CASH WORKING CAPITAL

1.0 PURPOSE

This evidence presents OPG's methodology for calculating cash working capital and the forecast of cash working capital amounts included in nuclear rate base for the 2022-2026 period.

2.0 OVERVIEW

As part of its EB-2007-0905 application to set payment amounts for regulated hydroelectric and nuclear facilities effective April 1, 2008, OPG prepared a lead-lag study to determine and apply lead/lag days for purposes of establishing an allowance for cash working capital.[1] The study was based on an analysis of transactions during 2006, which was the first full year of rate regulation for OPG under interim rates set by O. Reg. 53/05 and the most recent year for which financial information was available when the study was conducted. The OEB accepted OPG's cash working capital amounts as part of the proposed rate base.[2]

To determine cash working capital amounts in EB-2010-0008, EB-2013-0321 and EB-2016-0152, OPG continued to apply the same methodology and lead/lag days as in EB-2007-0905 to revenue and expense information from the most recent available historical year in each application. The OEB accepted the resulting cash working capital amounts in setting OPG's payment amounts in each of these proceedings. The cash working capital allowance has remained a relatively small component of OPG's rate base.[3]

Since EB-2016-0152, OPG determined that the passage of time since the 2006 study supported an updated assessment of the lead/lag days used to determine the cash working capital allowance.

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[1] EB-2007-0905, Ex. B4-1-1.
[2] EB-2007-0905 Decision with Reasons, p. 133.
[3] For example, in EB-2016-0152, cash working capital comprised approximately 0.2% of OPG's approved nuclear rate base over the 2017-2021 period, on average.

OPG retained Navigant Consulting Inc. ("Navigant") to conduct a study (the "Navigant Study") of OPG's lead/lag days for cash working capital purposes. The Navigant Study is presented as Attachment 1. Navigant used 2018 financial information to determine the revenue lag days and expense lead days for appropriate revenue and cost components of OPG's nuclear and regulated hydroelectric businesses.

Consistent with the approach in prior payment amounts applications, the net lag days determined in the Navigant Study were applied by OPG to actual financial results for the prescribed nuclear assets for 2019, being the most recent available historical year, to calculate a nuclear cash working capital amount of ($37.8M) to be used for the 2020 to 2026 period, as summarized in Chart 1 and presented in Ex. B3-5-1, Tables 1 and 2.

As in prior OPG proceedings, the cash working capital amount includes a Generation Revenue component and a Harmonized Sales Tax ("HST") component.[4] These components were determined using the same methodologies as in the prior applications and are discussed in Sections 3.0 and 4.0 below.

Chart 1
Summary of Results - Cash Working Capital ($M)
2022 through 2026

Line No.	Item	Nuclear
1	Generation Revenue	14.2
2	HST	(52.0)
3	**Total**	**(37.8)**

[4] The third component, Other Revenue, that was presented in prior applications was not studied for materiality reasons and therefore has been excluded. In EB-2016-0152, Other Revenue accounted for a total of $1.2M in cash working capital, including the HST component.

The proposed cash working capital amount calculated based on the results of the Navigant Study of ($37.8M) is lower than the average amount of $17.2M reflected in the previous four nuclear payment amounts applications.[5]

For the 2016 to 2018 period, OPG applied the net lag days determined in EB-2007-0905 to the actual financial results for the prescribed nuclear assets for those years in order to calculate the actual cash working capital amounts.

3.0 GENERATION REVENUE

The Navigant Study analyzed the time between the date OPG supplies electricity from its prescribed assets and the date it receives payment from the IESO ("revenue lag"), and the time between which OPG receives goods and services from vendors, employees or other payees and pays for them at a later date ("expense lead"). The study applies the mid-point method to services provided by (or to) OPG over a period of time, including electricity sales.[6]

Revenue lag days are determined in Section 3 of the Navigant Study. The calculation considers that OPG receives payment from the IESO on a monthly basis, in accordance with the IESO Settlement Schedule & Payments Calendar. The payment date for a given month's generation occurs approximately 20 days into the following month. Applying the mid-point method to generation sales means that OPG is considered to have provided service equally over the month. Combining this with the IESO payment schedule results in a revenue lag of 35.46 days for the nuclear business.[7] In Chart 2 below, the revenue lag appears in column (b).

Expense lead days are determined in Sections 4.2 to 4.4 of the Navigant Study for each major category of costs not otherwise considered in the calculation of rate base.

The expense lead days in column (c) of Chart 2 below can be traced to the Navigant Study as follows: Table 6 (for Income Taxes), Table 7 (for Interest on Long-Term Debt), Table 8 (for

[5] EB-2007-0905, Ex. B1-1-1, Table 1: $21.8M; EB-2010-0008, Ex. B1-1-2: $4.0M; EB-2013-0321, Ex. B1-1-2: $32.0M; EB-2016-0152, Ex. B1-1-2: $11.0M.
[6] The mid-point method is discussed at Attachment 1, p. 1, Section 1.1.1.
[7] Attachment 1, page 6, Section 3.2.

OM&A Expenses), and Table 9 (for Property Tax). The types of costs Navigant determined should be included in the analysis are consistent with those in the previous lead-lag study, with the exception of interest on long-term debt. Navigant determined it was appropriate to include interest on long-term debt in the cash working capital calculation as it represents a cash expense for the business and has been included as an expense lead in all previous cash working capital studies conducted by Navigant.[8]

As shown in Chart 2, the difference between the revenue lag days and the expense lead days ("net lead/lag days") is multiplied by the corresponding expense amounts to determine the total cash working capital amount of $14.2M for the Generation Revenue component for the nuclear business.

Chart 2
Cash Working Capital - Nuclear Generation Revenue
2019

Line No.	Expense Category	Expense Amount ($M)	Revenue Lag Days	Expense Lead Days	Net Lead/Lag Days	Cash Working Capital ($M)
		(a)	(b)	(c)	(d) = (b) - (c)	(e) = (a) * (d)/365
	OM&A Expenses:					
1	Payroll & Payroll Withholdings	941.7	35.5	21.7	13.7	35.4
2	Active Benefits	110.6	35.5	18.7	16.8	5.1
3	Performance Incentives	24.1	35.5	262.7	(227.3)	(15.0)
4	Leases and Utilities	28.3	35.5	6.0	29.5	2.3
5	IT Outsourced Services	57.1	35.5	58.3	(22.8)	(3.6)
6	Miscellaneous OM&A	446.2	35.5	72.5	(37.0)	(45.3)
	Centrally-held OM&A Expenses:					
7	Pensions	141.2	35.5	10.3	25.1	9.7
8	OPEB	90.4	35.5	13.4	22.0	5.5
9	Insurance	24.9	35.5	(166.7)	202.1	13.8
10	Total OM&A Expenses	1,864.5				7.9
	Other Costs:					
11	Property Taxes	4.1	35.5	(6.1)	41.6	0.5
12	Income Taxes	33.1	35.5	18.7	16.8	1.5
13	Interest	63.1	35.5	10.1	25.4	4.4
14	Total Other Costs					6.4
15	**Cash Working Capital - Nuclear**					**14.2**

[8] Attachment 1, page 9.

4.0 HARMONIZED SALES TAX

OPG pays HST to suppliers for the purchase of goods and services and remits HST that is collected on revenue to the government. The Navigant Study analyzed the time between the date OPG collects HST on generation revenues from the IESO and the time it remits it to the government ("HST lead"), as well as the time between the date OPG pays HST to suppliers and the time it receives an input tax credit from the government ("HST lag"). As shown in Section 4.5 of the Navigant Study, the HST lead is 43.21 days and the HST lag is 40.48 days for the nuclear business.[9]

The HST lead days are applied to $503.0M (representing HST collected on generation revenues in 2019) and the HST lag days are applied to $68.7M (representing estimated HST paid on expenses in 2019) to determine the total cash working capital amount of ($52.0M) for the HST component for the nuclear business, shown in Chart 3 below.

The HST cash working capital is calculated as shown in Chart 3 for the nuclear business:

Chart 3
Cash Working Capital - HST ($M)
2019

Line No.	Item	Nuclear
		(a)
1	Generation Revenue	(60.0)
2	HST Payments	8.0
3	**Total**	**(52.0)**

Further details on HST are provided in Ex. F4-2-1, Section 5.0.

[9] Attachment 1, p. 12.

ATTACHMENTS

Attachment 1: Lead/Lag Analysis for Working Capital Requirements for Ontario Power Generation Inc.