

## CASH WORKING CAPITAL

### 1.0 PURPOSE

This evidence presents OPG's methodology for calculating cash working capital. Application of this methodology produces a forecast of annual cash working capital for the regulated hydroelectric facilities of \$21.5 M in both 2011 and 2012, and for the nuclear facilities, the test period forecast of annual cash working is \$4.0 M in both 2011 and 2012 as follows:

Line No.	Type	Regulated Hydroelectric (a)	Nuclear (b)	Total (c)
1	Generation	28.9	18.2	47.1
2	Other Revenue		2.7	2.7
3	HST	(7.4)	(16.9)	(24.3)
4	Total	21.5	4.0	25.5

### 2.0 OVERVIEW

OPG conducted a lead/lag study as part of the EB-2007-0905 application. A lead/lag study is used by utilities to determine their cash working capital requirements. A lead/lag study analyzes transactions throughout the year to determine the number of days between the time services are rendered and payment is received (revenue lag), and the number of days between the time expenditures are incurred and payment is made for such services (expense or payment lead). A revenue lag is determined and compared to an expense lead, and the resulting net lag is then applied to each category of operating expense to determine the cash working capital requirements.

OPG has not conducted a new lead/lag study for this application given that: the OEB accepted OPG's cash working capital calculation in the last hearing; the OEB's filing

1 guidelines do not contemplate a lead/lag study; and the amount of cash working capital is  
2 small relative to the overall size of rate base. Instead, OPG has used a simpler approach and  
3 applied the net lag days provided in its EB-2007-0905 evidence to 2009 revenues and  
4 expenses. For the bridge year, OPG used this approach, but included a half year's impact of  
5 the Harmonized Sales Tax ("HST") because HST comes into effect on July 1, 2010. The test  
6 period includes the full impact of the HST.

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8 **3.0 METHODOLOGY**

9 OPG's regulated business earns revenues from generation sales and other revenues.<sup>1</sup> The  
10 two revenue types each have a distinct cash receipt cycle. Each component of working  
11 capital consists of revenue lags for each type of revenue and specific expense leads that  
12 relate to each type of expenditure. Consistent with the approach described in EB-2007-0905,  
13 OPG has applied the net lag days provided in EB-2007-0905 to revenue and expense  
14 categories using 2009 financial results for OPG's regulated assets because this is the most  
15 recent information available. The resulting cash working capital is then used for 2009. The  
16 only change for subsequent years is to include the impact of the HST as discussed below.

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18 In addition to the working capital calculations for generation sales and other revenues,  
19 OPG's EB-2007-0905 lead/lag study calculated cash working capital requirements related to  
20 the GST separately and included it as a component of cash working capital. The 5 per cent  
21 GST is being replaced by a 13 per cent HST effective July 1, 2010. While the HST rules have  
22 not been finalized, OPG has assumed that they will be similar to the GST in terms of net lag  
23 days. OPG has maintained the 2009 cash working capital component as the base, and  
24 prorated the impact the HST based on the time that it is in effect (i.e., half a year in 2010 and  
25 a full year in 2011 and 2012). The full-year amount used in the test period is determined by  
26 applying 13 per cent divided by 5 per cent to each component of the 2009 GST cash working  
27 capital component, Chart 7 shows the prorated the effects of HST in 2010, 2011 and 2012.

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<sup>1</sup> As a result of the OEB's EB-2007-0905 Decision, only net revenue from the Bruce Lease determined in accordance with Canadian GAAP is included in the revenue requirement for OPG's prescribed facilities. As cash working capital is not included in net revenues, the Bruce Lease revenue net revenue lag is no longer included in OPG's cash working capital calculation.

1 Chart 2 summarizes the results of applying the methodology discussed above to actual 2009  
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Chart 2				
Summary of Results - 2009 Cash Working Capital (\$M)				
Line	Type	Regulated	Nuclear	Total
No.		Hydroelectric		
		(a)	(b)	(c)
1	Generation	28.9	18.2	47.1
2	Other Revenue		2.7	2.7
3	GST	(2.9)	(6.5)	(9.4)
4	Total	26.0	14.3	40.3

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6 **4.0 GENERATION SALES**

7 The largest component of revenue is generation sales, which consists of electricity sales and  
 8 the provision of ancillary services to the IESO. The revenue lag associated with generation  
 9 sales and the associated expense leads described in EB-2007-0905 and detailed cash  
 10 working capital calculations for 2009 are provided in Chart 3 (for nuclear generation)<sup>2</sup> and  
 11 Chart 4 (for regulated hydroelectric generation).

<sup>2</sup> Expense categories for nuclear are listed if the expense amount is greater than \$2M; therefore the categories presented in the summary charts may differ from those shown for previous years in EB-2007-0905.

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Chart 3						
Cash Working Capital - Generation Nuclear						
2009						
		Expense				
Line		Amount	Revenue	Expense	Net Lead/Lag	CWC
No.	Expense Category	(\$M)	Lag Days	Lead Days	Days	(\$M)
		(a)	(b)	(c)	(d) = (b) - (c)	(e) = (a)*(d)/365
	OM&A - direct					
1	Labour	1,226.4	35.7	20.9	14.8	49.4
2	EPSCA Labour	9.3	35.7	12.0	23.7	0.6
3	Consultants - Nuclear	330.2	35.7	71.3	(35.6)	(32.2)
4	Consultants - Corporate	26.3	35.7	40.4	(4.7)	(0.3)
5	Augmented Staff - Nuclear	59.4	35.7	44.4	(8.7)	(1.4)
6	Augmented Staff - Corporate	2.0	35.7	61.4	(25.7)	(0.1)
7	Outsourced Services - Corporate	84.0	35.7	6.2	29.5	6.6
8	Telecommunications	2.8	35.7	54.5	(18.8)	(0.1)
9	Utilities	2.8	35.7	84.4	(48.7)	(0.4)
10	Facilities	3.8	35.7	0.0	35.7	0.4
11	Operating Licences	22.1	35.7	2.8	32.9	2.0
12	Membership Fees	2.5	35.7	(77.9)	113.6	0.8
13	Transport Work Equipment	5.0	35.7	56.0	(20.3)	(0.3)
14	Donations	2.6	35.7	0.0	35.7	0.3
15	All other cash expenses	47.9	35.7	28.7	7.0	0.9
	OM&A Centrally held Costs					
16	OPEB/Pensions	(20.6)	35.7	17.1	18.6	(1.0)
17	Incentives	29.1	35.7	240.0	(204.3)	(16.3)
18	PWU-EHT	3.5	35.7	240.0	(204.3)	(1.9)
19	ONFA fee	3.9	35.7	(151.5)	187.2	2.0
20	Gregorian Adjustment	3.8	35.7	20.9	14.8	0.2
21	Insurance	14.1	35.7	(103.7)	139.4	5.4
22	Total OM&A					14.6
	Other Costs:					
23	property taxes	16.9	35.7	1.9	33.8	1.6
24	capital taxes	7.2	35.7	15.1	20.6	0.4
25	income tax	27.6	35.7	15.1	20.6	1.6
26	Total Other Costs					3.6
27	Total for Nuclear					18.2

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Chart 4						
Cash Working Capital - Generation Regulated Hydroelectric						
2009						
		Expense				
Line		Amount	Revenue	Expense	Net Lead/Lag	CWC
No.	Expense Category	(\$M)	Lag Days	Lead Days	Days	(\$M)
		(a)	(b)	(c)	(d) = (b) - (c)	(e) = (a)*(d)/365
1	GRC	263.4	35.7	(1.1)	36.8	26.6
	OM&A - direct					
2	Labour	57.1	35.7	20.9	14.8	2.3
3	EPSCA Labour					
4	Consultants - Hydroelectric	15.6	35.7	66.0	(30.3)	(1.3)
5	Consultants - Corporate					
6	Outside Services - Corporate	9.4	35.7	6.2	29.5	0.8
7	All other cash expenses	(2.3)	35.7	79.1	(43.4)	0.3
	OM&A Centrally held Costs					
8	OPEB/Pensions	(1.0)	35.7	17.1	18.6	(0.1)
9	Incentives	1.9	35.7	240.0	(204.3)	(1.0)
10	Insurance	1.6	35.7	(103.7)	139.4	0.6
	Total OM&A					1.6
	Other Costs:					
11	property taxes	0.0	35.7	1.9	33.8	0.0
12	capital taxes	10.4	35.7	15.1	20.6	0.6
13	income tax	3.4	35.7	15.1	20.6	0.2
	Total Other Costs					0.8
	Total for Regulated Hydroelectric					28.9

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**5.0 OTHER REVENUE**

Other Revenue consists of cobalt and tritium isotope sales and inspection and maintenance services as described in Ex G2-T1-S1.

The lead/lag days from the study presented in EB-2007-0905 have been applied to the appropriate 2009 expenses and Chart 5 summarizes the results.

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Chart 5						
Cash Working Capital - Other Revenue						
2009						
		Expense				
Line		Amount	Revenue	Expense	Net Lead/Lag	CWC
No.	Expense Category	(\$M)	Lag Days	Lead Days	Days	(\$M)
		(a)	(b)	(c)	(d) = (b) - (c)	(e) = (a)*(d)/365
1	Labour	18.5	60.7	20.9	39.8	2.0
2	All other cash expenses	13.5	60.7	43.7	17.0	0.6
	<b>Total Cash Working Capital</b>					<b>2.7</b>

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**6.0 GOODS and SERVICES TAX/HARMONIZED SALES TAX<sup>3</sup>**

OPG pays HST to suppliers for the purchase of goods and services and remits HST that is collected on revenue to the Federal Government. The HST lag is the time between the HST payment date (to the supplier or to the Receiver General) and the date the Federal Government either refunds the HST to OPG or when OPG receives the input tax credit. OPG also collects HST from the IESO before making the remittance to the Receiver General. OPG collects significantly more HST than it pays to suppliers. A HST cash working capital amount is calculated for each of the two types of revenue.

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The calculation of HST is as follows:

- Collections: OPG remits HST after the IESO pays for the previous month's power. The remittance is made at the end of the next fiscal month. For example, if the IESO pays OPG HST for June's power production on July 17, OPG reports it on the July HST remittance, which is paid on September 5.
  - On average OPG retains the HST for a net period of 38.1 days.

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<sup>3</sup> For simplicity, the term HST will be used to refer to the goods and services tax whether it is GST up to July 1, 2010 or HST thereafter

- 1     ○ The amount of regulated HST = total HST collected from the IESO x the regulated
- 2         station's share of total generation sales.
- 3     ● Payments: OPG generally pays HST on all purchases and then claims an input tax credit
- 4         on its monthly HST remittance. For example, the goods received in June are included in
- 5         the June HST remittance paid on July 28.
- 6     ○ On average, OPG paid HST 30 days before receiving the HST credits.

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The 2009 GST cash working capital is calculated as shown in Chart 6:

Chart 6				
Cash Working Capital - GST (\$M)				
2009				
Line	Item	Regulated	Nuclear	Total
No.		Hydroelectric		
		(a)	(b)	(c)
1	Generation Revenue	(4.6)	(17.4)	(22.0)
2	Other Revenue		5.4	5.4
3	Payments - Regulated	1.8	5.5	7.3
4	Total	(2.9)	(6.5)	(9.4)

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Since there will be a significant increase with the move from the GST (5 per cent) in 2009 to the HST (13 per cent) in the test period, OPG applied a simple average to determine the annual cash working capital impacts. For example, 2011 was calculated as the 2009 amounts times 13 per cent divided by 5 per cent. Chart 7 provides the annual amounts:

Chart 7				
Cash Working Capital - GST/HST (\$M) by Year				
Line No.	Item	Regulated Hydroelectric	Nuclear	Total
		(a)	(b)	(c)
1	2009	(2.9)	(6.5)	(9.4)
2	2010	(5.2)	(11.7)	(16.9)
3	2011	(7.4)	(16.9)	(24.3)
4	2012	(7.4)	(16.9)	(24.3)

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