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 IR term. It also provides details of OPG's existing and planned long-term borrowing and associated costs for 2016 to 2026.

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 IR term is provided in Ex. C1-1-1, Tables 1 through 11.

OPG established a Medium Term Notes program in September 2017 to access the public debt market. The Medium Term Notes program diversifies OPG's source of funding beyond the existing credit facility with the Ontario Electricity Financial Corporation ("OEFC"), with comparable financing costs.

In line with OPG's focus on supporting climate change strategies, certain of the Medium Term Notes are issued as Green Bonds to finance eligible projects that offer tangible environmental benefits, as defined under OPG's Green Bond Framework, such as investments that help to supply energy from renewable sources. OPG's inaugural Green Bond issuance was in 2018.

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 previous payment amounts proceedings.

3.0 METHODOLOGY

3.1 Project-Related Long-Term Debt Issues

OPG assigns all existing and planned financing related to specific projects and other investments to regulated or unregulated operations based on whether the investment is related to its regulated assets. This approach includes the Green Bond portion of the long-term debt portfolio, which is assigned on the basis of the actual allocation of funding proceeds to underlying eligible projects and investments. All financing related to projects and other specific investments that is not associated with OPG's regulated assets is assigned to unregulated operations.

3.2 Corporate Long-Term Debt Issues

The portfolio of long-term debt remaining after assignment of financing related to specific projects and other investments is allocated to regulated and unregulated operations ("remaining long-term debt").

For the IR term, OPG has applied the allocation methodology approved by the OEB in prior payment amounts proceedings. Under this methodology, the book value of OPG's net fixed assets (gross fixed assets less accumulated depreciation plus construction work in progress plus other debt funded assets) is used to allocate the remaining long-term debt.[1] The net fixed asset values are adjusted to remove asset values that were financed pursuant to project-related 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 remaining 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.

The allocation ratios are used to allocate company-wide borrowing in Ex. C1-1-2, Table 2 (2016) through Ex. C1-1-2, Table 12 (2026). The allocation ratios are calculated in Ex. C1-1-2, Table 1. Consistent with the approach in prior payment amounts proceedings, OPG has

[1] "Other funded assets" includes OPG debt funded portion of long-term receivable balance from Fair Hydro Trust, which arose subsequent to EB-2016-0152 and is not part of regulated operations.

used information from its most recent audited financial statements (2019) to develop the allocation factor for 2020 to 2026.

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 5) provide the actual cost of debt issued and outstanding between January 1, 2016 and December 31, 2019.[2] The average remaining term of these long-term debt issues is approximately 17 years as at December 31, 2019.

Existing OEFC corporate debt and Medium Term Notes 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 both the OEFC credit agreement and the Trust Indenture 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, 2019, as reflected in OPG's 2019 financial results, is $8,233M. Project-related debt for OPG's regulated operations includes $575M of debt held by the OEFC for the Niagara Tunnel, $418M of green bond proceeds assigned to regulated hydroelectric projects and $25M of nuclear related insurance-linked bonds.[3] The portion of project-related debt directly associated with unregulated operations is $4,155M. The remaining $3,060M of corporate debt is allocated to regulated and unregulated operations based on the methodology described in Section 3.2.

4.2 Interest Rate on Planned New Debt Issues

The rate of interest on OPG's debt is determined using the same methodology as described in prior OEB payment amounts applications. For both the Medium Term Notes and the OEFC debt, interest rates are determined based on market conditions as well as OPG specific

[2] Long-term debt outstanding prior to January 1, 2016 is detailed in EB-2016-0152 Ex. C1-1-2 Table 2 (2013), Table 3 (2014) and Table 4 (2015).
[3] Insurance-linked bonds are denoted as “ILB” in tables accompanying this schedule.

credit considerations. In considering OPG specific credit conditions, investors analyze OPG's creditworthiness with the use of available information, including comparing credit ratings of issuers and credit opinion reports from the credit rating agencies. As a result, the interest rate of the Medium Term Notes and the OEFC debt is comparable.

For the OEFC debt, the interest 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.[4] Similarly, the interest rate for the Medium Term Notes is based on the benchmark Government of Canada bond rate plus the credit spread set by the capital market at the time the note is offered to investors.

The cost of planned new and refinanced corporate debt and project-related debt for 2020 to 2026 is based on a forecast of the 10-year Long Canada Bond published in September 2020 by Global Insight, a third party independent market source, as shown in Chart 1.

Chart 1:
Forecast 10-year Long Canada Bond Rates (%)

Year	Q1	Q2	Q3	Q4
2021	0.64	0.71	0.79	0.88
2022	0.95	1.03	1.1	1.16
2023	1.21	1.22	1.24	1.27
2024	1.3	1.36	1.41	1.47
2025	1.53	1.6	1.66	1.72
2026	1.79	1.86	1.92	1.99

[4] 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 a particular project.

OPG's credit spread at September 30, 2020 was 148 basis points. This spread has been added to the Global Insight rates noted in Chart 1 to determine the forecast rate for OPG's planned debt in 2021-2026, as shown in Chart 2.[5]

Chart 2:
Forecast 10-year Long Canada Bond Rates Plus Credit Risk Spread (%)

Year	Q1	Q2	Q3	Q4
2021	2.12	2.19	2.27	2.36
2022	2.43	2.51	2.58	2.64
2023	2.69	2.70	2.72	2.75
2024	2.78	2.84	2.89	2.95
2025	3.01	3.08	3.14	3.20
2026	3.27	3.34	3.40	3.47

4.3 Planned Long-Term Debt Issues

The total amounts of planned debt issues (total corporate and prescribed facilities projected-related) are listed in Ex. C1-1-2, Table 7a (2021), Table 8a (2022), Table 9a (2023), Table 10a (2024), Table 11a (2025), and Table 12a (2026). Maturing and new debt issues (total corporate and Niagara Tunnel) are summarized in Chart 3 below.

Chart 3:
Long-Term Debt Retirements and Planned Issues ($M)

	2021	2022	2023	2024	2025	2026	Total
Debt Issues Maturing	$185	$175	$40	$400	$0	$50	$850
Planned New Debt Issues	$200	$550	$75	$0	$0	$0	$825

[5] There are no remaining forecasted debt issues in 2020. Ex. C1-1-2, Tables 6 and 6a reflect actual issues during the year.

Included in the planned new debt issues above is $100M of debt attributed to the Sir Adam Beck I Hydroelectric GS Units G1 and G2 Replacement project, which is directly assigned to the regulated operations in the calculation of the long-term debt cost. OPG expects to issue Green Bonds in 2022 toward this project.

5.0 OTHER LONG-TERM DEBT

As discussed above, OPG finances long-term assets with long-term financing. Consistent with the methodology approved in prior OPG proceedings, 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 prior OPG proceedings, 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 2016	2017	2018	2019
			(a)	(b)	(c)	(d)
	Company-Wide:					
1	**Net Fixed Assets**	6	16,594.0	17,383.6	18,094.3	20,372.8
2	**Construction Work in Progress**	7	3,502.9	4,130.4	5,238.2	6,027.8
3	**Asset Values Using Project Financing**		(4,681.3)	(4,659.9)	(5,622.3)	(7,505.1)
4	**Adjusted Net Fixed Assets**		15,415.5	16,854.2	17,710.3	18,895.6
5	**Adjustment for Lesser of UNL or ARC**	1,2	4,661.3	3,131.0	3,383.8	3,339.1
6	**Adjusted Net Fixed Funded Assets** (line 4 - line 5)		10,754.2	13,723.3	14,326.5	15,556.5
	Regulated Operations					
7	**Net Fixed Assets**	3	10,005.0	10,536.2	10,671.5	11,143.3
8	**Construction Work in Progress**	7	3,156.4	4,011.9	5,060.3	5,891.5
9	**Asset Values Using Project Financing**	4	(1,346.0)	(1,330.7)	(1,650.2)	(1,706.8)
10	**Adjusted Net Fixed Assets**		11,815.4	13,217.4	14,081.6	15,328.0
11	**Adjustment for Lesser of UNL or ARC**	1, 5	825.7	505.1	570.6	488.5
12	**Adjusted Net Fixed Funded Assets** (line 10 - line 11)		10,989.7	12,712.3	13,510.9	14,839.6
13	**Total Regulated/Company-Wide Adjusted Net Fixed Funded Assets**		100.0%	92.6%	94.3%	95.4%
	(line 12 / line 6 if <100%)					

Notes:

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

2 Methodology is as reflected in the prior OPG payment amounts applications. Company-wide adjustment is derived as follows:

Table to Note 2

Line No.	Company-Wide Lesser of UNL and ARC	2016	2017	2018	2019
		(a)	(b)	(c)	(d)
	Company-Wide UNL:				
1a	C2-1-1 Table 2, line 21	1,063.1	703.9	753.6	672.1
2a	C2-1-1 Table 3, line 12	11,170.2	10,284.0	10,741.5	11,157.6
3a	C2-1-1 Table 3, line 18	7,572.0	7,856.9	8,111.3	8,375.8
4a	= Company Wide UNL	4,661.3	3,131.0	3,383.8	3,454.0
	Company-Wide ARC:				
5a	C2-1-1 Table 2, line 28	825.7	505.1	570.6	488.5
6a	+ C2-1-1 Table 3, line 25	4,340.8	2,943.8	2,919.8	2,850.6
7a	= Company Wide ARC	5,166.5	3,448.9	3,490.4	3,339.1
8a	Lesser of Company Wide UNL and ARC	4,661.3	3,131.0	3,383.8	3,339.1

3 Represents closing net book value of property, plant & equipment and intangible assets of the regulated business reflected in the calculation of actual rate base.

4 Represents the closing net book value of the Niagara Tunnel Project and, beginning in 2018, regulated operations projects funded by Green Bonds.

5 From Ex. C2-1-1 Table 2, line 30.

6 Represents closing net book value of property, plant & equipment and intangible assets, and other debt funded assets of OPG's consolidated

7 The term "adjusted" included in the line description in previous applications has been removed for greater clarity; there has been no change to the underlying methodology or values.

Table 2
Capitalization and Cost of Capital
Summary of Existing Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2016

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 to 16 and Issues 22 and 24 Matured Prior to 2016							
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 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
7	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
8	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
9	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
10	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
11	**Issue 29**	1	5.5	11/22/2016	10.0	11/22/2026	3.04%	0.2
12	**Issue 30**	2	5.5	11/22/2016	30.0	11/22/2046	4.03%	0.2
13	**Total**		1,971.0				5.04%	99.3
	Regulated Portion of Company-Wide Borrowing							
14	**Allocation**	5	1,971.0				5.04%	99.3
	Project Financing - Regulated Projects							
15	**Niagara 1**	4	129.8	10/22/2006	10.0	10/22/2016	5.23%	6.8
16	**Niagara 2**		50.0	1/22/2007	10.0	1/22/2017	5.10%	2.5
17	**Niagara 3**		30.0	4/23/2007	10.0	4/22/2017	5.09%	1.5
18	**Niagara 4**		40.0	1/22/2008	10.0	1/22/2018	5.53%	2.2
19	**Niagara 5**		30.0	4/22/2008	10.0	4/22/2018	5.90%	1.8
20	**Niagara 6**		30.0	7/22/2008	10.0	7/22/2018	5.87%	1.8
21	**Niagara 7**		30.0	1/22/2009	10.0	1/22/2019	8.41%	2.5
22	**Niagara 8**		35.0	4/22/2009	10.0	4/22/2019	7.71%	2.7
23	**Niagara 9**		35.0	7/22/2009	10.0	7/22/2019	6.41%	2.2
24	**Niagara 10**		50.0	10/22/2009	10.0	10/22/2019	5.63%	2.8
25	**Niagara 11**		50.0	1/22/2010	10.0	1/22/2020	5.44%	2.7
26	**Niagara 12**		65.0	4/22/2010	10.0	4/22/2020	5.73%	3.7
27	**Niagara 13**		35.0	7/22/2010	10.0	7/22/2020	5.57%	1.9
28	**Niagara 14**		50.0	10/22/2010	10.0	10/22/2020	4.87%	2.4
29	**Niagara 15**		40.0	1/24/2011	10.0	1/22/2021	5.18%	2.1
30	**Niagara 16**		35.0	4/26/2011	10.0	4/22/2021	5.34%	1.9
31	**Niagara 17**		50.0	7/22/2011	10.0	7/22/2021	5.24%	2.6
32	**Niagara 18**		60.0	10/24/2011	10.0	10/22/2021	5.74%	3.4
33	**Niagara 19**		40.0	1/22/2012	10.0	1/22/2022	5.50%	2.2
34	**Niagara 20**		35.0	4/22/2012	10.0	4/22/2022	5.36%	1.9
35	**Niagara 21**		45.0	7/22/2012	10.0	7/22/2022	5.51%	2.5
36	**Niagara 22**		30.0	10/22/2012	10.0	10/22/2022	5.52%	1.7
37	**Niagara 23**		20.0	1/22/2013	10.0	1/22/2023	5.35%	1.1
38	**Niagara 24**		20.0	4/22/2013	10.0	4/22/2023	5.37%	1.1
39	**ILB 1**	3	0.1	12/29/2016	5.0	1/4/2022	5.69%	0.0
40	**Total**		1,034.9				5.61%	58.1
	Total Regulated Funded Long-Term Debt							
41	Line 14+40		3,005.8				5.23%	157.3

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, 2016
Notes to Ex. C1-1-2, Table 2

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 29	11/22/2016	50.0	40.0	5.5
Note 2	Issue 30	11/22/2016	50.0	40.0	5.5
Note 3	ILB 1	12/29/2016	15.0	3.0	0.1
	Issue	Maturity Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 4	Niagara 1	10/22/2016	160.0	296.0	129.8

Note 5 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (a).

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, 2017

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 to 16 and Issues 22 and 24 Matured Prior to 2017							
1	**Issue 17**	7	47.1	6/22/2007	10.0	6/22/2017	5.44%	2.6
2	**Issue 18**	8	144.7	9/24/2007	10.0	9/22/2017	5.53%	8.0
3	**Issue 19**	9	289.3	12/21/2007	9.8	9/22/2017	5.31%	15.4
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 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
7	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
8	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
9	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
10	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
11	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.5
12	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
13	**Issue 31**	1	171.5	2/22/2017	30.0	2/22/2047	4.12%	7.1
14	**Issue 32**	2	52.9	6/22/2017	30.0	6/22/2047	3.65%	1.9
15	**Issue 33**	3	36.2	8/22/2017	30.0	8/22/2047	3.86%	1.4
16	**Issue 34**	4	110.7	9/22/2017	30.0	9/22/2047	4.07%	4.5
17	**Issue 35**	5, 13	123.8	10/2/2017	10.0	10/4/2027	3.43%	4.2
18	**Total**		2,336.1				4.70%	109.7
	Regulated Portion of Company-Wide Borrowing							
19	**Allocation**	12	2,164.0				4.70%	101.6
	Project Financing - Regulated Projects							
	Niagara 1 Matured Prior to 2017							
20	**Niagara 2**	10	2.9	1/22/2007	10.0	1/22/2017	5.10%	0.1
21	**Niagara 3**	11	9.1	4/23/2007	10.0	4/22/2017	5.09%	0.5
22	**Niagara 4**		40.0	1/22/2008	10.0	1/22/2018	5.53%	2.2
23	**Niagara 5**		30.0	4/22/2008	10.0	4/22/2018	5.90%	1.8
24	**Niagara 6**		30.0	7/22/2008	10.0	7/22/2018	5.87%	1.8
25	**Niagara 7**		30.0	1/22/2009	10.0	1/22/2019	8.41%	2.5
26	**Niagara 8**		35.0	4/22/2009	10.0	4/22/2019	7.71%	2.7
27	**Niagara 9**		35.0	7/22/2009	10.0	7/22/2019	6.41%	2.2
28	**Niagara 10**		50.0	10/22/2009	10.0	10/22/2019	5.63%	2.8
29	**Niagara 11**		50.0	1/22/2010	10.0	1/22/2020	5.44%	2.7
30	**Niagara 12**		65.0	4/22/2010	10.0	4/22/2020	5.73%	3.7
31	**Niagara 13**		35.0	7/22/2010	10.0	7/22/2020	5.57%	1.9
32	**Niagara 14**		50.0	10/22/2010	10.0	10/22/2020	4.87%	2.4
33	**Niagara 15**		40.0	1/24/2011	10.0	1/22/2021	5.18%	2.1
34	**Niagara 16**		35.0	4/26/2011	10.0	4/22/2021	5.34%	1.9
35	**Niagara 17**		50.0	7/22/2011	10.0	7/22/2021	5.24%	2.6
36	**Niagara 18**		60.0	10/24/2011	10.0	10/22/2021	5.74%	3.4
37	**Niagara 19**		40.0	1/22/2012	10.0	1/22/2022	5.50%	2.2
38	**Niagara 20**		35.0	4/22/2012	10.0	4/22/2022	5.36%	1.9
39	**Niagara 21**		45.0	7/22/2012	10.0	7/22/2022	5.51%	2.5
40	**Niagara 22**		30.0	10/22/2012	10.0	10/22/2022	5.52%	1.7
41	**Niagara 23**		20.0	1/22/2013	10.0	1/22/2023	5.35%	1.1
42	**Niagara 24**		20.0	4/22/2013	10.0	4/22/2023	5.37%	1.1
43	**ILB 1**		15.0	12/29/2016	5.0	1/4/2022	5.85%	0.9
44	**ILB 2**	6	0.0	12/29/2017	4.0	1/4/2022	6.29%	0.0
45	**Total**		852.0				5.72%	48.7
	Total Regulated Funded Long-Term Debt							
46	Line 19+45		3,016.0				4.99%	150.4

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, 2017
Notes to Ex. C1-1-2, Table 3

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 31	2/22/2017	200.0	313.0	171.5
Note 2	Issue 32	6/22/2017	100.0	193.0	52.9
Note 3	Issue 33	8/22/2017	100.0	132.0	36.2
Note 4	Issue 34	9/22/2017	400.0	101.0	110.7
Note 5	Issue 35	10/2/2017	496.5	91.0	123.8
Note 6	ILB 2	12/29/2017	4.3	3.0	0.0
	Issue	Maturity Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 7	Issue 17	6/22/2017	100.0	172.0	47.1
Note 8	Issue 18	9/22/2017	200.0	264.0	144.7
Note 9	Issue 19	9/22/2017	400.0	264.0	289.3
Note 10	Niagara 2	1/22/2017	50.0	21.0	2.9
Note 11	Niagara 3	4/22/2017	30.0	111.0	9.1

Note 12 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (b).
Note 13 Issuance costs of $3.5M are deducted from the face value

Table 4
Capitalization and Cost of Capital
Summary of Existing Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2018

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 to 19 and Issues 22 and 24 Matured Prior to 2018							
1	**Issue 20**	5	43.8	3/22/2008	10.0	3/22/2018	5.35%	2.3
2	**Issue 21**		100.0	3/22/2009	10.0	3/22/2019	5.65%	5.7
3	**Issue 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
4	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
5	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
6	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
7	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
8	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.5
9	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
10	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.2
11	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.6
12	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.9
13	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.3
14	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.0
15	**Issue 36**	1	188.5	1/22/2018	30.0	1/22/2048	3.87%	7.3
16	**Issue 37**	2	312.3	3/22/2018	30.0	3/22/2048	4.00%	12.5
17	**Total**		3,001.1				4.17%	125.1
	Regulated Portion of Company-Wide Borrowing							
18	**Allocation**	9	2,830.3				4.17%	118.0
	Project Financing - Regulated Projects							
	Niagara 1 to 3 Matured Prior to 2018							
19	**Niagara 4**	6	2.3	1/22/2008	10.0	1/22/2018	5.53%	0.1
20	**Niagara 5**	7	9.1	4/22/2008	10.0	4/22/2018	5.90%	0.5
21	**Niagara 6**	8	16.6	7/22/2008	10.0	7/22/2018	5.87%	1.0
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**		20.0	1/22/2013	10.0	1/22/2023	5.35%	1.1
39	**Niagara 24**		20.0	4/22/2013	10.0	4/22/2023	5.37%	1.1
40	**ILB 1**		15.0	12/29/2016	5.0	1/4/2022	6.53%	1.0
41	**ILB 2**		4.3	12/29/2017	4.0	1/4/2022	6.53%	0.3
42	**ILB 3**	4	0.0	12/31/2018	3.0	1/4/2022	7.06%	0.0
43	**Green Bond 1**	3	180.8	6/22/2018	30.0	6/22/2048	3.92%	7.1
44	**Total**		953.2				5.40%	51.5
	Total Regulated Funded Long-Term Debt							
45	Line 18+44		3,783.4				4.48%	169.5

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 Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2018
Notes to Ex. C1-1-2, Table 4

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 36	1/22/2018	200.0	344.0	188.5
Note 2	Issue 37	3/22/2018	400.0	285.0	312.3
Note 3	Green Bond 1	6/22/2018	342.0	193.0	180.8
Note 4	ILB 3	12/31/2018	2.2	1.0	0.0
	Issue	Maturity Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 5	Issue 20	3/22/2018	200.0	80.0	43.8
Note 6	Niagara 4	1/22/2018	40.0	21.0	2.3
Note 7	Niagara 5	4/22/2018	30.0	111.0	9.1
Note 8	Niagara 6	7/22/2018	30.0	202.0	16.6

Note 9 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (c).

Table 5
Capitalization and Cost of Capital
Summary of Existing Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2019

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 to 20 and Issues 22 and 24 Matured Prior to 2019							
1	**Issue 21**	4	22.2	3/22/2009	10.0	3/22/2019	5.65%	1.3
2	**Issue 23**		230.0	3/22/2010	10.0	3/22/2020	4.68%	10.8
3	**Issue 25**		230.0	9/22/2010	10.0	9/22/2020	4.39%	10.1
4	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
5	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
6	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
7	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.5
8	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
9	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.2
10	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.6
11	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.9
12	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.3
13	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.0
14	**Issue 36**		200.0	1/22/2018	30.0	1/22/2048	3.87%	7.7
15	**Issue 37**		400.0	3/22/2018	30.0	3/22/2048	4.00%	16.0
16	**Issue 38**	2	36.2	8/22/2019	20.0	8/22/2039	3.49%	1.3
17	**Total**		3,014.8				4.10%	123.6
	Regulated Portion of Company-Wide Borrowing							
18	**Allocation**	9	2,875.9				4.10%	117.9
	Project Financing - Regulated Projects							
	Niagara 1 to 6 Matured Prior to 2019							
19	**Niagara 7**	5	1.8	1/22/2009	10.0	1/22/2019	8.41%	0.2
20	**Niagara 8**	6	10.7	4/22/2009	10.0	4/22/2019	7.71%	0.8
21	**Niagara 9**	7	19.5	7/22/2009	10.0	7/22/2019	6.41%	1.2
22	**Niagara 10**	8	40.4	10/22/2009	10.0	10/22/2019	5.63%	2.3
23	**Niagara 11**		50.0	1/22/2010	10.0	1/22/2020	5.44%	2.7
24	**Niagara 12**		65.0	4/22/2010	10.0	4/22/2020	5.73%	3.7
25	**Niagara 13**		35.0	7/22/2010	10.0	7/22/2020	5.57%	1.9
26	**Niagara 14**		50.0	10/22/2010	10.0	10/22/2020	4.87%	2.4
27	**Niagara 15**		40.0	1/24/2011	10.0	1/22/2021	5.18%	2.1
28	**Niagara 16**		35.0	4/26/2011	10.0	4/22/2021	5.34%	1.9
29	**Niagara 17**		50.0	7/22/2011	10.0	7/22/2021	5.24%	2.6
30	**Niagara 18**		60.0	10/24/2011	10.0	10/22/2021	5.74%	3.4
31	**Niagara 19**		40.0	1/22/2012	10.0	1/22/2022	5.50%	2.2
32	**Niagara 20**		35.0	4/22/2012	10.0	4/22/2022	5.36%	1.9
33	**Niagara 21**		45.0	7/22/2012	10.0	7/22/2022	5.51%	2.5
34	**Niagara 22**		30.0	10/22/2012	10.0	10/22/2022	5.52%	1.7
35	**Niagara 23**		20.0	1/22/2013	10.0	1/22/2023	5.35%	1.1
36	**Niagara 24**		20.0	4/22/2013	10.0	4/22/2023	5.37%	1.1
37	**ILB 1**		15.0	12/29/2016	5.0	1/4/2022	6.82%	1.0
38	**ILB 2**		4.3	12/29/2017	4.0	1/4/2022	6.82%	0.3
39	**ILB 3**		2.2	12/31/2018	3.0	1/4/2022	6.82%	0.1
40	**ILB 4**	3	0.0	12/31/2019	2.0	1/4/2022	6.83%	0.0
41	**Green Bond 1**	10	417.1	6/22/2018	30.0	6/22/2048	3.92%	16.3
42	**Green Bond 2**	1	0.4	1/18/2019	30.0	1/18/2049	4.34%	0.0
43	**Total**		1,086.4				4.93%	53.5
	Total Regulated Funded Long-Term Debt							
44	Line 18+43		3,962.3				4.33%	171.4

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 Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2019
Notes to Ex. C1-1-2, Table 5

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Green Bond 2	1/18/2019	0.4	350.0	0.4
Note 2	Issue 38	8/22/2019	100.0	132.0	36.2
Note 3	ILB 4	12/31/2019	3.5	1.0	0.0
	Issue	Maturity Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 4	Issue 21	3/22/2019	100.0	81.0	22.2
Note 5	Niagara 7	1/22/2019	30.0	22.0	1.8
Note 6	Niagara 8	4/22/2019	35.0	112.0	10.7
Note 7	Niagara 9	7/22/2019	35.0	203.0	19.5
Note 8	Niagara 10	10/22/2019	50.0	295.0	40.4

Note 9 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (d).

Note 10 An additional portion of Green Bond 1 proceeds was allocated to fund regulated projects during 2019, following an initial assignment in 2018.

Table 6
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2020

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 to 22 and Issue 24 Matured Prior to 2020							
1	**Issue 23**	2	51.5	3/22/2010	10.0	3/22/2020	4.68%	2.4
2	**Issue 25**	3	167.2	9/22/2010	10.0	9/22/2020	4.39%	7.3
3	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
4	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
5	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
6	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.5
7	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
8	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.2
9	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.6
10	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.9
11	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.3
12	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.0
13	**Issue 36**		200.0	1/22/2018	30.0	1/22/2048	3.87%	7.7
14	**Issue 37**		400.0	3/22/2018	30.0	3/22/2048	4.00%	16.0
15	**Issue 38**		100.0	8/22/2019	20.0	8/22/2039	3.49%	3.5
16	**Issue 39**	1	318.0	3/16/2020	4.0	3/16/2024	1.75%	5.6
17	**Total**		3,133.2				3.80%	119.0
	Regulated Portion of Company-Wide Borrowing							
18	**Allocation**	8	2,988.8				3.80%	113.6
	Project Financing - Regulated Projects							
	Niagara 1 to 10 Matured Prior to 2020							
19	**Niagara 11**	4	3.0	1/22/2010	10.0	1/22/2020	5.44%	0.2
20	**Niagara 12**	5	20.1	4/22/2010	10.0	4/22/2020	5.73%	1.2
21	**Niagara 13**	6	19.5	7/22/2010	10.0	7/22/2020	5.57%	1.1
22	**Niagara 14**	7	40.4	10/22/2010	10.0	10/22/2020	4.87%	2.0
23	**Niagara 15**		40.0	1/24/2011	10.0	1/22/2021	5.18%	2.1
24	**Niagara 16**		35.0	4/26/2011	10.0	4/22/2021	5.34%	1.9
25	**Niagara 17**		50.0	7/22/2011	10.0	7/22/2021	5.24%	2.6
26	**Niagara 18**		60.0	10/24/2011	10.0	10/22/2021	5.74%	3.4
27	**Niagara 19**		40.0	1/22/2012	10.0	1/22/2022	5.50%	2.2
28	**Niagara 20**		35.0	4/22/2012	10.0	4/22/2022	5.36%	1.9
29	**Niagara 21**		45.0	7/22/2012	10.0	7/22/2022	5.51%	2.5
30	**Niagara 22**		30.0	10/22/2012	10.0	10/22/2022	5.52%	1.7
31	**Niagara 23**		20.0	1/22/2013	10.0	1/22/2023	5.35%	1.1
32	**Niagara 24**		20.0	4/22/2013	10.0	4/22/2023	5.37%	1.1
33	**ILB 1**		15.0	12/29/2016	5.0	1/4/2022	5.84%	0.9
34	**ILB 2**		4.3	12/29/2017	4.0	1/4/2022	5.84%	0.3
35	**ILB 3**		2.2	12/31/2018	3.0	1/4/2022	5.84%	0.1
36	**ILB 4**		3.5	12/31/2019	2.0	1/4/2022	5.84%	0.2
37	**Green Bond 1**		417.1	6/22/2018	30.0	6/22/2048	3.92%	16.3
38	**Green Bond 2**		0.4	1/18/2019	30.0	1/18/2049	4.34%	0.0
39	**Total**		900.5				4.73%	42.6
	Total Regulated Funded Long-Term Debt							
40	Line 18+39		3,889.3				4.01%	156.1

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, 2020
Notes to Ex. C1-1-2, Table 6

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 39	3/16/2020	400.0	291.0	318.0
	Issue	Maturity Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 2	Issue 23	3/22/2020	230.0	82.0	51.5
Note 3	Issue 25	9/22/2020	230.0	266.0	167.2
Note 4	Niagara 11	1/22/2020	50.0	22.0	3.0
Note 5	Niagara 12	4/22/2020	65.0	113.0	20.1
Note 6	Niagara 13	7/22/2020	35.0	204.0	19.5
Note 7	Niagara 14	10/22/2020	50.0	296.0	40.4

Note 8 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (d).
The 2019 allocation ratio is used as it reflects OPG's most recent financial results.

Table 7
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2021

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 to 25 Mature Prior to 2021							
1	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.096
2	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.110
3	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.712
4	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.519
5	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.014
6	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.245
7	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.648
8	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.858
9	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.265
10	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.018
11	**Issue 36**		200.0	1/22/2018	30.0	1/22/2048	3.87%	7.748
12	**Issue 37**		400.0	3/22/2018	30.0	3/22/2048	4.00%	15.987
13	**Issue 38**		100.0	8/22/2019	20.0	8/22/2039	3.49%	3.488
14	**Issue 39**		400.0	3/16/2020	4.0	3/16/2024	1.75%	7.016
15	**Issue 40**	1,8	75.6	3/31/2021	10.0	3/31/2031	2.12%	1.603
16	**Issue 41**	2,8	25.5	9/30/2021	10.0	9/30/2031	2.27%	0.578
17	**Total**		3,097.5				3.64%	112.905
	Regulated Portion of Company-Wide Borrowing							
18	**Allocation**	7	2,954.8				3.64%	107.7
	Project Financing - Regulated Projects							
	Niagara 1 to 14 Mature Prior to 2021							
19	**Niagara 15**	3	2.4	1/24/2011	10.0	1/22/2021	5.18%	0.1
20	**Niagara 16**	4	10.7	4/26/2011	10.0	4/22/2021	5.34%	0.6
21	**Niagara 17**	5	27.8	7/22/2011	10.0	7/22/2021	5.24%	1.5
22	**Niagara 18**	6	48.5	10/24/2011	10.0	10/22/2021	5.74%	2.8
23	**Niagara 19**		40.0	1/22/2012	10.0	1/22/2022	5.50%	2.2
24	**Niagara 20**		35.0	4/22/2012	10.0	4/22/2022	5.36%	1.9
25	**Niagara 21**		45.0	7/22/2012	10.0	7/22/2022	5.51%	2.5
26	**Niagara 22**		30.0	10/22/2012	10.0	10/22/2022	5.52%	1.7
27	**Niagara 23**		20.0	1/22/2013	10.0	1/22/2023	5.35%	1.1
28	**Niagara 24**		20.0	4/22/2013	10.0	4/22/2023	5.37%	1.1
29	**ILB 1**		15.0	12/29/2016	5.0	1/4/2022	5.84%	0.9
30	**ILB 2**		4.3	12/29/2017	4.0	1/4/2022	5.84%	0.3
31	**ILB 3**		2.2	12/31/2018	3.0	1/4/2022	5.84%	0.1
32	**ILB 4**		3.5	12/31/2019	2.0	1/4/2022	5.84%	0.2
33	**Green Bond 1**		417.1	6/22/2018	30.0	6/22/2048	3.92%	16.3
34	**Green Bond 2**		0.4	1/18/2019	30.0	1/18/2049	4.34%	0.0
35	**Total**		722.0				4.59%	33.1
	Total Regulated Funded Long-Term Debt							
36	Line 18+35		3,676.7				3.83%	140.8

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, 2021
Notes to Ex. C1-1-2, Table 7

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 40	3/31/2021	100.0	276.0	75.6
Note 2	Issue 41	9/30/2021	100.0	93.0	25.5
	Issue	Maturity Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 3	Niagara 15	1/22/2021	40.0	22.0	2.4
Note 4	Niagara 16	4/22/2021	35.0	112.0	10.7
Note 5	Niagara 17	7/22/2021	50.0	203.0	27.8
Note 6	Niagara 18	10/22/2021	60.0	295.0	48.5

Note 7 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (d).
The 2019 allocation ratio is used as it reflects OPG's most recent financial results.

Note 8 Future issue rate reference Global Insight (September 2020).

Issue 40

GOC & OPG Spread	
GOC Q1-21	0.64%
OPG Spread	1.48%
Effective Rate	2.12%

Issue 41

GOC & OPG Spread	
GOC Q3-21	0.79%
OPG Spread	1.48%
Effective Rate	2.27%

Table 8
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2022

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 to 25 Mature Prior to 2022							
1	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
2	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
3	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
4	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.5
5	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
6	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.2
7	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.6
8	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.9
9	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.3
10	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.0
11	**Issue 36**		200.0	1/22/2018	30.0	1/22/2048	3.87%	7.7
12	**Issue 37**		400.0	3/22/2018	30.0	3/22/2048	4.00%	16.0
13	**Issue 38**		100.0	8/22/2019	20.0	8/22/2039	3.49%	3.5
14	**Issue 39**		400.0	3/16/2020	4.0	3/16/2024	1.75%	7.0
15	**Issue 40**		100.0	3/31/2021	10.0	3/31/2031	2.12%	2.1
16	**Issue 41**		100.0	9/30/2021	10.0	9/30/2031	2.27%	2.3
17	**Issue 42**	1,13	127.8	3/31/2022	10.0	3/31/2032	2.43%	3.1
18	**Issue 43**	2,13	70.1	9/30/2022	10.0	9/30/2032	2.58%	1.8
19	**Total**		3,394.3				3.54%	120.0
	Regulated Portion of Company-Wide Borrowing							
20	**Allocation**	12	3,237.9				3.54%	114.5
	Project Financing - Regulated Projects							
	Niagara 1 to 18 Mature Prior to 2022							
21	**Niagara 19**	4	2.3	1/22/2012	10.0	1/22/2022	5.50%	0.1
22	**Niagara 20**	5	10.6	4/22/2012	10.0	4/22/2022	5.36%	0.6
23	**Niagara 21**	6	24.9	7/22/2012	10.0	7/22/2022	5.51%	1.4
24	**Niagara 22**	7	24.2	10/22/2012	10.0	10/22/2022	5.52%	1.3
25	**Niagara 23**		20.0	1/22/2013	10.0	1/22/2023	5.35%	1.1
26	**Niagara 24**		20.0	4/22/2013	10.0	4/22/2023	5.37%	1.1
27	**ILB 1**	8	0.1	12/29/2016	5.0	1/4/2022	5.84%	0.0
28	**ILB 2**	9	0.0	12/29/2017	4.0	1/4/2022	5.84%	0.0
29	**ILB 3**	10	0.0	12/31/2018	3.0	1/4/2022	5.84%	0.0
30	**ILB 4**	11	0.0	12/31/2019	2.0	1/4/2022	5.84%	0.0
31	**Green Bond 1**		417.1	6/22/2018	30.0	6/22/2048	3.92%	16.3
32	**Green Bond 2**		0.4	1/18/2019	30.0	1/18/2049	4.34%	0.0
33	**Green Bond 3**	3,13	80.2	3/31/2022	10.0	3/31/2032	2.43%	1.9
34	**Total**		599.9				3.98%	23.9
	Total Regulated Funded Long-Term Debt							
35	Line 20+34		3,837.8				3.61%	138.4

See Ex. C1-1-2 Table 8a 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 8a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2022
Notes to Ex. C1-1-2, Table 8

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 42	3/31/2022	169.0	276.0	127.8
Note 2	Issue 43	9/30/2022	275.0	93.0	70.1
Note 3	Green Bond 3	3/31/2022	106.0	276.0	80.2
	Issue	Maturity Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 4	Niagara 19	1/22/2022	40.0	21.0	2.3
Note 5	Niagara 20	4/22/2022	35.0	111.0	10.6
Note 6	Niagara 21	7/22/2022	45.0	202.0	24.9
Note 7	Niagara 22	10/22/2022	30.0	294.0	24.2
Note 8	ILB 1	1/4/2022	15.0	3.0	0.1
Note 9	ILB 2	1/4/2022	4.3	3.0	0.0
Note 10	ILB 3	1/4/2022	2.2	3.0	0.0
Note 11	ILB 4	1/4/2022	3.5	3.0	0.0

Note 12 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (d).
The 2019 allocation ratio is used as it reflects OPG's most recent financial results.

Note 13 Future issue rate reference Global Insight (September 2020).

Issue 42 and Green Bond 3

GOC & OPG Spread	
GOC Q1-22	0.95%
OPG Spread	1.48%
Effective Rate	2.43%

Issue 43

GOC & OPG Spread	
GOC Q3-22	1.10%
OPG Spread	1.48%
Effective Rate	2.58%

Table 9
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2023

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 to 25 Mature Prior to 2023							
1	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
2	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
3	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
4	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.5
5	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
6	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.2
7	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.6
8	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.9
9	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.3
10	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.0
11	**Issue 36**		200.0	1/22/2018	30.0	1/22/2048	3.87%	7.7
12	**Issue 37**		400.0	3/22/2018	30.0	3/22/2048	4.00%	16.0
13	**Issue 38**		100.0	8/22/2019	20.0	8/22/2039	3.49%	3.5
14	**Issue 39**		400.0	3/16/2020	4.0	3/16/2024	1.75%	7.0
15	**Issue 40**		100.0	3/31/2021	0.0	3/31/2031	2.12%	2.1
16	**Issue 41**		100.0	9/30/2021	0.0	9/30/2031	2.27%	2.3
17	**Issue 42**		169.0	3/31/2022	10.0	3/31/2032	2.43%	4.1
18	**Issue 43**		275.0	9/30/2022	10.0	9/30/2032	2.58%	7.1
19	**Issue 44**	1,6	28.4	3/31/2023	10.0	3/31/2033	2.69%	0.8
20	**Issue 45**	2,6	9.6	9/30/2023	10.0	9/30/2033	2.72%	0.3
21	**Total**		3,678.4				3.46%	127.3
	Regulated Portion of Company-Wide Borrowing							
22	**Allocation**	5	3,508.8				3.46%	121.5
	Project Financing - Regulated Projects							
	Niagara 1 to 22 and ILB 1 to 4 Mature Prior to 2023							
23	**Niagara 23**	3	1.2	1/22/2013	10.0	1/22/2023	5.35%	0.1
24	**Niagara 24**	4	6.1	4/22/2013	10.0	4/22/2023	5.37%	0.3
25	**Green Bond 1**		417.1	6/22/2018	30.0	6/22/2048	3.92%	16.3
26	**Green Bond 2**		0.4	1/18/2019	30.0	1/18/2049	4.34%	0.0
27	**Green Bond 3**		106.0	3/31/2022	10.0	3/31/2032	2.43%	2.6
28	**Total**		530.7				3.64%	19.3
	Total Regulated Funded Long-Term Debt							
29	Line 22+28		4,039.6				3.49%	140.8

See Ex. C1-1-2 Table 9a 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 9a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2023
Notes to Ex. C1-1-2, Table 9

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 44	3/31/2023	37.5	276.0	28.4
Note 2	Issue 45	9/30/2023	37.5	93.0	9.6
	Issue	Maturity Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 3	Niagara 23	1/22/2023	20.0	21.0	1.2
Note 4	Niagara 24	4/22/2023	20.0	111.0	6.1
					0.0
					0.0

Note 5 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (d).
The 2019 allocation ratio is used as it reflects OPG's most recent financial results.

Note 6 Future issue rate reference Global Insight (September 2020).

Issue 44

GOC & OPG Spread	
GOC Q1-23	1.21%
OPG Spread	1.48%
Effective Rate	2.69%

Issue 45

GOC & OPG Spread	
GOC Q3-23	1.24%
OPG Spread	1.48%
Effective Rate	2.72%

Table 10
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2024

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 to 25 Mature Prior to 2024							
1	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
2	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
3	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
4	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.5
5	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
6	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.2
7	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.6
8	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.9
9	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.3
10	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.0
11	**Issue 36**		200.0	1/22/2018	30.0	1/22/2048	3.87%	7.7
12	**Issue 37**		400.0	3/22/2018	30.0	3/22/2048	4.00%	16.0
13	**Issue 38**		100.0	8/22/2019	20.0	8/22/2039	3.49%	3.5
14	**Issue 39**	1	82.2	3/16/2020	4.0	3/16/2024	1.75%	1.4
15	**Issue 40**		100.0	3/31/2021	0.0	3/31/2031	2.12%	2.1
16	**Issue 41**		100.0	9/30/2021	0.0	9/30/2031	2.27%	2.3
17	**Issue 42**		169.0	3/31/2022	10.0	3/31/2032	2.43%	4.1
18	**Issue 43**		275.0	9/30/2022	10.0	9/30/2032	2.58%	7.1
19	**Issue 44**		37.5	3/31/2023	10.0	3/31/2033	2.69%	1.0
20	**Issue 45**		37.5	9/30/2023	10.0	9/30/2033	2.72%	1.0
21	**Total**		3,397.6				3.61%	122.8
	Regulated Portion of Company-Wide Borrowing							
22	**Allocation**	2	3,241.0				3.61%	117.1
	Project Financing - Regulated Projects							
	Niagara 1 to 22 and ILB 1 to 4 Mature Prior to 2024							
23	**Green Bond 1**		417.1	6/22/2018	30.0	6/22/2048	3.92%	16.3
24	**Green Bond 2**		0.4	1/18/2019	30.0	1/18/2049	4.34%	0.0
25	**Green Bond 3**		106.0	3/31/2022	10.0	3/31/2032	2.43%	2.6
26	**Total**		523.5				3.62%	18.9
	Total Regulated Funded Long-Term Debt							
27	Line 22+26		3,764.6				3.61%	136.0

See Ex. C1-1-2 Table 10a 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 10a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2024
Notes to Ex. C1-1-2, Table 10

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 39	3/16/2024	400.0	75.0	82.2

Note 2 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (d).
The 2019 allocation ratio is used as it reflects OPG's most recent financial results.

Table 11
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2025

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 to 25 and Issue 39 Mature Prior to 2025							
1	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
2	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
3	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
4	**Issue 29**		50.0	11/22/2016	10.0	11/22/2026	3.04%	1.5
5	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
6	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.2
7	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.6
8	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.9
9	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.3
10	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.0
11	**Issue 36**		200.0	1/22/2018	30.0	1/22/2048	3.87%	7.7
12	**Issue 37**		400.0	3/22/2018	30.0	3/22/2048	4.00%	16.0
13	**Issue 38**		100.0	8/22/2019	20.0	8/22/2039	3.49%	3.5
14	**Issue 40**		100.0	3/31/2021	0.0	3/31/2031	2.12%	2.1
15	**Issue 41**		100.0	9/30/2021	0.0	9/30/2031	2.27%	2.3
16	**Issue 42**		169.0	3/31/2022	10.0	3/31/2032	2.43%	4.1
17	**Issue 43**		275.0	9/30/2022	10.0	9/30/2032	2.58%	7.1
18	**Issue 44**		37.5	3/31/2023	10.0	3/31/2033	2.69%	1.0
19	**Issue 45**		37.5	9/30/2023	10.0	9/30/2033	2.72%	1.0
20	**Total**		3,315.5				3.66%	121.3
	Regulated Portion of Company-Wide Borrowing							
21	**Allocation**	1	3,162.6				3.66%	115.7
	Project Financing - Regulated Projects							
	Niagara 1 to 24 and ILB 1 to 4 Mature Prior to 2025							
22	**Green Bond 1**		417.1	6/22/2018	30.0	6/22/2048	3.92%	16.3
23	**Green Bond 2**		0.4	1/18/2019	30.0	1/18/2049	4.34%	0.0
24	**Green Bond 3**		106.0	3/31/2022	10.0	3/31/2032	2.43%	2.6
25	**Total**		523.5				3.62%	18.9
	Total Regulated Funded Long-Term Debt							
26	Line 21+25		3,686.2				3.65%	134.7

See Ex. C1-1-2 Table 11a 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 11a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2025
Notes to Ex. C1-1-2, Table 11

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
					0.0

Note 1 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (d).
The 2019 allocation ratio is used as it reflects OPG's most recent financial results.

Numbers may not add due to rounding.

Table 12
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2026

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 to 25 Mature Prior to 2025							
1	**Issue 26**		150.0	3/22/2011	30.0	3/22/2041	5.40%	8.1
2	**Issue 27**		150.0	9/22/2011	30.0	9/22/2041	4.74%	7.1
3	**Issue 28**		200.0	3/22/2012	30.0	3/22/2042	4.36%	8.7
4	**Issue 29**	1	44.5	11/22/2016	10.0	11/22/2026	3.04%	1.4
5	**Issue 30**		50.0	11/22/2016	30.0	11/22/2046	4.03%	2.0
6	**Issue 31**		200.0	2/22/2017	30.0	2/22/2047	4.12%	8.2
7	**Issue 32**		100.0	6/22/2017	30.0	6/22/2047	3.65%	3.6
8	**Issue 33**		100.0	8/22/2017	30.0	8/22/2047	3.86%	3.9
9	**Issue 34**		400.0	9/22/2017	30.0	9/22/2047	4.07%	16.3
10	**Issue 35**		496.5	10/2/2017	10.0	10/4/2027	3.43%	17.0
11	**Issue 36**		200.0	1/22/2018	30.0	1/22/2048	3.87%	7.7
12	**Issue 37**		400.0	3/22/2018	30.0	3/22/2048	4.00%	16.0
13	**Issue 38**		100.0	8/22/2019	20.0	8/22/2039	3.49%	3.5
14	**Issue 40**		100.0	3/31/2021	10.0	3/31/2031	2.12%	2.1
15	**Issue 41**		100.0	9/30/2021	10.0	9/30/2031	2.27%	2.3
16	**Issue 42**		169.0	3/31/2022	10.0	3/31/2032	2.43%	4.1
17	**Issue 43**		275.0	9/30/2022	10.0	9/30/2032	2.58%	7.1
18	**Issue 44**		37.5	3/31/2023	10.0	3/31/2033	2.69%	1.0
19	**Issue 45**		37.5	9/30/2023	10.0	9/30/2033	2.72%	1.0
20	**Total**		3,310.0				3.66%	121.2
	Regulated Portion of Company-Wide Borrowing							
21	**Allocation**	2	3,157.4				3.66%	115.6
	Project Financing - Regulated Projects							
	Niagara 1 to 24 and ILB 1 to 4 Mature Prior to 2026							
22	**Green Bond 1**		417.1	6/22/2018	30.0	6/22/2048	3.92%	16.3
23	**Green Bond 2**		0.4	1/18/2019	30.0	1/18/2049	4.34%	0.0
24	**Green Bond 3**		106.0	3/31/2022	10.0	3/31/2032	2.43%	2.6
25	**Total**		523.5				3.62%	18.9
	Total Regulated Funded Long-Term Debt							
26	Line 21+25		3,680.9				3.65%	134.5

See Ex. C1-1-2 Table 12a 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 12a
Capitalization and Cost of Capital
Summary of Existing and Planned Long-Term Debt ($M)
Outstanding During Calendar Year Ending Dec. 31, 2026
Notes to Ex. C1-1-2, Table 12

	Issue	Issue Date	Face Value ($M)	Effective Days	Weighted Principal ($M)
Note 1	Issue 29	11/22/2026	50.0	325.0	44.5

Note 2 Allocation ratio as per Ex. C1-1-2 Table 1, line 13, col (d).
The 2019 allocation ratio is used as it reflects OPG's most recent financial results.