SUMMARY OF REVENUE REQUIREMENT, REVENUES AND REVENUE DEFICIENCY

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4 **1. PURPOSE**

5 The purpose of this evidence is to provide a summary of the revenue requirement for OPG's 6 regulated hydroelectric and nuclear facilities for the 2008 - 2009 test period including the 7 adjustments necessary to remove the January 1, 2008 - March 31, 2008 period from the 8 2008 annual information provided in the application. The revenue deficiency for the test 9 period is also provided.

10

11 2. REVENUE REQUIREMENT

OPG's proposed revenue requirement for the 21 month test period addresses a number of
 factors that have arisen since the interim payment amounts took effect on April 1, 2005. The
 test period revenue requirement is summarized in Ex. K1-T1-S1 Tables 1 and 2.

15

16 OPG operates on an accounting year ending December 31 for financial reporting purposes. 17 The application contains annual forecasts for each of 2008 and 2009. These annual 18 forecasts allow comparison of year-over-year trends and are consistent with OPG's business 19 planning process and fiscal year. In order for the OEB's first order for payment amounts for 20 the prescribed facilities to be effective on April 1, 2008, the earliest allowable date under O. 21 Reg. 53/05, adjustments are required to back-out the portion of OPG's costs, revenues, and 22 production for the period January 1 - March 31, 2008. These adjustments are based on 23 estimates of the trending of forecast costs for 2008 and do not necessarily represent exactly 24 25% of the costs, revenue and production. For example, while base OM&A costs will be fairly 25 consistent throughout the year, outage costs will follow planned outage schedules (typically 26 spring and fall) and project expenditures may be staggered throughout the year, and will rise 27 and fall as the projects are started and completed. In addition, gross revenue charge rates 28 increase on a calendar basis with cumulative generation thresholds and therefore lower rates 29 typically occur in Q1 of each year. Depreciation will also increase during the year as new 30 assets are added.

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The revenue requirement amounts set out above include recovery of deferral and variance account balances as at December 31, 2007 using a payment rider for the nuclear balances and as part of the payment amount for the regulated hydroelectric balances as described in Ex. J1-T2-S1.

6

7 3. REVENUE DEFICIENCY AND REVENUES EARNED

8 This section compares OPG's revenue determined using the interim payment amounts 9 provided in O. Reg. 53/05 to the test period revenue requirement for each of OPG's 10 regulated hydroelectric and nuclear operations. Exhibit K1-T1-S1 Table 3 presents the 11 calculation of the resulting deficiency for nuclear and hydroelectric using production 12 forecasts.

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Updated: 2008-06-27 EB-2007-0905 Exhibit K1 Tab 1 Schedule 1 Table 1

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Table 1 Summary of Revenue Requirement (\$M) April 1, 2008 to December 31, 2008

			Re	egulated Hydro	electric		Nuclear		Total
Line				Adjustment	2008		Adjustment	2008	2008
No.	Description	Note	2008	(Note 1)	(Apr. 1-Dec. 31)	2008	(Note 1)	(Apr. 1-Dec. 31)	(Apr. 1-Dec. 31)
			(a)	(b)	(c)	(d)	(e)	(f)	(g)
	Rate Base								
1	Net Fixed Assets	2	3,863.1	(5.2)	3,857.8	2,794.0	(6.3)	2,787.7	6,645.5
2	Working Capital	2	0.6	0.0	0.6	705.4	0.0	705.4	706.0
3	Cash Working Capital	2	21.8	0.0	21.8	16.0	0.0	16.0	37.8
4	Total Rate Base		3,885.5	(5.2)	3,880.2	3,515.4	(6.3)	3,509.1	7,389.3
	Capitalization								
5	Short-term Debt	3	99.4	0.0	99.4	89.9	0.0	89.9	189.3
6	Long-Term Debt	3	1,551.9	(2.3)	1,549.7	1,404.1	(2.7)	1,401.4	2,951.1
7	Common Equity	3	2,234.1	(3.0)	2,231.1	2,021.4	(3.6)	2,017.7	4,248.9
8	Total Capital		3,885.5	(5.3)	3,880.2	3,515.4	(6.3)	3,509.1	7,389.3
	•								
	Cost of Capital								
9	Short-term Debt	4	5.8	0.0	5.8	5.2	0.0	5.2	11.0
10	Long-Term Debt	4	89.3	(23.8)	65.4	80.8	(21.6)	59.2	124.6
11	Return on Equity	4	234.6	(58.9)	175.7	212.2	(53.3)	158.9	334.6
12	Total Cost of Capital		329.7	(82.7)	246.9	298.3	(74.9)	223.3	470.3
	Expenses								
13	OM&A	5	119.0	(25.9)	93.1	2,184.6	(521.9)	1,662.7	1,755.8
14	Fuel and GRC	6	228.2	(48.3)	179.9	162.4	(36.7)	125.7	305.6
15	Depreciation & Amortization	7	61.5	(15.6)	45.9	350.1	(72.8)	277.2	323.2
16	Property and Capital Taxes	8	8.7	(2.2)	6.5	21.8	(5.5)	16.3	22.9
17	Total Expenses		417.4	(92.0)	325.4	2,718.8	(636.8)	2,082.0	2,407.4
	Less:								
	Other Revenues								
	Bruce Lease Revenues Net of								
18	Direct Costs	9	N/A	N/A	N/A	69.1	(17.4)	51.8	51.8
19	Ancillary and Other Revenue	10	32.4	(8.1)	24.3	65.5	(16.0)	49.4	73.8
20	Total Other Revenues		32.4	(8.1)	24.3	134.6	(33.4)	101.2	125.5
21	Income Tax	8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Revenue Requirement		714.7	(166.7)	548.0	2.882.5	(678.4)	2,204.1	2,752.1
- 22	Nevenue Nequirement		/ 14./	(100.7)	546.0	2,002.5	(070.4)	2,204.1	2,102.1
		1							

Notes:

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Adjustment to remove activity from January 1, 2008 to March 31, 2008 as described in Ex. K1-T1-S1. Ex. B1-T1-S1 Table 1 (Reg. Hydro), Ex. B1-T1-S1 Table 2 (Nuclear) Totals from Ex. C1-T2-S1 Table 3 (Column (a)) Capitalization is allocated to Regulated Hydroelectric and Nuclear operations using rate base. Capital Structure for OPG's combined regulated operations is provided in Ex. C1-T2-S1 Table 3 Totals from Ex. C1-T2-S1 Table 3 (Column (d))

4 Totals from Exhibit C1-T2-S1 Table 3 (Column (d))

Cost of Capital is allocated to Regulated Hydroelectric and Nuclear operations using rate base. Capital Structure for OPG's combined regulated dydroelectric and Nuclear operations using rate base. Ex. E1-T1-S1 Table 1 (Reg. Hydro), Ex. E2-T1-S1 Table 1 (Nuclear). Nuclear adjustment includes \$25M deferred from Q1 and treated as a regulatory asset. 5

6

Ex. F1-TI-S1 Table 1 (Reg. Hydro), EX. F2-TI-S1 Table 1 (Nuclear) Ex. F1-TI-S1 Table 1 (Reg. Hydro), EX. F2-TI-S1 Table 1 (Nuclear) Reg. Hydro: Ex. F3-T2-S1 Table 1 (OM&A Dep'n & Amort.) plus Ex. J1-T2-S1 Table 2 (Deferral & Variance Account Amort.) Nuclear: Ex. F3-T2-S1 Table 4 (OM&A Dep'n & Amort.) plus Ex. J1-T2-S1 Table 2 (Deferral & Variance Account Amort.) Ex. F3-T2-S1 Table 4 (OM&A Dep'n & Amort.) plus Ex. J1-T2-S1 Table 2 (Deferral & Variance Account Amort.) Ex. F3-T2-S1 Table 4 (Reg. Hydro), Ex. F3-T2-S1 Table 4 (Nuclear) Revenues from Ex. G2-T2-S1 Table 1 less Direct Costs from Ex. G2-T2-S1 Table 3 7

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10 Ex. G1-T1-S2 Table 1 (Reg. Hydro), Ex. G2-T1-S1 Table 1 (Nuclear)

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Table 2Summary of Revenue Requirement (\$M)January 1, 2009 to December 31, 2009

Line			Regulated		Total
No.	Description	Note	Hydroelectric	Nuclear	2009
			(a)	(b)	(c)
	Rate Base				
1	Net Fixed Assets	1	3,847.5	2,696.0	6,543.5
2	Working Capital	1	0.6	771.8	772.4
3	Cash Working Capital	1	21.8	16.0	37.8
4	Total Rate Base		3,869.9	3,483.8	7,353.7
	Capitalization				
5	Short-term Debt	2	99.6	89.7	189.3
6	Long-Term Debt	2	1,545.0	1,390.9	2,936.0
7	Common Equity	2	2,225.2	2,003.2	4,228.4
8	Total Capital		3,869.9	3,483.8	7,353.7
	Cost of Capital				
9	Short-term Debt	3	6.0	5.4	11.3
10	Long-Term Debt	3	91.5	82.4	173.8
10	Return on Equity	3	233.6	210.3	444.0
12	Total Cost of Capital	Ŭ	331.1	298.1	629.1
	Expenses				
13	OM&A	4	119.0	2,168.7	2,287.7
14	Fuel and GRC	5	244.1	204.2	448.2
15	Depreciation & Amortization	6	61.6	388.9	450.5
16	Property and Capital Taxes	7	8.7	22.0	30.7
17	Total Expenses		433.4	2,783.8	3,217.1
	Less:				
	Other Revenues				
18	Bruce Lease Revenues Net of				
	Direct Costs	8	N/A	82.6	82.6
19	Ancillary and Other Revenue	9	33.1	50.9	84.0
20	Total Other Revenues		33.1	133.4	166.6
21	Income Tax	7	0.0	0.0	0.0
22	Revenue Requirement		731.3	2,948.4	3,679.7

Notes:

2 Totals from Ex. C1-T2-S1 Table 2 (Column (a))

- 7 Ex. F3-T2-S1 Table 1 (Reg. Hydro), Ex. F3-T2-S1 Table 4 (Nuclear)
- 8 Revenues from Ex. G2-T2-S1 Table 1 less Direct Costs from Ex. G2-T2-S1 Table 3
- 9 Ex. G1-T1-S2 Table 1 (Reg. Hydro), Ex. G2-T1-S1 Table 1 (Nuclear)

¹ Ex. B1-T1-S1 Table 1 (Reg. Hydro), Ex. B1-T1-S1 Table 2 (Nuclear)

Capitalization is allocated to Regulated Hydroelectric and Nuclear operations using rate base. Capital Structure for OPG's combined regulated operations is provided in Ex. C1-T2-S1 Table 2 Totals from Ex. C2-T1-S1 Table 2 (Column (d))

Cost of Capital is allocated to Regulated Hydroelectric and Nuclear operations using rate base. Capital Structure for OPG's combined regulated operations is provided in Ex. C1-T2-S1 Table 2

⁴ Ex. F1-T1-S1 Table 1 (Reg. Hydro), Ex. F2-T1-S1 Table 1 (Nuclear)

⁵ Ex. F1-T4-S1 Table 1 (Reg. Hydro), Ex. F2-T5-S1 Table 1 (Nuclear)

⁶ Reg. Hydro: Ex. F3-T2-S1 Table 1 (OM&A Dep'n & Amort.) plus Ex. J1-T2-S1 Table 2 (Deferral & Variance Account Amort.)

Nuclear: Ex. F3-T2-S1 Table 4 (OM&A Dep'n & Amort.) plus Ex. J1-T2-S1 Table 3 (Deferral & Variance Account Amort.)

Updated: 2008-06-27 EB-2007-0905 Exhibit K1 Tab 1 Schedule 1 Table 3

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Table 3 Summary of Revenue Deficiency by Test Period Test Period April 1. 2008 to December 31. 2009

		2008	Apr. 1-Dec. 3	31)		2009	
Line		Regulated			Regulated		
No.	Description	Hydroelectric	Nuclear	Total	Hydroelectric	Nuclear	Total
		(a)	(b)	(c)	(d)	(e)	(f)
1	Forecast Production (TWh) ¹	12.9	38.3	51.3	18.5	49.9	68.4
2	Prescribed Payment Amount (\$/MWh) ²	33.0	49.5	N/A	33.0	49.5	N/A
3	Indicated Production Revenue (\$M) (line 1 * line 2)	427.1	1,897.7	2,324.8	611.1	2,470.2	3,081.2
4	Revenue Requirement (\$M) ³	548.0	2,204.1	2,752.1	731.3	2,948.4	3,679.7
5	Revenue Requirement Deficiency (\$M)	120.9	306.4	427.3	120.3	478.2	598.5
	(line 4 - line 3)						

Notes: 1

2008 Nuclear production from Exhibit E2-T1-S2 Table 1. Production from January 1, 2008 to March 31, 2008 has been removed as described in Ex. K1-T-1-S1.

- 2009 Reg. Hydro production from Ex. E1-T1-S1 Table 1
- 2009 Nuclear production from Ex. E2-T1-S1 Table 1
- 2 From O.Reg. 53/05
- 3 From Ex. K1-T1-S1 Table 1 (2008) and Ex. K1-T1-S1 Table 2 (2009)

Production from January 1, 2008 to March 31, 2008 has been removed as described in Ex. K1-T1-S1.

1

MITIGATION OF PAYMENT AMOUNT INCREASES

2

OPG's revenue requirement forecast as presented in Ex. K1-T1-S1 summarizes the revenue and expense evidence for OPG's 21 month test period for the nuclear and regulated hydroelectric facilities. OPG recognizes that the revenue requirement increase over the current payment amounts is significant and will have an impact on electricity consumers. OPG proposes to mitigate this impact by crediting the benefit associated with certain tax losses accumulated over the interim period to consumers in the test period.

9

As detailed in Ex. F3-T2-S1, the regulatory taxable income calculation for the years 2005 -2008 results in tax losses for those years. OPG has used the accumulated tax losses at the end of 2008 to reduce the regulatory taxable income for 2009 to nil. The projected remaining balance of regulated tax losses is \$503.2M at the end of 2009.

14

15 Absent any mitigation, OPG would propose to carry forward this balance to reduce regulatory 16 taxable income in future years until no tax loss balance remained. To mitigate the increase in 17 payment amounts in this application, OPG proposes to accelerate the application of the 18 available tax losses to reduce the test period revenue requirement. This mitigation approach 19 results in the application of the associated tax loss balance multiplied by the 2009 income tax 20 rate of 32 percent (see Ex. F3-T2-S1 Table 7) to revenue requirement in the test period. This 21 results in a reduction to the revenue requirement of \$228M. This mitigation approach results 22 in a 14.8 percent increase in the payment amounts, as opposed to an 19.0 percent increase 23 without mitigation.

24

OPG proposes to apply the mitigation associated with the tax loss carry forward balance to its nuclear and regulated hydroelectric payment amounts to achieve a consistent payment amount increase across the two technologies. This application results in a reduction of regulated hydroelectric revenue requirement of \$90.1M and a reduction in the nuclear revenue requirement of \$137.9M. The offset in revenue requirement associated with mitigation is used in the calculation of the regulated hydroelectric and nuclear payment amounts as presented in Ex. K1-T2-S1 and Ex. K1-T3-S1, respectively.

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1	CONSUMER IMPACT
2	
3	1. PURPOSE
4	The purpose of this evidence is to provide an illustrative example of the impact of the
5	proposed increase in payment amounts on a typical residential electricity consumer.
6	
7	2. REVENUE REQUIREMENT
8	For purposes of this consumer impact analysis, OPG has calculated its mitigated regulated
9	hydroelectric and nuclear revenue requirements for the April 1, 2008 - December 31, 2009
10	test period on a \$/MWh basis, and used the average electricity distributor bill information
11	provided on the OEB's website at:
12	http://www.oeb.gov.on.ca/html/en/consumers/understanding/bill_comparison.htm
13	
14	The consumer bill impact associated with OPG's deferral and variance account proposals is
15	provided separately, as is the total consumer bill impact of revenue requirement and
16	deferral/variance account recovery.
17	
18	Based on this analysis, the consumer bill impact of the increase in payment amounts being
19	sought in this application over the test period is about 2.73 percent (or \$3.05 per monthly bill)
20	(Ex. K1-T1-S3 Table 1).

Updated: 2008-06-27 EB-2007-0905 Exhibit K1 Tab 1 Schedule 3 Table 1

Table 1
Typical Residential Consumer Impact Assessment
Test Period April 1, 2008 to December 31, 2009

Line			Test Period			
		Regulated				
No.	Description	Hydroelectric	Nuclear	Total		
		(a)	(b)	(c)		
1	Typical Residential Consumer Usage (KWh/Month) ¹	1,000.0	1,000.0	1,000.0		
2	Gross-up for Line Losses ²	1.0522	1.0522	1.0522		
3	OPG Portion ³	11.4%	31.9%	43.3%		
4	Residential Consumer Usage of OPG Generation (KWh/Month)	119.8	336.0	455.8		
	(line 1 * line 2 * line 3)					
	IMPACT OF RECOVERY OF REVENUE REQUIREMENT DEFICIENC	<u>Y:</u>				
5	Test Period Deficiency (\$M)	241.2	784.6	1,025.8		
6	Less: Mitigation (\$M) ⁴	90.1	137.9	228.0		
7	Required Recovery (\$M) (line 5 - line 6)	151.1	646.7	797.8		
8	Forecast Production (TWh) ⁵	31.5	88.2	119.7		
9	Required Recovery (\$/MWh) ⁶ (line 7 / line 8)	4.80	7.33	6.66		
10	Typical Monthly Consumer Bill Impact (\$)	0.58	2.46	3.04		
	(line 4 * line 9)					
11	Typical Monthly Residential Consumer Bill (\$) ⁷	111.63	111.63	111.63		
12	Percentage Increase in Consumer Bills	0.52%	2.21%	2.72%		
	(line 10 / line 11)					

Notes:

1 OPG has used consumption information reflected in the consumer rate impact analysis in the rate model developed by the OEB to establish rates for Ontario's electric distributors. This information can be accessed at: http://www.oeb.gov.on.ca/html/en/consumers/understanding/bill_comparison.htm

2 OPG has used the adjustment factor for line losses data reflected in the consumer rate impact analysis in the rate model developed by the OEB to establish rates for Ontario's electric distributors. This information can be accessed at: <u>http://www.oeb.gov.on.ca/html/en/consumers/understanding/bill_comparison.htm</u>

3 Total based on OPG's forecast production divided by the weather normal IPSP energy forecast

for 2008 and 2009. Reg. Hydro. and Nuclear portions determined based on energy production.

4 Inclusion of tax losses applicable to future periods as described in Ex. K1-T1-S2

5 From Ex. K1-T1-S1 Table 3

6 Recovery amount is expressed in \$/MWh and does not reflect the structure of the payment amount which includes a fixed payment amount for Nuclear.

7 OPG has used the average electricity distributors bill included in the consumer rate impact analysis in the rate model developed by the OEB to establish rates for Ontario's electric distributors. This information can be accessed at: http://www.oeb.gov.on.ca/html/en/consumers/understanding/bill_comparison.htm

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1	IMPLEMENTATION
2	
3	1. PURPOSE
4	This evidence presents OPG's proposed approach for recovery of the revenue deficiency for
5	the period of interim payment amounts.
6	
7	2. SUMMARY
8	OPG recognizes that the OEB is unlikely to make a decision on the new payment amounts
9	by April 1, 2008. OPG is nevertheless seeking payment amounts that allow full recovery of
10	the test period revenue requirement over the test period.
11	
12	Accordingly, OPG applied to establish interim payment amounts effective April 1, 2008 and
13	on February 7, 2008 the OEB granted OPG's request that payment amounts be made interim
14	effective April 1, 2008.
15	
16	Once the OEB establishes final payment amounts, OPG requests recovery of the difference
17	between interim and final payment amounts for the period from April 1, 2008 to the date of
18	implementation of the OEB's final order. OPG proposes that the balance for recovery be
19	collected through a settlement adjustment to be implemented through IESO settlement
20	processes.

21

1

REGULATED HYDROELECTRIC PAYMENT AMOUNT

2

3 **1. PURPOSE**

4 The purpose of this evidence is to present OPG's requested payment amount for the 5 regulated hydroelectric facilities.

6

7 2. PAYMENT AMOUNT

OPG is seeking approval of a payment amount for the regulated hydroelectric facilities of \$37.90/MWh for the average hourly net energy production (MWh) from the regulated facilities in any given month (the "hourly volume") for each hour of that month. Production over the hourly volume will receive the market price from the IESO – administered energy market. Where production from the regulated hydroelectric facilities is less than the hourly volume, OPG's revenues will be adjusted by the difference between the hourly volume and the actual net energy production at the market price from the IESO - administered market.

16 The design of the payment amounts is as proposed in Ex. I1-T1-S1. The basis for the 17 requested payment amount is presented in Ex. K1-T2-S1 Table 1. Numbers may not add due to rounding.

Table 1
Payment Design - Regulated Hydroelectric
Test Period April 1, 2008 to December 31, 2009

Line		Test
No.	Description	Period
		(a)
1	Revenue Requirement (\$M)	1,279.3
2	Less: Mitigation (\$M) ¹	90.1
3	Requested Revenue Requirement Recovery (\$M)	1,189.2
	(line 1 - line 2)	
	PAYMENT AMOUNT:	
4	Requested Revenue Requirement Recovery (\$M)	1,189.2
	(line 3)	
5	Forecast Production (TWh) ²	31.5
6	Payment Amount (\$/MWh)	37.8
	(line 4 / line 5)	

Notes:

- 1 Inclusion of tax losses applicable to future periods as described in Ex. K1-T1-S1
- 2 From Ex. K1-T1-S1 Table 3 (line 1, columns (a)+(d))

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NUCLEAR PAYMENT AMOUNT 1 2 3 1. PURPOSE 4 The purpose of this evidence is to present OPG's requested payment amount for the nuclear 5 facilities. 6 7 2. PAYMENT AMOUNT 8 OPG is seeking approval of payment amounts for the nuclear facilities, of \$58.2M/month plus 9 \$41.50/MWh. 10 11 These payment amounts are designed to recover 25 percent of the nuclear revenue 12 requirement through a fixed monthly charge and recover the remaining revenue requirement 13 through a variable charge based on OPG's forecast nuclear production as discussed in Ex. 14 I1-T2-S1. 15 16 The basis for the requested payment amount is presented in Ex. K1-T3-S1 Table 1. 17

Numbers may not add due to rounding.

Table 1
Payment Design - Nuclear
Test Period April 1, 2008 to December 31, 2009

Line No.	Description	Test Period
		(a)
1	Revenue Requirement (\$M)	5,152.5
2	Less: Mitigation (\$M) ¹	137.9
3	Requested Revenue Requirement Recovery (\$M) (line 1- line 2)	5,014.6
4	Less: Amortized Amount for Deferral & Variance Accounts (\$M)	128.1
5	Revenue Requirement to be Recovered Through Payment Amounts (\$M) (line 3 - line 4)	4,886.5
	FIXED MONTHLY PAYMENT AMOUNT:	
6	Proposed Fixed Recovery ²	25%
7	Fixed Recovery Amount (\$M) (line 5 * line 6)	1,221.6
8	Fixed Monthly Payment (\$M) (line 7 / 21 months)	58.2
	VARIABLE PAYMENT AMOUNT:	
9	Remaining Revenue Requirement (\$M) (line 5 - line 7)	3,664.9
10	Forecast Production (TWh) ³	88.2
11	Variable Payment (\$/MWh) (line 9 / line 10)	41.5
	DEFERRAL AND VARIANCE ACCOUNT PAYMENT RIDE	ER AMOUNT:
12	Payment Rider (\$/MWh) ⁴	1.45

Notes:

1 Inclusion of tax losses applicable to future periods as described in Ex. K1-T1-S1

2 Per Ex. I-T1-S1

3 From Ex. K1-T1-S1 Table 3 (line 1, columns (b)+(e))

⁴ From Ex. J1-T2-S1 Table 3