10.0	4/22/2017	5.09%	1.5
21	**Niagara 4**		40.0	1/22/2008	10.0	1/22/2018	5.53%	2.2
22	**Niagara 5**		30.0	4/22/2008	10.0	4/22/2018	5.90%	1.8
23	**Niagara 6**		30.0	7/22/2008	10.0	7/22/2018	5.87%	1.8
24	**Niagara 7**		30.0	1/22/2009	10.0	1/22/2019	8.41%	2.5
25	**Niagara 8**		35.0	4/22/2009	10.0	4/22/2019	7.71%	2.7
26	**Niagara 9**		35.0	7/22/2009	10.0	7/22/2019	6.41%	2.2
27	**Niagara 10**		50.0	10/22/2009	10.0	10/22/2019	5.63%	2.8
28	**Niagara 11**		50.0	1/22/2010	10.0	1/22/2020	5.44%	2.7
29	**Niagara 12**		65.0	4/22/2010	10.0	4/22/2020	5.73%	3.7
30	**Niagara 13**		35.0	7/22/2010	10.0	7/22/2020	5.57%	1.9
31	**Niagara 14**		50.0	10/22/2010	10.0	10/22/2020	4.87%	2.4
32	**Niagara 15**	5,11	37.4	1/24/2011	10.0	1/22/2021	5.18%	1.9
33	**Niagara 16**	6,11	23.9	4/26/2011	10.0	4/22/2021	5.34%	1.3
34	**Niagara 17**	7,11	22.2	7/22/2011	10.0	7/22/2021	5.24%	1.2
35	**Niagara 18**	8,11	11.2	10/24/2011	10.0	10/22/2021	5.74%	0.6
36	**Total**		784.6				5.65%	44.3
	Total Regulated Long-Term Debt							
37	Line 16+36		2,300.0				5.23%	120.2

See Ex. C1-1-2 Table 3a for notes

* For debt issues that are issued or mature during the year the face value is reduced to reflect only that portion of the year the debt issue is financing the rate base.

Table 3a
Capitalization and Cost of Capital
Summary of Existing Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2011
Notes to Ex. C1-1-2, Table 3

	Issue	Issue/Redemption Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 9	3/22/2011	187.5	81.0	41.6
Note 2	Issue 10	9/22/2011	187.5	265.0	136.1
Note 3	Issue 26	3/22/2011	150.0	284.0	116.7
Note 4	Issue 27	9/22/2011	150.0	100.0	41.1
Note 5	Niagara 15	1/24/2011	40.0	341.0	37.4
Note 6	Niagara 16	4/26/2011	35.0	249.0	23.9
Note 7	Niagara 17	7/22/2011	50.0	162.0	22.2
Note 8	Niagara 18	10/24/2011	60.0	68.0	11.2

Note 9 Allocation ratio for 2011 described in Ex. C1-1-2 Table 1, line 17 (excludes Newly Regulated Hydroelectric net fixed assets).

Note 10 Includes related costs of issuance/redemption and the amortization of debt discount or premium.

Note 11 See below for effective interest rate.

New Issues	Effective Rate
Issue 26	5.40%
Issue 27	4.74%
Niagara 15	5.18%
Niagara 16	5.34%
Niagara 17	5.24%
Niagara 18	5.74%
Average Rate	5.28%

Table 4
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2012

Line No.	Issue	Note	Weighted Principal* ($M)	Issue Date	Duration (years)	Maturity Date	Effective Rate (%)	Annual Cost ($M)
			(a)	(b)	(c)	(d)	(e)	(f)
	Company-Wide Borrowing							
	Issues 1 and 2 Redeemed During 2007							
	Issues 3 and 4 Redeemed During 2008							
	Issues 5 and 6 Redeemed During 2009							
	Issues 7, 8, 11, 12, 13, 14, 15 Redeemed During 2010							
	Issues 9 and 10 Redeemed During 2011						**(Note 8)**	
1	**Issue 16**	1	132.6	4/29/2005		4/30/2012	5.72%	7.6
2	**Issue 17**		100.0	6/22/2007		6/22/2017	5.44%	5.4
3	**Issue 18**		200.0	9/24/2007		9/22/2017	5.53%	11.1
4	**Issue 19**		400.0	12/21/2007		9/22/2017	5.31%	21.2
5	**Issue 20**		200.0	3/22/2008		3/22/2018	5.35%	10.7
6	**Issue 21**		100.0	3/22/2009		3/22/2019	5.65%	5.7
7	**Issue 22**		300.0	3/22/2010		3/22/2015	3.56%	10.7
8	**Issue 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
9	**Issue 24**		200.0	9/22/2010	5.0	9/22/2015	3.24%	6.5
10	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
11	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
12	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
13	**Issue 28**	2, 9	155.6	3/22/2012	30.0	3/22/2042	4.36%	6.8
14	**Total**		2,548.2				4.77%	121.7
	Regulated Portion of Company-Wide Borrowing							
15	**Allocation**	7	1,324.9				4.77%	63.3
	Project Financing--Regulated Projects							
16	**Niagara 1**		160.0	10/22/2006	10.0	10/22/2016	5.23%	8.4
17	**Niagara 2**		50.0	1/22/2007	10.0	1/22/2017	5.10%	2.5
18	**Niagara 3**		30.0	4/23/2007	10.0	4/22/2017	5.09%	1.5
19	**Niagara 4**		40.0	1/22/2008	10.0	1/22/2018	5.53%	2.2
20	**Niagara 5**		30.0	4/22/2008	10.0	4/22/2018	5.90%	1.8
21	**Niagara 6**		30.0	7/22/2008	10.0	7/22/2018	5.87%	1.8
22	**Niagara 7**		30.0	1/22/2009	10.0	1/22/2019	8.41%	2.5
23	**Niagara 8**		35.0	4/22/2009	10.0	4/22/2019	7.71%	2.7
24	**Niagara 9**		35.0	7/22/2009	10.0	7/22/2019	6.41%	2.2
25	**Niagara 10**		50.0	10/22/2009	10.0	10/22/2019	5.63%	2.8
26	**Niagara 11**		50.0	1/22/2010	10.0	1/22/2020	5.44%	2.7
27	**Niagara 12**		65.0	4/22/2010	10.0	4/22/2020	5.73%	3.7
28	**Niagara 13**		35.0	7/22/2010	10.0	7/22/2020	5.57%	1.9
29	**Niagara 14**		50.0	10/22/2010	10.0	10/22/2020	4.87%	2.4
30	**Niagara 15**		40.0	1/24/2011	10.0	1/22/2021	5.18%	2.1
31	**Niagara 16**		35.0	4/26/2011	10.0	4/22/2021	5.34%	1.9
32	**Niagara 17**		50.0	7/22/2011	10.0	7/22/2021	5.24%	2.6
33	**Niagara 18**		60.0	10/24/2011	10.0	10/22/2021	5.74%	3.4
34	**Niagara 19**	3,9	37.7	1/22/2012	10.0	1/22/2022	5.50%	2.1
35	**Niagara 20**	4,9	24.3	4/22/2012	10.0	4/22/2022	5.36%	1.3
36	**Niagara 21**	5,9	20.0	7/22/2012	10.0	7/22/2022	5.51%	1.1
37	**Niagara 22**	6,9	5.8	10/22/2012	10.0	10/22/2022	5.52%	0.3
38	**Total**		962.7				5.62%	54.1
	Total Regulated Funded Long-Term Debt							
39	Line 15+38		2,287.6				5.13%	117.3

See Ex. C1-1-2 Table 4a for notes

* For debt issues that are issued or mature during the year the face value is reduced to reflect only that portion of the year the debt issue is financing the rate base.

Table 4a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2012
Notes to Ex. C1-1-2, Table 4

	Issue	Issue/Redemption Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 16	4/30/2012	400.0	121.0	132.6
Note 2	Issue 28	3/22/2012	200.0	284.0	155.6
Note 3	Niagara 19	1/22/2012	40.0	344.0	37.7
Note 4	Niagara 20	4/22/2012	35.0	253.0	24.3
Note 5	Niagara 21	7/22/2012	45.0	162.0	20.0
Note 6	Niagara 22	10/22/2012	30.0	70.0	5.8

Note 7 Allocation ratio for 2012 described in Ex. C1-1-2 Table 1, line 17 (excludes Newly Regulated Hydroelectric net fixed assets).

Note 8 Includes related costs of issuance/redemption and the amortization of debt discount or premium.

Note 9 See below for effective interest rate.

New Issues	Effective Rate
Issue 28	4.36%
Niagara 19	5.50%
Niagara 20	5.36%
Niagara 21	5.51%
Niagara 22	5.52%
Average Rate	5.25%

Table 5
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2013

Line No.	Issue	Note	Weighted Principal* ($M)	Issue Date	Duration (years)	Maturity Date	Coupon Rate (%)	Annual Cost ($M)
			(a)	(b)	(c)	(d)	(e)	(f)
	Company-Wide Borrowing							
	Issues 1 and 2 Redeemed During 2007							
	Issues 3 and 4 Redeemed During 2008							
	Issues 5 and 6 Redeemed During 2009							
	Issues 7, 8, 11, 12, 13, 14, 15 Redeemed During 2010							
	Issues 9 and 10 Redeemed During 2011							
	Issue 16 Redeemed During 2012						**(Note 7)**	
1	**Issue 17**		100.0	6/22/2007	10.0	6/22/2017	5.44%	5.4
2	**Issue 18**		200.0	9/24/2007	10.0	9/22/2017	5.53%	11.1
3	**Issue 19**		400.0	12/21/2007	9.8	9/22/2017	5.31%	21.2
4	**Issue 20**		200.0	3/22/2008	10.0	3/22/2018	5.35%	10.7
5	**Issue 21**		100.0	3/22/2009	10.0	3/22/2019	5.65%	5.7
6	**Issue 22**		300.0	3/22/2010	5.0	3/22/2015	3.56%	10.7
7	**Issue 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
8	**Issue 24**		200.0	9/22/2010	5.0	9/22/2015	3.24%	6.5
9	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
10	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
11	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
12	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
13	**Issue 29**	1,8	81.4	9/23/2013	10.0	9/22/2023	3.40%	2.8
14	**Total**		2,541.4				4.67%	118.8
	Regulated Portion of Company-Wide Borrowing							
15	**Allocation**	6	1,321.3				4.67%	61.8
	Project Financing - Regulated Projects							
16	**Niagara 1**		160.0	10/22/2006	10.0	10/22/2016	5.23%	8.4
17	**Niagara 2**		50.0	1/22/2007	10.0	1/22/2017	5.10%	2.5
18	**Niagara 3**		30.0	4/23/2007	10.0	4/22/2017	5.09%	1.5
19	**Niagara 4**		40.0	1/22/2008	10.0	1/22/2018	5.53%	2.2
20	**Niagara 5**		30.0	4/22/2008	10.0	4/22/2018	5.90%	1.8
21	**Niagara 6**		30.0	7/22/2008	10.0	7/22/2018	5.87%	1.8
22	**Niagara 7**		30.0	1/22/2009	10.0	1/22/2019	8.41%	2.5
23	**Niagara 8**		35.0	4/22/2009	10.0	4/22/2019	7.71%	2.7
24	**Niagara 9**		35.0	7/22/2009	10.0	7/22/2019	6.41%	2.2
25	**Niagara 10**		50.0	10/22/2009	10.0	10/22/2019	5.63%	2.8
26	**Niagara 11**		50.0	1/22/2010	10.0	1/22/2020	5.44%	2.7
27	**Niagara 12**		65.0	4/22/2010	10.0	4/22/2020	5.73%	3.7
28	**Niagara 13**		35.0	7/22/2010	10.0	7/22/2020	5.57%	1.9
29	**Niagara 14**		50.0	10/22/2010	10.0	10/22/2020	4.87%	2.4
30	**Niagara 15**		40.0	1/24/2011	10.0	1/22/2021	5.18%	2.1
31	**Niagara 16**		35.0	4/26/2011	10.0	4/22/2021	5.34%	1.9
32	**Niagara 17**		50.0	7/22/2011	10.0	7/22/2021	5.24%	2.6
33	**Niagara 18**		60.0	10/24/2011	10.0	10/22/2021	5.74%	3.4
34	**Niagara 19**		40.0	1/22/2012	10.0	1/22/2022	5.50%	2.2
35	**Niagara 20**		35.0	4/22/2012	10.0	4/22/2022	5.36%	1.9
36	**Niagara 21**		45.0	7/22/2012	10.0	7/22/2022	5.51%	2.5
37	**Niagara 22**		30.0	10/22/2012	10.0	10/22/2022	5.52%	1.7
38	**Niagara 23**	2,9	18.8	1/22/2013	10.0	1/22/2023	5.35%	1.0
39	**Niagara 24**	3,9	13.9	4/22/2013	10.0	4/22/2023	5.37%	0.7
40	**Niagara 25**	4,8	13.3	7/22/2013	10.0	7/22/2023	3.40%	0.5
41	**Niagara 26**	5,8	5.8	10/22/2013	10.0	10/22/2023	3.58%	0.2
42	**Total**		1,076.7				5.57%	59.9
	Total Regulated Funded Long-Term Debt							
43	Line 15+42		2,398.1				5.07%	121.7

See Ex. C1-1-2 Table 5a for notes

* For debt issues that are issued or mature during the year the face value is reduced to reflect only that portion of the year the debt issue is financing the rate base.

Table 5a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2013
Notes to Ex. C1-1-2, Table 5

	Issue	Issue/Redemption Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 29	9/23/2013	300.0	99.0	81.4
Note 2	Niagara 23	1/22/2013	20.0	343.0	18.8
Note 3	Niagara 24	4/22/2013	20.0	253.0	13.9
Note 4	Niagara 25	7/22/2013	30.0	162.0	13.3
Note 5	Niagara 26	10/22/2013	30.0	70.0	5.8

Note 6 Allocation ratio for 2013 described in Ex. C1-1-2 Table 1, line 17 (excludes Newly Regulated Hydroelectric net fixed assets). The 2012 allocation ratio is used as it reflects OPG's most recent financing results.

Note 7 Includes related costs of issuance/redemption and the amortization of debt discount or premium.

Note 8 Future issue rate reference Global Insight (April 2013).

Issue 29

GOC & OPG Spread	
GOC Q3-13	2.08%
OPG Spread	1.32%
Effective Rate	3.40%
	300.0

Niagara 25

GOC & OPG Spread	
GOC Q3-13	2.08%
OPG Spread	1.32%
Effective Rate	3.40%
	30.0

Niagara 26

GOC & OPG Spread	
GOC Q4-13	2.26%
OPG Spread	1.32%
Effective Rate	3.58%
	30.0

Note 9 Realized effective rate on 2013 debt issued at April 2013.

New Issues	Effective Rate
Niagara 23	5.35%
Niagara 24	5.37%
Average Rate	5.36%

Table 6
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2014

Line No.	Issue	Note	Weighted Principal* ($M)	Issue Date	Duration (years)	Maturity Date	Coupon Rate (%)	Annual Cost ($M)
			(a)	(b)	(c)	(d)	(e)	(f)
	Company-Wide Borrowing							
	Issues 1 and 2 Redeemed During 2007							
	Issues 3 and 4 Redeemed During 2008							
	Issues 5 and 6 Redeemed During 2009							
	Issues 7, 8, 11, 12, 13, 14, 15 Redeemed During 2010							
	Issues 9 and 10 Redeemed During 2011							
	Issue 16 Redeemed During 2012						**(Note 4)**	
1	**Issue 17**		100.0	6/22/2007	10.0	6/22/2017	5.44%	5.4
2	**Issue 18**		200.0	9/24/2007	10.0	9/22/2017	5.53%	11.1
3	**Issue 19**		400.0	12/21/2007	9.8	9/22/2017	5.31%	21.2
4	**Issue 20**		200.0	3/22/2008	10.0	3/22/2018	5.35%	10.7
5	**Issue 21**		100.0	3/22/2009	10.0	3/22/2019	5.65%	5.7
6	**Issue 22**		300.0	3/22/2010	5.0	3/22/2015	3.56%	10.7
7	**Issue 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
8	**Issue 24**		200.0	9/22/2010	5.0	9/22/2015	3.24%	6.5
9	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
10	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
11	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
12	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
13	**Issue 29**		300.0	9/23/2013	10.0	9/22/2023	3.40%	10.2
14	**Issue 30**	1,5	116.7	3/22/2014	10.0	3/22/2024	3.72%	4.3
15	**Issue 31**	2,5	41.1	9/22/2014	10.0	9/22/2024	3.96%	1.6
16	**Total**		2,917.8				4.53%	132.2
	Regulated Portion of Company-Wide Borrowing							
17	**Allocation**	3	2,247.7				4.53%	101.8
	Project Financing - Regulated Projects							
18	**Niagara 1**		160.0	10/22/2006	10.0	10/22/2016	5.23%	8.4
19	**Niagara 2**		50.0	1/22/2007	10.0	1/22/2017	5.10%	2.5
20	**Niagara 3**		30.0	4/23/2007	10.0	4/22/2017	5.09%	1.5
21	**Niagara 4**		40.0	1/22/2008	10.0	1/22/2018	5.53%	2.2
22	**Niagara 5**		30.0	4/22/2008	10.0	4/22/2018	5.90%	1.8
23	**Niagara 6**		30.0	7/22/2008	10.0	7/22/2018	5.87%	1.8
24	**Niagara 7**		30.0	1/22/2009	10.0	1/22/2019	8.41%	2.5
25	**Niagara 8**		35.0	4/22/2009	10.0	4/22/2019	7.71%	2.7
26	**Niagara 9**		35.0	7/22/2009	10.0	7/22/2019	6.41%	2.2
27	**Niagara 10**		50.0	10/22/2009	10.0	10/22/2019	5.63%	2.8
28	**Niagara 11**		50.0	1/22/2010	10.0	1/22/2020	5.44%	2.7
29	**Niagara 12**		65.0	4/22/2010	10.0	4/22/2020	5.73%	3.7
30	**Niagara 13**		35.0	7/22/2010	10.0	7/22/2020	5.57%	1.9
31	**Niagara 14**		50.0	10/22/2010	10.0	10/22/2020	4.87%	2.4
32	**Niagara 15**		40.0	1/24/2011	10.0	1/22/2021	5.18%	2.1
33	**Niagara 16**		35.0	4/26/2011	10.0	4/22/2021	5.34%	1.9
34	**Niagara 17**		50.0	7/22/2011	10.0	7/22/2021	5.24%	2.6
35	**Niagara 18**		60.0	10/24/2011	10.0	10/22/2021	5.74%	3.4
36	**Niagara 19**		40.0	1/22/2012	10.0	1/22/2022	5.50%	2.2
37	**Niagara 20**		35.0	4/22/2012	10.0	4/22/2022	5.36%	1.9
38	**Niagara 21**		45.0	7/22/2012	10.0	7/22/2022	5.51%	2.5
39	**Niagara 22**		30.0	10/22/2012	10.0	10/22/2022	5.52%	1.7
40	**Niagara 23**		20.0	1/22/2013	10.0	1/22/2023	5.35%	1.1
41	**Niagara 24**		20.0	4/22/2013	10.0	4/22/2023	5.37%	1.1
42	**Niagara 25**		30.0	7/22/2013	10.0	7/22/2023	3.40%	1.0
43	**Niagara 26**		30.0	10/22/2013	10.0	10/22/2023	3.58%	1.1
44	**Total**		1,125.0				5.49%	61.7
	Total Regulated Funded Long-Term Debt							
45	Line 17+44		3,372.7				4.85%	163.6

See Ex. C1-1-2 Table 6a for notes
* For debt issues that are issued or mature during the year the face value is reduced to reflect only that portion of the year the debt issue is financing the rate base.

Table 6a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2014
Notes to Ex. C1-1-2, Table 6

	Issue	Issue/Redemption Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 30	3/22/2014	150.0	284.0	116.7
Note 2	Issue 31	9/22/2014	150.0	100.0	41.1

Note 3 Allocation ratio for 2014 described in Ex. C1-1-2 Table 1, line 19 (includes Newly Regulated Hydroelectric net fixed assets). The 2012 allocation ratio is used as it reflects OPG's most recent financing results.

Note 4 Includes related costs of issuance/redemption and the amortization of debt discount or premium.

Note 5 Future issue rate reference Global Insight (April 2013).

Issue 30

GOC & OPG Spread	
GOC Q1-14	2.40%
OPG Spread	1.32%
Effective Rate	3.72%

Issue 31

GOC & OPG Spread	
GOC Q3-14	2.64%
OPG Spread	1.32%
Effective Rate	3.96%

Table 7
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2015

Line No.	Issue	Note	Weighted Principal* ($M)	Issue Date	Duration (years)	Maturity Date	Coupon Rate (%)	Annual Cost ($M)
			(a)	(b)	(c)	(d)	(e)	(f)
	Company-Wide Borrowing							
	Issues 1 and 2 Redeemed During 2007							
	Issues 3 and 4 Redeemed During 2008							
	Issues 5 and 6 Redeemed During 2009							
	Issues 7, 8, 11, 12, 13, 14, 15 Redeemed During 2010							
	Issues 9 and 10 Redeemed During 2011							
	Issue 16 Redeemed During 2012						**(Note 6)**	
1	**Issue 17**		100.0	6/22/2007	10.0	6/22/2017	5.44%	5.4
2	**Issue 18**		200.0	9/24/2007	10.0	9/22/2017	5.53%	11.1
3	**Issue 19**		400.0	12/21/2007	9.8	9/22/2017	5.31%	21.2
4	**Issue 20**		200.0	3/22/2008	10.0	3/22/2018	5.35%	10.7
5	**Issue 21**		100.0	3/22/2009	10.0	3/22/2019	5.65%	5.7
6	**Issue 22**	1	66.6	3/22/2010	5.0	3/22/2015	3.56%	2.4
7	**Issue 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
8	**Issue 24**	2	145.2	9/22/2010	5.0	9/22/2015	3.24%	4.7
9	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
10	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
11	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
12	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
13	**Issue 29**		300.0	9/23/2013	10.0	9/22/2023	3.40%	10.2
14	**Issue 30**		150.0	3/22/2014	10.0	3/22/2024	3.72%	5.6
15	**Issue 31**		150.0	9/22/2014	10.0	9/22/2024	3.96%	5.9
16	**Issue 32**	3,7	232.6	3/23/2015	10.0	3/22/2025	4.03%	9.4
17	**Issue 33**	4,7	54.8	9/22/2015	10.0	9/22/2025	4.47%	2.4
18	**Total**		3,059.2				4.56%	139.5
	Regulated Portion of Company-Wide Borrowing							
19	**Allocation**	5	2,356.6				4.56%	107.5
	Project Financing - Regulated Projects							
20	**Niagara 1**		160.0	10/22/2006		10/22/2016	5.23%	8.4
21	**Niagara 2**		50.0	1/22/2007		1/22/2017	5.10%	2.5
22	**Niagara 3**		30.0	4/23/2007		4/22/2017	5.09%	1.5
23	**Niagara 4**		40.0	1/22/2008		1/22/2018	5.53%	2.2
24	**Niagara 5**		30.0	4/22/2008		4/22/2018	5.90%	1.8
25	**Niagara 6**		30.0	7/22/2008		7/22/2018	5.87%	1.8
26	**Niagara 7**		30.0	1/22/2009		1/22/2019	8.41%	2.5
27	**Niagara 8**		35.0	4/22/2009		4/22/2019	7.71%	2.7
28	**Niagara 9**		35.0	7/22/2009		7/22/2019	6.41%	2.2
29	**Niagara 10**		50.0	10/22/2009		10/22/2019	5.63%	2.8
30	**Niagara 11**		50.0	1/22/2010		1/22/2020	5.44%	2.7
31	**Niagara 12**		65.0	4/22/2010		4/22/2020	5.73%	3.7
32	**Niagara 13**		35.0	7/22/2010		7/22/2020	5.57%	1.9
33	**Niagara 14**		50.0	10/22/2010		10/22/2020	4.87%	2.4
34	**Niagara 15**		40.0	1/24/2011		1/22/2021	5.18%	2.1
35	**Niagara 16**		35.0	4/26/2011		4/22/2021	5.34%	1.9
36	**Niagara 17**		50.0	7/22/2011		7/22/2021	5.24%	2.6
37	**Niagara 18**		60.0	10/24/2011		10/22/2021	5.74%	3.4
38	**Niagara 19**		40.0	1/22/2012		1/22/2022	5.50%	2.2
39	**Niagara 20**		35.0	4/22/2012		4/22/2022	5.36%	1.9
40	**Niagara 21**		45.0	7/22/2012		7/22/2022	5.51%	2.5
41	**Niagara 22**		30.0	10/22/2012		10/22/2022	5.52%	1.7
42	**Niagara 23**		20.0	1/22/2013		1/22/2023	5.35%	1.1
43	**Niagara 24**		20.0	4/22/2013		4/22/2023	5.37%	1.1
44	**Niagara 25**		30.0	7/22/2013		7/22/2023	3.40%	1.0
45	**Niagara 26**		30.0	10/22/2013		10/22/2023	3.58%	1.1
46	**Total**		1,125.0				5.49%	61.7
	Total Regulated Funded Long-Term Debt							
47	Line 19+46		3,481.6				4.86%	169.2

See Ex. C1-1-2 Table 7a for notes

* For debt issues that are issued or mature during the year the face value is reduced to reflect only that portion of the year the debt issue is financing the rate base.

Table 7a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2015
Notes to Ex. C1-1-2, Table 7

	Issue	Issue/Redemption Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 22	3/22/2015	300.0	81.0	66.6
Note 2	Issue 24	9/22/2015	200.0	265.0	145.2
Note 3	Issue 32	3/23/2015	300.0	283.0	232.6
Note 4	Issue 33	9/22/2015	200.0	100.0	54.8

Note 5 Allocation ratio for 2015 described in Ex. C1-1-2 Table 1, line 19 (includes Newly Regulated Hydroelectric net fixed assets). The 2012 allocation ratio is used as it reflects OPG's most recent financing results.

Note 6 Includes related costs of issuance/redemption and the amortization of debt discount or premium.

Note 7 Future issue rate reference Global Insight (April 2013).

Issue 32

GOC & OPG Spread	
GOC Q1-15	2.71%
OPG Spread	1.32%
Effective Rate	4.03%

Issue 33

GOC & OPG Spread	
GOC Q3-15	3.15%
OPG Spread	1.32%
Effective Rate	4.47%

COST OF SHORT-TERM DEBT

1.0 PURPOSE

This evidence details OPG's annual short-term borrowing and associated costs for the test period. It also provides actual short-term debt costs for 2010 - 2012 and budgeted costs for 2013.

2.0 DESCRIPTION OF SHORT-TERM DEBT

OPG's cost of short-term debt for the test period was determined using the methodology approved by the OEB in EB-2007-0905 and in EB-2010-0008. The short-term debt component of OPG's capital structure reflects its forecast amount of short-term borrowings, and the cost of short-term debt reflects its forecast short-term borrowing cost.

OPG's short-term debt is comprised of a commercial paper program and an accounts receivable securitization program.

OPG's commercial paper program is used to fund intra-month working capital requirements. OPG expects to continue to use this source of financing in the test period. OPG forecasts that a daily average borrowing of $20M is required to finance OPG's normalized intra-month working capital requirements in the test period.

In addition, a bank credit facility continues to be used as the backstop to the commercial paper program. The bank credit facility also provides liquidity support in the event that OPG is unable to issue commercial paper as OPG would be able to borrow by way of bankers' acceptances under the bank credit facility. Access to adequate liquidity is an important element that credit rating agencies consider when reviewing credit ratings. The bank facility is $1B in size, comprised of two $500M multi-year tranches. In May 2013, OPG extended both tranches to May 2018.

OPG's other primary source of short-term financing is its accounts receivable securitization program with the Royal Bank of Canada. This facility is $250M in size. OPG has not used this facility to date in 2013 but projects borrowing $195M via this facility in Q4. Therefore the projected average borrowing for 2013 is $49M. OPG forecasts continued borrowing of $195M under this program throughout the 2014 - 2015 test period.

Under the accounts receivable securitization program, OPG borrows a portion of the month-end accounts receivable balance owing to OPG from the IESO for the prior month. OPG's month-end accounts receivable balances have ranged from $289M to $498M during the period January 2010 to December 2012. The accounts receivable securitization balance of $195M rolls over on a monthly basis and is supported by the amount of the IESO monthly payment. By selling its receivables, OPG is in essence borrowing money in advance of the monthly receipt from the IESO and the interest is the cost of that borrowed money. Under this program OPG continues to service the receivables and pays a short-term cost of funds on a monthly basis to an independent trust.

3.0 SHORT-TERM DEBT COST

OPG's borrowing rate under the commercial paper program is market-based, comprised of a 10 basis point dealer fee and a corporate spread over the bankers' acceptances rate for OPG. The corporate spread forecast over the test period is based on the current corporate spread of 5 basis points.

Consistent with the approach used in EB-2010-0008, OPG has used the Global Insight forecast as the basis for the bankers' acceptances interest rate forecast after adjusting for the spread differential between bankers' acceptances and the yield on treasury securities. For 2013, the bankers' acceptances rate used is 1.13 per cent, for 2014 it is 1.22 per cent, and for 2015 it is 2.23 per cent.

The bank credit facility is forecast to cost $3.6M in each of 2013, 2014 and 2015, which is equal to the actual cost in 2012 As in EB-2007-0905 and EB-2010-0008, these costs are included with OPG's short term debt costs, as the bank credit facility is required to support OPG's commercial paper program. A renewal fee of $0.2M for the accounts receivable securitization program is also included in the facility cost.

The cost of the accounts receivable securitization program, consisting of the banker's acceptance rate for the securitization program plus a program fee of 0.6 per cent, is forecast to be $0.9M in 2013, $3.7M in 2014 and $5.7M in 2015. Although the accounts receivable securitization program is slightly more expensive than OPG's commercial paper program, it represents an alternative form of financing, and is a more permanent component of OPG's short-term debt.

OPG's forecast program spread over the bankers' acceptances rate over the test period is based on the current program spread of 10 basis points.

From a liquidity perspective, the availability of different sources of financing provides flexibility in managing short term funding by allowing the borrower to manage the use of their overall facilities. The securitization program allows OPG to diversify its sources of liquidity at a reasonable cost.

Ex. C1-1-3 Table 2 summarizes OPG's forecast company-wide cost of short-term debt.

4.0 ALLOCATION TO REGULATED OPERATIONS

For the test period, OPG has used the same allocation methodology approved by the OEB in EB-2007-0905 and EB-2010-0008. In summary, the ratio of the construction work in progress and non-cash working capital amounts (fuel inventory and materials/supplies) for OPG's regulated operations to the total construction work in progress and non-cash working capital amounts reported in OPG's audited financial statements, is used as the basis for allocating company-wide, short-term borrowing. This allocation ratio reflects OPG's use of short-term borrowing to finance its working capital requirements and to assist with managing the cash flow variability of capital projects.

For all company-wide, short-term borrowing prior to December 31, 2012, the allocation ratio is determined based on actual year-end values in that year. Consistent with the approach approved in EB-2007-0905 and EB-2010-0008, OPG is using the most recent actual audited information available at the time evidence was developed to determine the allocation factor for OPG's short-term debt for 2013 - 2015. OPG has used asset and liability balances from its last audited financial statements as this approach is consistent with the asset values that are readily available, the amounts are independently verified, the approach is simple and transparent.

The allocation ratio determined in Ex C1-1-2 Table 1 has been calculated for 2010 - 2012 both with (line 19) and without (line 17) the newly regulated hydroelectric facilities. As the capitalization and cost of capital approved by the OEB in EB-2012-0002 did not include newly regulated hydroelectric facilities; the allocation ratio applied during 2010 - 2013 similarly does not include newly regulated hydroelectric facilities. As the capitalization and cost of capital for the 2014 - 2015 test period includes newly regulated hydroelectric facilities, the allocation ratio includes the impact of newly regulated hydroelectric facilities as reflected in Ex C-1-1-3 Table 2, line 12. The allocation ratio has increased from the 64.7 per cent for 2009 (EB-2010-0008 Ex C1-1-3 Table 1, line 9) as a result of the inclusion of newly regulated hydroelectric facilities in 2014 and 2015, the changing relative proportion of construction work in progress as the Niagara Tunnel project progressed, and the declining coal inventory reflected in company-wide fuel inventory amounts ($837M in EB-2010-0008 Ex C1-1-3 Table 1 reduced to $505M in Ex. C1-1-3 Table 1).

Numbers may not add due to rounding.

Table 1
Capitalization and Cost of Capital
Allocation of Existing Short-term Debt ($M)

Line No.	Asset	Note	Amount 2010	2011	2012
			(a)	(b)	(c)
	Company-Wide:				
1	**Adjusted Construction Work-In-Progress (CWIP)**	1	1,486.1	2,327.6	3,512.7
2	**CWIP Using Short-term Project Financing**	2	(292.2)	(766.3)	(1,353.1)
3	**Fuel**		733.8	655.3	505.0
4	**Materials/Supplies**		484.6	463.4	444.9
5	**CWIP + Non Cash Working Capital**		2,412.3	2,680.0	3,109.5
	Previously Regulated Operations:				
6	**Adjusted Construction Work-In-Progress (CWIP)**	1	1,090.7	1,459.2	1,952.3
7	**Fuel**	3	336.9	353.9	327.4
8	**Materials/Supplies**	4	428.3	416.9	411.2
9	**CWIP + Non Cash Working Capital**		1,855.9	2,230.1	2,690.9
	Newly Regulated Operations:				
10	**Adjusted Construction Work-In-Progress (CWIP)**	1	54.1	56.8	88.5
11	**Fuel**				
12	**Materials/Supplies**	5	0.7	0.7	0.7
13	**CWIP + Non Cash Working Capital**		54.8	57.5	89.2
	Relative Ratios:				
14	**Previously Regulated/Company-Wide Net Fixed Assets** (line 9 / line 5)		76.9%	83.2%	86.5%
15	**Newly Regulated/Company-Wide Net Fixed Assets** (line 13 / line 5)		2.3%	2.1%	2.9%
16	**Total Regulated/Company-Wide Net Fixed Assets** (line 14 + line 15)		79.2%	85.4%	89.4%

Notes:
1 From Ex. C1-1-2 Table 1.
2 CWIP for Lower Mattagami Project is removed as it uses its own specific project financing.
3 From Ex. B3-5-1 Table 1, col. (b).
4 Sum of Ex. B2-5-1, col. (b) (Prev. Reg. Hydro) and Ex. B3-5-1 Table 1, col. (b) (Nuclear).
5 From Ex. B2-5-1 Table 2, col. (b).

Table 2
Capitalization and Cost of Capital
Summary of OPG's Actual and Forecast Cost of Short-term Debt ($M)

Line No.	Description	2010	2011	2012	2013	2014	2015
		(a)	(b)	(c)	(d)	(e)	(f)
1	**Commercial Paper Amount**[1]	4.0	0.0	0.0	20.0	20.0	20.0
2	**Interest Rate**	0.54%	0.00%	0.00%	1.28%	1.37%	2.38%
3	**Commercial Paper Cost**	0.0	0.0	0.0	0.3	0.3	0.5
4	**A/R Securitization Amount**[1]	249.6	233.3	8.3	48.8	195.0	195.0
5	**Interest Rate**	1.39%	1.78%	1.79%	1.83%	1.92%	2.94%
6	**A/R Securitization Cost**	3.5	4.2	0.1	0.9	3.7	5.7
7	**Total Short-term Debt Amount**[1] (line 1 + line 4)	253.6	233.3	8.3	68.8	215.0	215.0
8	**Effective Interest Rate** ((line 3 + line 6) / line 7)	1.37%	1.78%	1.79%	1.67%	1.87%	2.89%
9	**Short-term Debt Interest Cost**	3.5	4.2	0.1	1.1	4.0	6.2
10	**Facility Cost**	3.0	3.7	3.8	3.8	3.8	3.8
11	**Total Short-term Debt Cost**	6.5	7.9	4.0	5.0	7.8	10.0
	Regulated Portion of Short-Term Debt						
12	**Allocation Factor**[2]	76.9%	83.2%	86.5%	86.5%	89.4%	89.4%
13	**Short Term Debt Amount** (line 7 x line 12)	195.1	194.2	7.2	59.5	192.2	192.2
14	**Short-term Debt Cost** (line 11 x line 12)	5.0	6.5	3.4	4.3	7.0	9.0

Notes:
1 Actual daily weighted average balance for 2010 to 2012.
Working Capital funding with commercial paper is assumed to be outstanding for the first 20 days of each month.
2 Allocation factor determined at Ex. C1-1-3 Table 1. 2010 through 2013 are from Ex. C1-1-3 Table 1, line 14 and exclude Newly Regulated Hydroelectric. 2014 and 2015 are from Ex. C1-1-3 Table 1, line 16 and include Newly Regulated Hydroelectric.

NUCLEAR WASTE MANAGEMENT AND DECOMMISSIONING – REVENUE REQUIREMENT IMPACT

1.0 PURPOSE

The purpose of this evidence is to present the impacts on OPG's nuclear asset retirement obligation ("ARO"), nuclear segregated funds and asset retirement costs ("ARC") resulting from the current approved Ontario Nuclear Funds Agreement ("ONFA") Reference Plan effective January 1, 2012. This evidence also presents the projected financial impacts of the current approved ONFA Reference Plan on the 2014 - 2015 test period revenue requirement. These impacts are also reflected in projected additions to the Nuclear Liability Deferral Account and the Bruce Lease Net Revenues Variance Account in 2013.

2.0 OVERVIEW

OPG is seeking recovery of $847.5M over the test period in respect of liabilities for nuclear waste management and decommissioning for both prescribed and Bruce facilities. This amount includes the financial impacts of the current approved ONFA Reference Plan, which total $442.3M over the test period. These impacts relate primarily to increases in depreciation expense and variable used fuel storage and disposal expenses and, for the Bruce facilities, increases in accretion expense. The 2013 impacts of the current approved ONFA Reference Plan are being recorded as additions to the Nuclear Liability Deferral Account and Bruce Lease Net Revenues Variance Account and are projected to be $122.7M and $110M respectively.

For the prescribed facilities, OPG is seeking recovery of a total pre-tax test period amount of $427.8M in respect of the liabilities for nuclear waste management and decommissioning, consisting of $214.6M for 2014 and $213.2M for 2015 (Ex. C2-1-1 Table 1, line 6). The associated income tax impacts are $14.8M for 2014 and $13.5M for 2015 (Ex. C2-1-1 Table 1, line 7).

For the Bruce facilities, OPG is seeking recovery of a total pre-tax test period amount in respect of the liabilities for nuclear waste management and decommissioning of $293.6M as a reduction to Bruce Lease net revenues, consisting of $144.9M for 2014 and $148.7M for 2015 (Ex. C2-1-1 Table 1, line 15). The associated income tax impacts are $48.3M for 2014 and $49.6M for 2015 (Ex. C2-1-1 Table 1, line 16).

The current approved ONFA Reference Plan covers the 2012-2016 period. The ONFA was approved by the Province effective January 1, 2012, as discussed in EB-2012-0002. The accounting consequences and financial impacts of the current approved ONFA Reference Plan are summarized in section 3.0. The impacts for the prescribed facilities projected for 2013 are discussed in Section 4.1 and, for 2014 and 2015, in Section 4.2.

3.0 SUMMARY OF IMPACTS

Accounting for the current approved ONFA Reference Plan increased the carrying balance of the ARO and ARC by $1,363.5M, as detailed in Ex. C2-1-1 Table 4, lines 6 and 7 (2011 ARO/ARC adjustment of $934.3M) and lines 13 and 14 (2012 ARO/ARC adjustment of $429.2M).[1] Exhibit C2-1-2 Table 4 includes the details of these adjustments at the program and station level.

The financial impacts of the current approved ONFA Reference Plan for 2013 to 2015 are summarized below. The methodologies applied in deriving these impacts are unchanged from those applied in EB-2012-0002 and EB-2010-0008.

1) With respect to the prescribed facilities, an increase in the 2014-2015 after-tax revenue requirement of $136.4M as detailed in Ex. C2-1-2 Table 5, and discussed in section 4.2
2) With respect to the Bruce facilities, a reduction in the 2014-2015 Bruce Lease net revenues of $229.4M as detailed in Ex. C2-1-2 Table 5 and discussed in Ex. G2-2-1 Section 6.0. The reduction in Bruce Lease net revenues results in a corresponding pre-tax increase in the test period revenue requirement and an associated increase of $76.5M in income taxes for the prescribed facilities as detailed in Ex. C2-1-2 Table 5.

[1] Ex. C2-1-2 Table 4 contains the same information as presented in EB-2012-0002 Ex. H1-1-2, Table 20

3) Projected 2013 additions to the Nuclear Liability Deferral Account of $122.7M detailed in Ex. H1-1-1 Table 10 and discussed in Section 4.1 below
4) Projected 2013 additions to the Bruce Lease Net Revenues Variance Account of approximately $110M discussed in Ex. G2-2-1 Section 6.0

The above impacts arise as a result of the following:

- Higher ARC depreciation and variable costs for storage and disposal of incremental used fuel and low and intermediate level waste ("L&ILW") for both prescribed and Bruce facilities;
- Lower cost of capital on ARC[2] in rate base, at the weighted average accretion rate, for the prescribed facilities;[3]
- Higher accretion expense for the Bruce facilities, due to the higher ARO balance; and,
- Lower income taxes for the Bruce facilities.

The above depreciation and cost of capital impacts include those due to the lower depreciation expense for prescribed and Bruce facilities' ARC balances recorded prior to December 31, 2011, resulting from the changes in the estimated service lives of the Pickering A and B and Bruce A and B stations effective December 31, 2012.

Additionally, higher contributions into the segregated funds for the prescribed facilities for 2014 and 2015, per the approved segregated fund contribution schedule based on the current approved ONFA Reference Plan, result in a higher income tax deduction for the prescribed facilities in those years.

[2] For each of 2013-2015, the average ARC is lower than the average Unfunded Nuclear Liability; both with the current approved ONFA Reference Plan in effect and in the illustrative case without the current approved ONFA Reference Plan. As such, in both cases, in accordance with the methodology established by the OEB in EB-2007-0905 and applied in EB-2010-0008, return on rate base is calculated by applying the weighted average accretion rate to average ARC.

[3] The lower cost of capital results as both the average ARC amount in Ex. C2-1-1 Table 2 and the weighted average accretion rate of 5.37% in Ex. C1-1-1 Tables 1 (2015) and 2 (2014) are lower than the ARC and accretion rate applicable prior to the implementation of the current approved ONFA Reference Plan illustrated in Ex. C2-1-1 Table 5a, note 2.

The higher variable used fuel and L&ILW costs reflect higher storage and disposal baseline cost estimates as well as a lower discount rate. The changes in the ARO and ARC at the end of 2011 and the variable costs during 2012 were recorded at the accounting discount rate of 3.43 per cent, which is lower than the discount rate of 4.8 per cent used to value and accrete the previous ARO tranche and to determine the variable costs reflected in EB-2010-0008. The changes in the ARO and ARC at the end of 2012 were recorded at the accounting discount rate of 3.50 per cent, which is reflected in the projected variable costs for 2013 - 2015 presented in this Application. The weighted average accretion rate of 5.37 per cent used to calculate the projected return on rate base for the prescribed facilities' ARC for 2013 - 2015 reflects the impact of the ARO tranches recorded at 3.43 per cent and 3.50 per cent , as shown in EB-2012-0002.[4]

4.0 PROJECTED IMPACTS FOR PRESCRIBED FACILITIES

4.1 Impacts on Nuclear Liability Deferral Account for 2013

The Nuclear Liability Deferral Account has been authorized by the OEB pursuant to section 5.2(1) of O. Reg. 53/05 in order to capture the revenue requirement impact of any change in OPG's nuclear decommissioning liability arising from an approved reference plan under the ONFA.[5,6] Ontario Regulation 53/05 section 6(2)8 requires the OEB to ensure that OPG recovers the revenue requirement impact of its nuclear decommissioning liability arising from the current approved reference plan.

The forecast amounts approved in EB-2010-0008 were based on the previous reference plan. As a result, the 2013 impacts of the changes in the nuclear ARO from the current approved ONFA Reference Plan and the changes in segregated fund contributions are

[4] The derivation of the weighted average accretion rate of 5.37% is found at EB-2012-0002 Ex. M1-1, Att. 3, Table 1a, Note 1.

[5] As originally determined by the OEB in its EB-2007-0905 Decision with Reasons (p. 112) and as stated in the EB-2012-0002 Payment Amounts Order (Appendix B, p. 9 and 11), the cost impacts of changes in OPG's nuclear decommissioning and nuclear waste management liabilities for the Bruce facilities are recorded in the Bruce Lease Net Revenues Variance Account rather than the Nuclear Liability Deferral Account.

[6] The "nuclear decommissioning liability" is defined in O. Reg. 53/05 and the EB-2012-0002 Payment Amounts Order (Appendix F, p. 9) as "the liability of Ontario Power Generation Inc. for decommissioning its nuclear generation facilities and the management of its nuclear waste and used fuel."

captured as additions to the Nuclear Liability Deferral Account. Similar amounts recorded in the account as 2012 additions were approved by the OEB in EB-2012-0002.

The projected revenue requirement impact on the prescribed assets to be added to the Nuclear Liability Deferral Account balance during 2013 is $122.7M, as shown in Ex H1-1-1 Table 10.

The projected amount of $122.7M consists of the following items:[7]

1) *Increase in Depreciation Expense of $51.7M:* The amount includes: (i) the additional depreciation in 2013 resulting from the 2011 and 2012 ARC adjustments attributable to Pickering A, Pickering B and Darlington, and (ii) reduction in 2013 depreciation for ARC balances for Pickering A and B recorded prior to December 31, 2011, due to changes in the estimated service lives of Pickering A and B effective December 31, 2012.

   The first impact is derived by dividing the December 31, 2012 net book value of the ARC changes in 2011 and 2012 by the current remaining useful lives of the corresponding prescribed stations. The December 31, 2012 net book value of the 2011 and 2012 ARC changes includes the increase in ARC of $439.2M at December 31, 2011 (Ex. C2-1-1 Table 4, line 7), reduced by the 2012 impact on depreciation of $98.2M (recorded in 2012 in the Nuclear Liability Deferral Account, as presented in EB-2012-0002)[8], and the decrease in ARC of $276.9M at December 31, 2012 (Ex. C2-1-1 Table 4, line 14).

   The second impact is derived by calculating the difference between the 2013 depreciation of the pre-December 31, 2011 ARC using the current estimated service lives of Pickering A and B and the depreciation that would have resulted from the

[7] These items follow Section 6(2)7 of O. Reg. 53/05, which states that the revenue requirement impact to be recorded in the deferral account is to be based on: return on rate base, depreciation expense, income and capital taxes, and fuel expense. No capital taxes are included as capital taxes were eliminated effective July 1, 2010.
[8] The 2012 depreciation impact of $98.2M is calculated as shown at EB-2012-0002 Ex. H1-1-2, Table 8, note 1.

services lives in effect prior to December 31, 2012 and reflected in the EB-2010-0008 payment amounts.

The details of the calculations of the above impacts are provided in Ex. H1-1-1 Table 10 note 1.

2) *Increase in Return on Rate Base of $2.1M:* The relatively small increase results from applying the weighted average accretion rate of 5.37 per cent, per the EB-2012-0002 Payment Amounts Order (App. B, p. 9), to the additional ARC associated with the current approved ONFA Reference Plan (Ex. H1-1-1, Table 10, line 4)

3) *Increase in Variable Expenses of $27.1M:* The higher variable cost rates for used fuel storage and disposal and L&ILW management are applied to the average forecast nuclear used fuel and waste volumes underpinning the EB-2010-0008 forecast variable expenses for 2011 and 2012 in order to calculate the impact of the current approved ONFA Reference Plan on the variable expenses

4) *Increase in Income Taxes of $41.8M:* As in EB-2012-0002, the increase in income taxes is a result of the net increase in taxes associated with the recovery/refund of the three impacts noted above and the changes in taxes associated with changes in segregated fund contributions. On a net basis, the three impacts above increase regulatory taxable income because they are added to regulatory earnings before tax. These items are not deductible for income tax purposes. The decrease in 2013 segregated fund contributions, relative to the average of the 2011 and 2012 forecast contributions reflected in the EB-2012-0002 payment amounts, also increases taxable income because these contributions are deductible from earnings before tax. The calculation of the income tax impact is based on the resulting net amount of incremental additions to earnings before tax and is provided at Ex. H1-1-1, Table 10, lines 8 to 13.

4.2 Impacts on the Test Period Revenue Requirement

With respect to the prescribed facilities, the current approved ONFA Reference Plan increases the test period revenue requirement by $136.4M, as presented in Ex. C2-1-1 Table 5. The forecast test period impacts for the prescribed facilities consist of the four items identified in Section 3.1. The impacts are derived similarly and, in total, are comparable in size to the projected 2013 impacts. The return on rate base impact for the test period reflects the declining net book value of the 2011 and 2012 ARC due to depreciation in the normal course. The income tax impact reflects the difference between the segregated fund contributions for 2014 and 2015 per the current segregated fund contribution schedule and those per the segregated fund contribution schedule based on the previous approved ONFA Reference Plan.

Numbers may not add due to rounding.

Table 1
Revenue Requirement Impact of OPG's Nuclear Liabilities ($M)
Years Ending December 31, 2010 to 2015

Line No.	Description	Note or Reference	2010 Actual	2011 Actual	2012 Actual	2013 Budget	2014 Plan	2015 Plan
			(a)	(b)	(c)	(d)	(e)	(f)
	PRESCRIBED FACILITIES							
1	**Depreciation of Asset Retirement Costs**	Ex. C2-1-1 Table 2	26.3	29.0	127.2	80.7	80.7	80.7
2	**Used Fuel Storage and Disposal Variable Expenses**	Ex. C2-1-1 Table 2	23.5	26.0	51.9	52.7	56.1	56.7
3	**Low & Intermediate Level Waste Management Variable Expenses**	Ex. C2-1-1 Table 2	1.1	0.9	3.8	3.3	3.1	5.5
	Return on ARC in Rate Base:							
4	**Return on Rate Base at Weighted Average Accretion Rate**	Ex. C1-1-1 Tables 1-6	84.7	83.1	100.5	78.9	74.6	70.3
5	**Return on Rate Base at Weighted Average Cost of Capital**	Note 1	0.0	0.0	0.0	0.0	0.0	0.0
6	**Pre-Tax Revenue Requirement Impact**		135.5	139.1	283.5	215.6	214.6	213.2
7	**Income Tax Impact**	Note 2	(6.0)	(2.1)	58.8	39.2	14.8	13.5
8	**Total Revenue Requirement Impact** (line 6 + line 7)		129.5	137.0	342.3	254.8	229.4	226.6
	BRUCE FACILITIES							
9	**Depreciation of Asset Retirement Costs**	Ex. C2-1-1 Table 3	26.1	23.9	69.6	100.6	100.6	100.6
10	**Used Fuel Storage and Disposal Variable Expenses**	Ex. C2-1-1 Table 3	17.8	27.0	44.5	51.6	54.3	56.4
11	**Low & Intermediate Level Waste Management Variable Expenses**	Ex. C2-1-1 Table 3	0.9	1.0	1.8	2.8	2.4	3.8
12	**Accretion Expense**	Ex. C2-1-1 Table 3	283.1	296.6	327.8	367.8	382.9	397.3
13	**Less: Segregated Fund Earnings (Losses)**	Ex. C2-1-1 Table 3	418.0	240.1	350.9	330.8	347.0	359.8
14	**Impact on Bruce Facilities' Income Taxes**	Note 3	21.5	(27.5)	(23.2)	(48.0)	(48.3)	(49.6)
15	**Pre-Tax Revenue Requirement Impact (Impact on Bruce Lease Net Revenues)**		(68.6)	81.0	69.6	143.9	144.9	148.7
16	**Income Tax Impact on Revenue Requirement** (line 15 x tax rate / (1-tax rate))	Note 4	(28.0)	29.2	23.2	48.0	48.3	49.6
17	**Total Revenue Requirement Impact** (line 15 + line 16)		(96.6)	110.2	92.9	191.9	193.2	198.3
18	**Total Revenue Requirement Impact - Prescribed and Bruce Faciliites**		32.9	247.2	435.1	446.7	422.6	424.9
	(line 8 + line 17)							

See Ex. C2-1-1 Table 1a for notes

Table 1a
Revenue Requirement Impact of OPG's Nuclear Liabilities ($M)
Years Ending December 31, 2010 to 2015
Notes to Ex. C2-1-1, Table 1

Notes:

1 If average UNL is less than average ARC for the prescribed facilities, the funded portion of average ARC (i.e. the amount by which average ARC exceeds average UNL) earns WACC as follows:

Table to Note 1

Line No.	Year	(from Ex. C2-1-1 Table 2, line 31) Average ARC ($M)	(from Ex. C2-1-1 Table 2, line 22) Average UNL ($M)	(a)-(b) ARC-UNL ($M)	Annual WACC	(c) x (d) if >0 Return on Rate Base ($M)	WACC Reference
		(a)	(b)	(c)	(d)	(e)	
1a	2010	1,517.6	1,719.8	(202.1)	7.19%	0.0	EB-2007-0905 Payment Amounts Order, App. A, Table 5b
2a	2011	1,490.0	1,605.5	(115.6)	7.31%	0.0	EB-2010-0008 Payment Amounts Order, App. A, Table 4b
3a	2012	1,851.1	2,016.9	(165.9)	7.40%	0.0	EB-2010-0008 Payment Amounts Order, App. A, Table 5b
4a	2013	1,470.2	1,715.2	(245.0)	7.40%	0.0	EB-2010-0008 Payment Amounts Order, App. A, Table 5b
5a	2014	1,389.5	1,671.3	(281.9)	6.77%	0.0	Ex. C1-1-1 Table 2
6a	2015	1,308.8	1,589.2	(280.5)	6.79%	0.0	Ex. C1-1-1 Table 1

2 The income tax impact for prescribed facilities is calculated as follows:

Table to Note 2 ($M)

Line No.	Item	2010 Actual	2011 Actual	2012 Actual	2013 Budget	2014 Plan	2015 Plan
		(a)	(b)	(c)	(d)	(e)	(f)
1b	Increase in Regulatory Taxable Income Before Impact of Segregated Fund Contributions (Ex. C2-1-1, Table 1, line 6)	135.5	139.1	283.5	215.6	214.6	213.2
2b	Contributions to Nuclear Segregated Funds for Prescribed Facilities (Ex. C2-1-1 Table 2, line 16)	150.2	145.0	107.1	98.1	170.1	172.8
3b	Net Increase in Regulatory Taxable Income (line 1b - line 2b)	(14.7)	(5.9)	176.4	117.5	44.5	40.4
4b	Income Tax Rate (Ex. F4-2-1 Table 4 line 33 and Ex. F4-2-1 Table 5 line 29)	29.00%	26.50%	25.00%	25.00%	25.00%	25.00%
5b	Income Tax Impact (line 3b x line 4b / (1 - line 4b))	(6.0)	(2.1)	58.8	39.2	14.8	13.5

3 The impact on Bruce facilities' income taxes relates to higher deductible temporary differences associated with the expenses at Ex. C2-1-1 Table 1, lines 9-13, which are not deductible for tax purposes. The impact is calculated as follows:

Table to Note 3 ($M)

Line No.	Item	2010 Actual	2011 Actual	2012 Actual	2013 Budget	2014 Plan	2015 Plan
		(a)	(b)	(c)	(d)	(e)	(f)
	Short-Term Temporary Differences:						
1c	Increase in Short-Term Temporary Differences - Depreciation Expense (Ex. C2-1-1 Table 1, line 9)	26.1	23.9	69.6	100.6	100.6	100.6
2c	Income Tax Rate - Current (Ex. G2-2-1 Tables 7 and 8, line 50)	29.00%	26.50%	25.00%	25.00%	25.00%	25.00%
3c	Increase in Deferred Income Taxes - Short-Term	(7.6)	(6.3)	(17.4)	(25.1)	(25.1)	(25.1)
	Long-Term Temporary Differences:						
4c	Increase in Long-Term Temporary Differences - All Other Expenses (Ex. C2-1-1 Table 1, lines 10 through 13)	(116.2)	84.5	23.3	91.3	92.6	97.7
5c	Income Tax Rate - Long-Term (Ex. G2-2-1 Tables 7 and 8, line 54)	25.00%	25.00%	25.00%	25.00%	25.00%	25.00%
6c	Increase in Deferred Income Taxes - Long-Term	29.0	(21.1)	(5.8)	(22.8)	(23.2)	(24.4)
7c	Impact on Bruce Facilities' Income Taxes (line 3c + line 6c)	21.5	(27.5)	(23.2)	(48.0)	(48.3)	(49.6)

4 Income tax rates are from Ex. F4-2-1 Table 4, line 33 and Ex. F4-2-1 Table 5, line 29.

Numbers may not add due to rounding.

Table 2
Prescribed Facilities - Asset Retirement Obligation, Nuclear Segregated Funds, and Asset Retirement Costs ($M)
Years Ending December 31, 2010 to 2015

Line No.	Description	Note	2010 Actual	2011 Actual	2012 Actual	2013 Budget	2014 Plan	2015 Plan
			(a)	(b)	(c)	(d)	(e)	(f)
	ASSET RETIREMENT OBLIGATION							
1	**Opening Balance**	1	6,391.2	7,174.5	7,935.9	8,034.1	8,400.6	8,772.2
2	**Darlington Refurbishment Adjustment**	2	497.4	0.0	0.0	0.0	0.0	0.0
3	**Adjusted Opening Balance** (line 1 + line 2)		6,888.6	7,174.5	7,935.9	8,034.1	8,400.6	8,772.2
4	**Used Fuel Storage and Disposal Variable Expenses**		23.5	26.0	51.9	52.7	56.1	56.7
5	**Low & Intermediate Level Waste Management Variable Expenses**		1.1	0.9	3.8	3.3	3.1	5.5
6	**Accretion Expense**		382.2	399.0	432.6	442.1	461.3	479.8
7	**Expenditures for Used Fuel, Waste Management & Decommissioning**		(122.0)	(104.0)	(115.5)	(131.6)	(148.8)	(197.6)
8	**Consolidation and Other Adjustments**		1.2	0.3	0.9	0.0	0.0	0.0
9	**Closing Balance Before Year-End Adjustments** (lines 3 through 8)		7,174.5	7,496.7	8,309.7	8,400.6	8,772.2	9,116.7
10	**Current Approved ONFA Reference Plan Adjustment**	3	0.0	439.2	(276.9)	0.0	0.0	0.0
11	**New CNSC Requirements Adjustment**	4	0.0	0.0	1.3	0.0	0.0	0.0
12	**Closing Balance** (line 9 + line 10 + line 11)		7,174.5	7,935.9	8,034.1	8,400.6	8,772.2	9,116.7
13	**Average Asset Retirement Obligation** ((line 3 + line 9)/2)		7,031.6	7,335.6	8,122.8	8,217.3	8,586.4	8,944.4
	NUCLEAR SEGREGATED FUNDS BALANCE							
14	**Opening Balance**	1	5,058.7	5,564.9	5,895.3	6,316.5	6,687.8	7,142.4
15	**Earnings (Losses)**		417.7	220.7	355.7	326.5	347.2	369.3
16	**Contributions**		150.2	145.0	107.1	98.1	170.1	172.8
17	**Disbursements**		(61.8)	(35.3)	(41.6)	(53.3)	(62.6)	(116.5)
18	**Closing Balance** (line 14 + line 15 + line 16 + line 17)		5,564.9	5,895.3	6,316.5	6,687.8	7,142.4	7,568.0
19	**Average Nuclear Segregated Funds Balance** ((line 14 + line 18)/2)		5,311.8	5,730.1	6,105.9	6,502.1	6,915.1	7,355.2
	UNFUNDED NUCLEAR LIABILITY BALANCE (UNL)							
20	**Opening Balance** (line 3 - line 14)		1,829.9	1,609.6	2,040.6	1,717.6	1,712.8	1,629.8
21	**Closing Balance** (line 9 - line 18)		1,609.6	1,601.4	1,993.2	1,712.8	1,629.8	1,548.7
22	**Average Unfunded Nuclear Liability Balance** ((line 20 + line 21)/2)		1,719.8	1,605.5	2,016.9	1,715.2	1,671.3	1,589.2
	ASSET RETIREMENT COSTS (ARC)							
23	**Opening Balance**	1	1,098.0	1,504.5	1,914.7	1,510.5	1,429.8	1,349.1
24	**Reconciliation Adjustment**	5	(42.7)	0.0	0.0			
25	**Darlington Refurbishment Adjustment**	2	475.5	0.0	0.0	0.0	0.0	0.0
26	**Adjusted Opening Balance** (line 23 + line 24 + line 25)		1,530.8	1,504.5	1,914.7	1,510.5	1,429.8	1,349.1
27	**Depreciation Expense**		(26.3)	(29.0)	(127.2)	(80.7)	(80.7)	(80.7)
28	**Closing Balance Before Year-End Adjustments** (line 26 + line 27)		1,504.5	1,475.4	1,787.5	1,429.8	1,349.1	1,268.4
29	**Current Approved ONFA Reference Plan Adjustment**	3	0.0	439.2	(276.9)	0.0	0.0	0.0
30	**Closing Balance** (line 28 + line 29)		1,504.5	1,914.7	1,510.5	1,429.8	1,349.1	1,268.4
31	**Average Asset Retirement Costs** ((line 26 + line 28)/2)		1,517.6	1,490.0	1,851.1	1,470.2	1,389.5	1,308.8
32	**LESSER OF AVERAGE UNL OR ARC** (lesser of line 22 or line 31)		1,517.6	1,490.0	1,851.1	1,470.2	1,389.5	1,308.8

Notes:

1 Opening balances in col. (a) from EB-2010-0008, Ex. C2-1-1 Table 1.

2 Adjustment recorded on January 1, 2010 associated with the changes to the end-of-life date assumptions underlying the ARO calculation, as a result of the approval of the definition phase of the Darlington Refurbishment project.

3 Adjustments recorded on December 31, 2011 and December 31, 2012, as per Ex. C2-1-1 Table 4, associated with the current approved ONFA Reference Plan effective January 1, 2012.

4 Represents implementation, in accordance with GAAP, of new CNSC requirements in 2012 to include certain facilites with Waste Nuclear Substance Licenses not included in the 2012 ONFA Reference Plan due to timing of notification by the CNSC. As a result, ARO increased by $2.4M to include a legacy facility not used to support OPG's current operations, of which $1.3M is atttributed to prescribed facilities and $1.1M is attributed to Bruce facilities. In accordance with GAAP, this amount was expensed (i.e., not included in ARC) in 2012.

5 Adjustment to remove from the ARC continuity amounts reflected in the non-ARC portion of PP&E in rate base. Total rate base is not impacted.

Numbers may not add due to rounding.

Table 3
Bruce Facilities - Asset Retirement Obligation, Nuclear Segregated Funds, and Asset Retirement Costs ($M)
Years Ending December 31, 2010 to 2015

Line No.	Description	Note	2010 Actual	2011 Actual	2012 Actual	2013 Budget	2014 Plan	2015 Plan
			(a)	(b)	(c)	(d)	(e)	(f)
	ASSET RETIREMENT OBLIGATION							
1	**Opening Balance**	1	5,315.0	5,357.0	6,107.7	7,125.5	7,434.8	7,745.5
2	**Darlington Refurbishment Adjustment**	2	(204.4)	0.0	0.0	0.0	0.0	0.0
3	**Adjusted Opening Balance** (line 1 + line 2)		5,110.7	5,357.0	6,107.7	7,125.5	7,434.8	7,745.5
4	**Used Fuel Storage and Disposal Variable Expenses**		17.8	27.0	44.5	51.6	54.3	56.4
5	**Low & Intermediate Level Waste Management Variable Expenses**		0.9	1.0	1.8	2.8	2.4	3.8
6	**Accretion Expense**		283.1	296.6	327.8	367.8	382.9	397.3
7	**Expenditures for Used Fuel, Waste Management & Decommissioning**		(57.5)	(68.1)	(83.7)	(112.8)	(128.9)	(172.7)
8	**Consolidation and Other Adjustments**		1.9	(1.0)	0.6	0.0	0.0	0.0
9	**Closing Balance Before Year-End Adjustments** (lines 3 through 8)		5,357.0	5,612.6	6,398.7	7,434.8	7,745.5	8,030.3
10	**Current Approved ONFA Reference Plan Adjustment**	3	0.0	495.1	706.1	0.0	0.0	0.0
11	**New CNSC Requirements Adjustment**	4	0.0	0.0	20.6	0.0	0.0	0.0
12	**Closing Balance** (line 9 + line 10 + line 11)		5,357.0	6,107.7	7,125.5	7,434.8	7,745.5	8,030.3
13	**Average Asset Retirement Obligation** ((line 3 + line 9)/2)		5,233.8	5,484.8	6,253.2	7,280.1	7,590.2	7,887.9
	NUCLEAR SEGREGATED FUNDS BALANCE							
14	**Opening Balance**	1	5,187.2	5,680.9	6,002.5	6,400.1	6,779.6	7,045.2
15	**Earnings (Losses)**		418.0	240.1	350.9	330.8	347.0	359.8
16	**Contributions**		113.9	105.5	74.9	85.9	(31.3)	(29.4)
17	**Disbursements**		(38.2)	(24.0)	(28.1)	(37.2)	(50.1)	(89.3)
18	**Closing Balance** (line 14 + line 15 + line 16 + line 17)		5,680.9	6,002.5	6,400.1	6,779.6	7,045.2	7,286.3
19	**Average Nuclear Segregated Funds Balance** ((line 14 + line 18)/2)		5,434.0	5,841.7	6,201.3	6,589.9	6,912.4	7,165.8
	ASSET RETIREMENT COSTS (ARC)							
20	**Opening Balance**	1	1,035.8	817.6	1,288.8	1,944.8	1,844.2	1,743.6
21	**Reconciliation Adjustment**	5	(9.6)	0.0	0.0			
22	**Darlington Refurbishment Adjustment**	2	(182.4)	0.0	0.0	0.0	0.0	0.0
23	**Adjusted Opening Balance** (line 20 + line 21 + line 22)		843.7	817.6	1,288.8	1,944.8	1,844.2	1,743.6
24	**Depreciation Expense**		(26.1)	(23.9)	(69.6)	(100.6)	(100.6)	(100.6)
25	**Closing Balance Before Year-End Adjustments** (line 23 + line 24)		817.6	793.7	1,219.2	1,844.2	1,743.6	1,643.0
26	**Current Approved ONFA Reference Plan Adjustment**	3	0.0	495.1	706.1	0.0	0.0	0.0
27	**New CNSC Requirements Adjustment**	4	0.0	0.0	19.5	0.0	0.0	0.0
28	**Closing Balance** (line 25 + line 26 + line 27)		817.6	1,288.8	1,944.8	1,844.2	1,743.6	1,643.0
29	**Average Asset Retirement Costs** ((line 23 + line 25)/2))		830.7	805.7	1,254.0	1,894.5	1,793.9	1,693.3

Notes:

1 Opening balances in col. (a) from EB-2010-0008, Ex. C2-1-1 Table 2.

2 Adjustment recorded on January 1, 2010 associated with the changes to the end-of-life date assumptions underlying the ARO calculation, as a result of the approval of the definition phase of the Darlington Refurbishment project.

3 Adjustments recorded on December 31, 2011 and December 31, 2012, as per Ex. C2-1-1 Table 4, associated with the current approved ONFA Reference Plan effective January 1, 2012.

4 Represents implementation, in accordance with GAAP, of new CNSC requirements in 2012 to include certain facilites with Waste Nuclear Substance Licenses not included in the 2012 ONFA Reference Plan due to timing of notification by the CNSC. As a result, ARO increased by $2.4M to include a legacy facility not used to support OPG's current operations, of which $1.3M is atttributed to prescribed facilities and $1.1M is attributed to Bruce facilities. In accordance with GAAP, this amount was expensed (i.e., not included in ARC) in 2012. ARO increased by a further $19.5M to include a facility dedicated to supporting the Bruce facilities. In accordance with GAAP, this amount was included in ARC.

5 Adjustment to remove from the ARC continuity amounts reflected in the non-ARC portion of PP&E. Total Bruce Lease net revenues are not impacted.

Table 4

Impact of Current Approved ONFA Reference Plan - Assignment of ARO Adjustment and Allocation of ARC to Nuclear Stations ($M)

Line No.	Description	Pickering A	Pickering B	Darlington	Prescribed Facilities Total	Bruce A	Bruce B	Bruce Facilities Total	Total
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	December 31, 2011 Actual:								
1	**Decommissioning Program**	(111.0)	(209.3)	(296.2)	(616.5)	(188.5)	(194.3)	(382.8)	(999.3)
2	**Low and Intermediate Level Waste Storage Program**	125.7	83.6	64.2	273.6	183.0	26.9	209.9	483.5
3	**Low and Intermediate Level Waste Disposal Program**	245.3	194.9	36.3	476.5	317.0	42.1	359.2	835.7
4	**Used Fuel Disposal Program**	(31.4)	(59.7)	(104.3)	(195.4)	(8.0)	(25.9)	(33.9)	(229.3)
5	**Used Fuel Storage Program**	139.7	166.4	194.9	501.1	78.1	264.6	342.6	843.7
6	**ARO Adjustment Assignment to Station Level**	368.4	175.9	(105.1)	439.2	381.6	113.5	495.1	934.3
7	**Asset Retirement Cost Adjustment**	368.4	175.9	(105.1)	439.2	381.6	113.5	495.1	934.3

Line No.	Description	Pickering A	Pickering B	Darlington	Prescribed Facilities Total	Bruce A	Bruce B	Bruce Facilities Total	Total
		(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
	December 31, 2012 Actual:								
8	**Decommissioning Program**	(18.8)	(43.0)	0.0	(61.8)	(33.0)	(40.4)	(73.4)	(135.2)
9	**Low and Intermediate Level Waste Storage Program**	(14.2)	11.9	(10.0)	(12.2)	60.3	21.1	81.4	69.2
10	**Low and Intermediate Level Waste Disposal Program**	(60.1)	(8.0)	(52.4)	(120.5)	76.0	37.3	113.3	(7.2)
11	**Used Fuel Disposal Program**	(74.0)	194.6	(176.6)	(56.0)	289.3	315.9	605.1	549.1
12	**Used Fuel Storage Program**	(11.3)	(22.2)	7.1	(26.4)	(10.4)	(9.9)	(20.3)	(46.7)
13	**ARO Adjustment Assignment to Station Level**	(178.5)	133.3	(231.7)	(276.9)	382.2	323.9	706.1	429.2
14	**Asset Retirement Cost Adjustment**	(178.5)	133.3	(231.7)	(276.9)	382.2	323.9	706.1	429.2

Table 5
Impact of Current Approved ONFA Reference Plan on Nuclear Liabilities Costs ($M)
Years Ending December 31, 2014 and 2015

Line No.	Description	Note or Reference (for cols. (a) and (b))	With Current Approved ONFA Reference Plan 2014 Plan	With Current Approved ONFA Reference Plan 2015 Plan	Note or Reference (for cols. (c) and (d))	Without Current Approved ONFA Reference Plan[1] 2014 Plan	Without Current Approved ONFA Reference Plan[1] 2015 Plan	(a)-(c)+(b)-(d) Impact on Nuclear Liabilities Costs
			(a)	(b)		(c)	(d)	(e)
	PRESCRIBED FACILITIES							
1	**Depreciation of Asset Retirement Costs**	Ex. C2-1-1 Table 1	80.7	80.7	Note 2	29.0	29.0	103.3
2	**Used Fuel Storage and Disposal Variable Expenses**	Ex. C2-1-1 Table 1	56.1	56.7		31.1	31.8	49.9
3	**Low & Intermediate Level Waste Management Variable Expenses**	Ex. C2-1-1 Table 1	3.1	5.5		1.4	2.5	4.8
	Return on ARC in Rate Base:							
4	**Return on Rate Base at Weighted Average Accretion Rate**	Ex. C2-1-1 Table 1	74.6	70.3	Note 2	78.3	76.7	(10.0)
5	**Return on Rate Base at Weighted Average Cost of Capital**	Ex. C2-1-1 Table 1	0.0	0.0	Note 2	0.0	0.0	0.0
6	**Pre-tax Revenue Requirement Impact**		214.6	213.2		139.8	140.0	148.0
7	**Income Tax Impact on Revenue Requirement**	Ex. C2-1-1 Table 1	14.8	13.5	Note 3	20.3	19.7	(11.6)
8	**Total Impact on Nuclear Liabilities Costs - Prescribed Facilities**		229.4	226.6		160.0	159.6	136.4
	(line 6 + line 7)							
	BRUCE FACILITIES							
9	**Depreciation of Asset Retirement Costs**	Ex. C2-1-1 Table 1	100.6	100.6		26.7	26.7	147.8
10	**Used Fuel Storage and Disposal Variable Expenses**	Ex. C2-1-1 Table 1	54.3	56.4		26.9	28.3	55.5
11	**Low & Intermediate Level Waste Management Variable Expenses**	Ex. C2-1-1 Table 1	2.4	3.8		1.0	1.6	3.5
12	**Accretion**	Ex. C2-1-1 Table 1	382.9	397.3		337.8	350.8	91.5
13	**Less: Segregated Fund Earnings (Losses)**	Ex. C2-1-1 Table 1	347.0	359.8		349.4	365.0	(7.6)
14	**Bruce Facilities' Income Tax Impact**	Ex. C2-1-1 Table 1	(48.3)	(49.6)	Note 4	(10.8)	(10.6)	(76.5)
15	**Pre-Tax Revenue Requirement Impact (Impact on Bruce Lease Net Revenues)**		144.9	148.7		32.3	31.9	229.4
16	**Income Tax Impact on Revenue Requirement**	Ex. C2-1-1 Table 1	48.3	49.6	Note 5	10.8	10.6	76.5
17	**Total Impact on Nuclear Liabilities Costs - Bruce Facilities**		193.2	198.3		43.1	42.5	305.9
	(line 15 + line 16)							
18	**Total Test Period Impact of Current Approved ONFA Reference Plan on Nuclear Liabilities Costs** (col. (e): line 8 + line 17)							442.3

See Ex. C2-1-1 Table 5a for notes

Table 5a
Impact of Current Approved ONFA Reference Plan on Nuclear Liabilities Costs ($M)
Years Ending December 31, 2010 to 2015
Notes to Ex. C2-1-1, Table 5

Notes:

1 "Without Current Approved ONFA Reference Plan" amounts are derived from a base case calculation of ARC, ARO and Segregated Funds using the same assumptions for baseline cost estimates, discount rates and accounting station end-of-life dates as those underlying amounts reflected in the payment amounts approved in EB-2010-0008 (i.e., prior to impact of current approved ONFA Reference Plan).

2 Average ARC is less than average UNL (Ex. C2-1-1, Page 3, note 2); therefore, the forecast average ARC earns a return at the weighted average accretion rate.

Table to Note 2 ($M)

Line No.	Amounts Prior to Implementation of Current Approved ONFA Reference Plan	2012 Actual	2013 Budget	2014 Plan	2015 Plan
		(a)	(b)	(c)	(d)
1a	ARC Opening Balance (col. (a) from Ex. C2-1-1 Table 2, col. (b), line 28)	1,475.4	1,446.4	1,417.3	1,388.3
2a	Depreciation Expense (Ex. C2-1-1 Table 2, col. (b), line 27)	(29.0)	(29.0)	(29.0)	(29.0)
3a	ARC Closing Balance (line 1a - line 2a)	1,446.4	1,417.3	1,388.3	1,359.2
4a	Average ARC (cols. (c) and (d): (line 1a + line 3a) / 2)			1,402.8	1,373.8
5a	Weighted Average Accretion Rate Approved in EB-2010-0008			5.58%	5.58%
6a	Return on Rate Base (cols. (c) and (d): line 4a x line 5a)			78.3	76.7

3 The income tax impact for prescribed facilties without the Current Approved ONFA Reference Plan is calculated as follows:

Table to Note 3 ($M)

Line No.	Item	2014 Plan	2015 Plan
		(a)	(b)
1b	Increase in Regulatory Taxable Income Before Impact of Segregated Fund Contributions (Ex. C2-1-1, Table 5, line 6)	139.8	140.0
2b	Contributions to Nuclear Segregated Funds for Prescribed Facilities Per Previous Approved ONFA Reference Plan	79.0	81.0
3b	Net Increase in Regulatory Taxable Income (line 1b - line 2b)	60.8	59.0
4b	Income Tax Rate (Ex. F4-2-1 Table 5 line 29)	25.00%	25.00%
5b	Income Tax Impact (line 3b x line 4b / (1 - line 4b))	20.3	19.7

4 The Bruce Facilities' income tax impact is calculated in the same manner as in Ex. C2-1-1, Table 1a, note 3, as follows:

Table to Note 4 ($M)

Line No.		2014 Plan	2015 Plan
		(a)	(b)
	Short-Term Temporary Differences:		
1c	Increase in Short-Term Temporary Differences - Depreciation Expense (Ex. C2-1-1 Table 5, cols. (c) and (d), line 9)	26.7	26.7
2c	Income Tax Rate - Current (Ex. G2-2-1 Table 8, line 50)	25.00%	25.00%
3c	Increase in Deferred Income Taxes - Short-Term	(6.7)	(6.7)
3c			
	Long-Term Temporary Differences:		
4c	Increase in Long-Term Temporary Differences - All Other Expenses (Ex. C2-1-1 Table 5, cols. (c) and (d), lines 10 through 13)	16.4	15.8
5c	Income Tax Rate - Long-Term (Ex. G2-2-1 Table 8, line 54)	25.00%	25.00%
6c	Increase in Deferred Income Taxes - Long-Term	(4.1)	(4.0)
7c	Impact on Bruce Facilities' Income Taxes (line 3c + line 6c)	(10.8)	(10.6)

5 Calculated as amount at Ex. C2-1-1 Table 5, line 15 x tax rate / (1 - tax rate). The income tax rates are from Ex. F4-2-1 Table 5, line 29.