

**Board Staff Supplementary Interrogatories**  
**Rideau St. Lawrence Distribution Inc.**  
**EB-2011-0274**

**51.**

**Capacity for Renewable Generation**

References:

- IRR Board Staff # 10
- Exhibit 2 / Appendix A / p. 7 / section 3.2 “Capacity Assessment Methodology”;
- Exhibit 2 / Appendix A / p. 4 / Table 2 “Renewable Generation Capacity by Station/Feeder”
- TECHNICAL REVIEW OF HYDRO ONE’S ANTI-ISLANDING CRITERIA FOR MICROFIT PV GENERATORS, November 22, 2011

**Preamble:**

- (i) In the first reference RSL indicated that based on current information and industry practice, RSL has adopted a limit of 7% of the minimum feeder load for RSL owned 4.16kV and 8.32kV feeders – the results of implementing that criterion is shown in Table 2 at the second reference. This is founded on the fact that most problems with reverse power flow will occur under light loading conditions. The relatively light load on most RSL feeders generates a limit of potential RG load of 20kW to 50kW per feeder.
- (ii) Board staff in its preamble to its interrogatory No. 10 indicated that Hydro One Networks (“HONI”) has a criterion for establishing the FIT capacity which is the lesser of: 7% of peak load or 33% of minimum load, provided that the ratio of minimum load for any feeder to its peak load is at least 20%. Board staff further indicated that this criterion is more reflective of many jurisdictions in the U.S. and of some other distributors in Ontario. It is also Board staff’s understanding that the shorter the distribution feeder, the more suitable is that feeder for application of the noted criterion to establish the FIT Capacity.
- (iii) In response to Question c) of Board staff interrogatory No.10, RSL [shown at the third reference - IRR 10. c)], that it is reluctant to consider the lesser of the two new columns at this time.

RSL further indicated that its consultant has not seen any conclusive evidence for revising the position on RE connection guidelines, based on review of a Kinectrics’ report on HONI procedures shown in the fourth reference. RSL also indicated that they participate on several relevant CSA committees, and that at the present time, they note that Kinectrics’ has questioned the foundation for any RE connection guidelines specifically Section 4.2 of the noted report.

(iv) Upon review of the RSL's cited report in the fourth reference, Board staff notes that:

- RSL is correct in that Section 4.2 of the report indicates that more studies are needed to determine conclusively the criterion for establishing the FIT capacity level for any feeder.
- However, Section 4.2 of that report reviewed two standards (the IEEE 1547 standard used by Hydro One, and the FERC SGIP standard which is more permissive) and concludes by stating:

*Hydro One's adoption of the one-third anti-islanding limit found in IEEE 1547 is acceptable for the time being, in light of the fact that it is an industry-accepted standard and specifically related to anti-islanding. Further study of the relationship between DG penetration and anti-islanding should lead to the development of a new penetration limit that is acceptable for Hydro One's system.*

- The report in its Executive Summary stated in part:

*Based on the results of this study, Kinectrics Inc. has found that Hydro One's current position is reasonable, given the information that is available.*

Questions:

(a) For the record in this application, please file a copy of the report cited by RSL (listed as the fourth reference of this interrogatory).

***Attached.***

(b) Does RSL agree that its proposed approach is more restrictive than the Hydro One criterion, and that it might have a negative impact on the renewable energy generation industry in the future? (This can occur if the RSL's proposed criterion would result in microFIT or FIT facilities being required by RSL to incur extra cost of connection to a higher voltage feeder.)

***RSL agrees that the proposed approach is more cautious. We are prepared to adopt the proposed limits as outlined in the Kinectrics report for Hydro One. However we feel that given our lightly loaded feeders and continued decline in load, our cautious approach is prudent. As stated by Kinectrics in their review, Load "could decline and further restrict DG penetration. This fact would support the need for a periodic review of allowable DG penetration and the use of a conservative penetration limit so that DG would not have to be disconnected should load decrease." (Section 7.8 p. 26)***

(c) If a proposed microFIT or FIT facility exceeded RSL's criterion for connection, would RSL be willing to consider applications on a case by case basis and perhaps if feasible, consulting with staff of Hydro One Distribution to examine key aspects such as:

- adequacy and type of the anti-islanding protection scheme(UOFV) proposed by microFIT or FIT proponent, as discussed in section 4.5, page 18 of the fourth reference.
- characteristic of the feeder such as its length, and the ratio of the total capacity of microFIT plus FIT installations, including the proposed project, to the minimum load on that feeder?

***Yes, RSL would be willing to consider applications on a case by case basis, and if feasible, consult with Hydro One Distribution staff to examine key aspects.***

(d) Please comment on the view that:

*Notwithstanding that there is no conclusive criterion established for Fit capacity on a feeder, there is no justification for RSL in the meantime to delay in applying the noted Hydro One criterion and instead to continue applying a criterion that is too limiting and not supported by any standard. This could have negative impacts on renewable generation in RSL's service area because it would increase the cost of connection of MicroFIT and FIT generation facilities to a higher distribution voltage system costs more.*

***RSL does not take issue with the above view. RSL is concerned that allowing a higher criterion on our lightly loaded feeders may be detrimental to the safe operation of our system. Mitigating these impacts may burden our existing customers and distribution grid with possible corrective measures. This is in line with the Kinectrics statement in part 4 of their conclusion that,***

***A single anti-islanding limit may not be suitable for all cases, due to the variability of the following factors:***

- *minimum loading on feeder sections,*
- *reclosing times,*
- *inverter anti-islanding protection capabilities, and*
- *presence of multiple DGs.*

***(Section 8 p. 27)***

## **Corporate Cost Allocation / Purchases from Affiliates**

52.

References: IRR Board Staff # 13; Exhibit 4 / 4 / p. 18

- a) What are the principal skills and knowledge base required for the Regulatory Analyst position?

*The principal skills and knowledge base required for the Regulatory Analyst position are:*

- *Successful completion of a post-secondary degree in Accounting, Business, Finance, or Information Technology.*
- *Knowledge of provincial regulations and policy that affects an electricity distribution company is preferred.*
- *Proficient use of computer software including accounting, billing, and Excel.*
- *Data extraction skills using SQL Server databases.*
- *Outstanding interpersonal analytical and communication skills.*
- *Comfortable working in a fast paced environment and the ability to meet rigid deadlines.*

- b) Has the Applicant discussed with its affiliates whether they might be able to benefit from these skills, with the possibility that some of the cost of this new position might be on a shared basis with affiliates rather than borne completely by the Applicant?

*There are no “Regulatory Reporting” requirements for the affiliates, as all rates and mandated reporting responsibilities are performed by the municipalities.*

**53.**

References: IRR VECC # 22(a); IRR Board Staff # 12

The interrogatory responses do provide much assistance toward understanding Table 4-9 and Appendix 2-L in the Application, and in particular how the information affects the 2012 revenue requirement of the Applicant.

- a) With respect to Meter Reading, please explain more fully which affiliate of RSL is expected to incur a meter reading cost of \$46,840 in 2012, and how much of that cost is included in the revenue requirement in this application? How does the amount of \$2,342 relate to the previous sentence?

*Exhibit 4, Schedule 5, Shared Services/Corporate Cost Allocation, as shown on pages 21 and 22 of RSL's application EB-2011-0274, filed on February 7, 2012, explains the methodology adopted in 2008 and carried through into 2012. The exception is for the meter reading costs. The 2012 meter reading cost for RSL is for demand/Industrial meters only, and has reduced from \$74,000 (all meters) in 2011 to \$32,800 (Industrial meters only) in 2012.*

*Appendix 2-L has been reformatted, and reproduced below in Table 53, to provide better clarity. The total Corporate cost has been shown and the allocation to RSL, as well as the Utilities cost.*

*The 2012 meter reading cost of \$46,840 is the cost incurred by Utilities Inc., and is not included in the revenue requirement of this application. The amount of \$2,342 is also not included in the revenue requirement of this application.*

- b) In light of the investment in Smart Meters by the regulated distributor and the resulting decrease in meter reading costs described in IRR BS # 12, why is there no decrease in the aggregate meter reading cost for 2012 (shown in Appendix 2-L in the Application)?

*The investment in Smart Meters by the regulated distributor has resulted in a decrease in meter reading costs from \$74,000 for 2011 Bridge, to \$32,800 for 2012 Test, as shown in the revised Shared Services cost in Table 53 below.*

- c) In light of the Smart Meter investment, should there be a reduction in the "Percentage Allocation" in Appendix 2-L?

*The 2012 Meter Reading cost of \$32,800 is for Industrial meters, and is a sum of the cost for manual reads and for settlement costs. The "Percentage Allocation" methodology used in prior years was not used for 2012 Test year.*

**Table 53**  
**Appendix 2-L Revised**  
**Shared Services/Corporate Cost Allocation**

Year: 2008 - Actual

Name of Company		Service Offered	Pricing Methodology	Corporate	RSL Cost	Utilities Cost	Percentage Allocation
From	To					\$	
Utilities	RSL	Meter Reading	Split costs on meter count by service	\$109,235	\$64,415	\$44,820	59
Utilities	RSL	Billing costs	Bill Complexity plus Hydro Settlement	\$312,923	\$268,399	\$44,524	85.8
Utilities	RSL	Collection Costs	Allocated based on # of bills per service	\$67,030	\$40,882	\$26,148	61

**Appendix 2-L**  
**Shared Services/Corporate Cost Allocation**

Year: 2009 - Actual

Name of Company		Service Offered	Pricing Methodology	Corporate	RSL Cost	Utilities Cost	Percentage Allocation
From	To					\$	
Utilities	RSL	Meter Reading	Split costs on meter count by service	\$106,833	\$65,060	\$41,773	60.9
Utilities	RSL	Billing costs	Bill Complexity plus Hydro Settlement	\$322,708	\$276,355	\$46,353	85.6
Utilities	RSL	Collection Costs	Allocated based on # of bills per service	\$60,990	\$35,061	\$25,929	57.5

Year: 2010 - Actual

Name of Company		Service Offered	Pricing Methodology	Corporate	RSL Cost	Utilities Cost	Percentage Allocation
From	To					\$	
Utilities	RSL	Meter Reading	Split costs on meter count by service	\$112,813	\$68,648	\$44,165	60.9
Utilities	RSL	Billing costs	Bill Complexity plus Hydro Settlement	\$332,266	\$282,862	\$49,404	85.1
Utilities	RSL	Collection Costs	Allocated based on # of bills per service	\$60,804	\$35,080	\$25,724	57.7

Year: 2011 - Bridge

Name of Company		Service Offered	Pricing Methodology	Corporate	RSL Cost	Utilities Cost	Percentage Allocation
From	To					\$	
Utilities	RSL	Meter Reading	Split costs on meter count by service	\$119,440	\$74,000	\$45,440	62
Utilities	RSL	Billing costs	Bill Complexity plus Hydro Settlement	\$321,452	\$272,000	\$49,452	84.6
Utilities	RSL	Collection Costs	Allocated based on # of bills per service	\$66,456	\$36,000	\$30,456	54.2

Year: 2012 - Test

Name of Company		Service Offered	Pricing Methodology	Corporate	RSL Cost	Utilities Cost	Percentage Allocation
From	To					\$	
Utilities	RSL	Meter Reading	Industrial Demand Meter Reading	\$79,640	\$32,800	\$46,840	41.2
Utilities	RSL	Billing costs	Bill Complexity plus Hydro Settlement	\$331,212	\$280,200	\$51,012	84.6
Utilities	RSL	Collection Costs	Allocated based on # of bills per service	\$68,825	\$37,100	\$31,725	53.9

**54.**

References: IRR Board Staff # 15(c); Exhibit 4 / Appendix 4A

- a) Does the evidence show the Net Book Value of the corporate assets that determine the Applicant's cost of shared services? If not, what is the Net Book Value of the assets that are shared?

*The evidence does not show the Net Book Value of the corporate assets that determine the Applicants cost of shared services.*

*The Net Book Value of shared assets is \$320,000.*

- b) With respect to the deliverables (a) – (x) that are listed in section 1.91 of the Master Service Agreement, please describe briefly the assets involved and how they are used in providing the contracted services to the Applicant.

*The largest asset involved in providing the deliverables listed in section 1.01 of the Master Services Agreement is the employees. The provided services are tracked on timesheets, and are charged to the appropriate affiliate.*

*The Fixed Assets involved are land and buildings, office equipment, rolling stock, tools, and communication equipment. The land and buildings are the head office, and include facilities for staff, inventory, and vehicles.*

**55.**

Reference: IRR SEC # 6

- a) Was the review of cost sharing performed by RSL-affiliated staff or by a third party?

*The review of cost sharing was performed by RSL-affiliated staff.*

- b) Was a written report prepared? If so, please file a copy for the record.

*No written report was prepared.*

56.

Reference: IRR Board Staff # 15(b)

Does the Applicant expect that its affiliate will require it to cover the cost of Post-Employment Benefits in the future? When, or why not?

*The Applicant does not expect its affiliate will require it to recover the cost of Post-Employment Benefits in the future, because there are no such benefits.*

### Global Adjustment

57.

Reference: IRR Board staff # 25(a) – (c)

Under IRR 25(a), the proration of non-RPP and RPP for December for charge type 146 shown on page 40 is as follows:

GA prorated to RPP portion	\$201,496
GA prorated to non-RPP customers	\$167,678
Total	\$369,174

- a) How is the proration calculation performed for prorating charge type 146 to RPP and non-RPP customers?

*The proration of Global Adjustment (GA) to RPP and to non-RPP for December 2010 for charge type 146 is based on data extracted from the RSL billing system. The billing system is set up to charge a Global Adjustment amount to every customer billed, and for those customers on RPP, the Global Adjustment is negated (cancelled). A new Global Adjustment rate is provided each month to LDCs by the IESO, and is entered into the billing system. The monthly consumption, loss adjusted, times this rate, is the calculated Global Adjustment. This amount, provided from the billing system, is prorated to the cost of power for the RPP customers, and the balance of charge type 146 is applied to the non RPP cost of power.*

- b) Board staff noted that the above proration was not applied to the journal entries provided under IRR 25(b) and 25(c) on pages 42-43. The entries provided on pages 42-43 show that the amount booked into

account 1588, sub-account GA was arrived at by subtracting total GA billed to non-RPP customers from **all** GA cost invoiced by IESO (i.e. \$369,174.08), and not the amount prorated as shown under IRR 25(a). Please provide an explanation.

***The amounts included in these correcting entries were for the approved disposition of Group 1 Deferral and Variance Accounts in EB-2009-0248 - GA: principal plus interest in the amount of \$243,160. Effective May 1, 2010, this approved amount was transferred to GL 1595. An incorrect GL account number was applied to this recovered amount, and it was incorrectly added to the cost of GA. The error was discovered as part of the 2011 Year End. As the amount was entirely for the GA recovery, no proration is required.***

**58.**

Reference: IRR Board staff # 25(d)

In IRR 25 (d), RSL stated:

*“While preparing this response, an error was discovered in our December 2010 submission for 1598.*

*An excess amount of \$118,489.87 was claimed in our December 2010 submission on Form 1598. The amount settled on line 142 of the IESO Power bill was a credit of \$134,360.29, based on RSL’s submission. The amount that should have been submitted is a credit of \$15,870.42 – an over claimed amount of \$118,489.87.*

*This amount should be reduced in RSL’s Deferral and Variance disposition request of 2010 Audited balances.”*

a) Has RSL adjusted its balances for disposition for this amount?

***RSL has not adjusted its balances in this application for disposition of this amount.***

***RSL has added the \$118,489.87 to the 1598 form submitted to the IESO for settlement in the April 2012 Power bill. RSL has repaid the over claimed amount, as it was included in the charge type 142 amount of \$152,037.08.***

***As RSL has already settled for the over claimed amount, RSL should adjust its balances before final disposition is approved. RSL proposes to make the \$118,489.87 adjustment as part of the final adjustments.***

b) Has RSL consulted third parties for advice on the accounting matters related to regulatory accounting?

***RSL has not consulted third parties for advice on the accounting matters related to regulatory accounting.***

**59.**

Reference: IRR Board staff # 28 – Table 9.10R

Account 1588 – Power and sub-account 1588 – GA amounts for disposition have been changed by RSL as follows:

<b>Account</b>	<b>Prefiled Balance Exh 9 / 8 / Table 9.10</b>	<b>New Balance IRR #28 / p. 46</b>	<b>Difference</b>
1588 – excl GA	-\$94,604	\$141,196	\$235,800
1588 – GA	-\$155,896	-\$391,695	-\$235,799

Please provide an explanation for the changes in the balances for disposition.

***Table 59 below shows the numerical changes in the 1588 balances requested for disposition.***

***As explained in board Staff IR 30 c), when completing the Deferral and Variance Account Work form, RSL incorrectly entered the \$231,267.02 adjustment for the GA sub-account disposition approved effective May 1, 2010 (not effective May 1, 2011 as typed for Board staff IR 30) on EB-2009-0248, in the 2012 Continuity Schedule in Cell BX29, when it should have been entered in Cell BX28.***

***The additional difference of \$4,533 is for the change in Interest Improvement for 2011 - \$3,400, and for the first four months of 2012 - \$1,133.***

***The original adjustment of \$231,267 plus the change in Interest Improvement of \$4,533, provide the total difference of \$235,800 shown above.***

***There is a \$1 difference in 1588 – GA due to rounding.***

**Table 59**  
**Account 1588 – sub-account Power and sub-account GA**

Transactions Debit/ (Credit) during 2010 excluding interest and adjustments <sup>6</sup>	Board-Approved Dispositions during 2010	Other <sup>3</sup> Adjustments during Q4 2010	Closing Principal Balance as of Dec-31-10	Interest Jan-1 to Dec-31-10	Board-Approved Disposition during 2010	Closing Interest Amounts as of Dec-31-10	Principal Disposition during 2011 - instructed by Board	Interest Disposition during 2011 - instructed by Board	Closing Principal Balances as of Dec 31-10 Adjusted for Dispositions during 2011	Closing Interest Balances as of Dec 31-10 Adjusted during 2011 Disposition	Projected Interest from Jan 1, 2011 to December 31, 2011 on Dec 31 -10 balance adjusted for disposition during 2011 <sup>9</sup>	Projected Interest from January 1, 2012 to April 30, 2012 on Dec 31 -10 balance adjusted for disposition during	Total Claim	
<b>GL Acct 1588:</b>														
<b>Prefiled Balance Ex 9 / 8 / Table 9.10</b>														
RSVA - Power, Exclude GA	-\$ 110,250	\$ 389,187	\$ -	\$ 499,437	\$ 3,589	\$ 52,915	\$ 4,729	-\$ 148,150	\$ 15,620	-\$ 351,287	-\$ 10,891	-\$ 5,164	-\$ 1,721	-\$ 369,063
RSVA - Power, GA only	-\$ 315,917	\$ 246,991	\$ 231,267	-\$ 331,641	-\$ 1,899	-\$ 3,831	-\$ 3,038	\$ 402,883	\$ 6,186	-\$ 734,524	-\$ 9,224	-\$ 10,798	-\$ 3,599	-\$ 758,145
<b>New Balance IRR # 28 / p. 46</b>														
RSVA - Power, Exclude GA	-\$ 110,250	\$ 389,187	\$ 231,267	-\$ 268,170	\$ 3,589	\$ 52,915	\$ 4,729	-\$ 148,150	\$ 15,620	-\$ 120,020	-\$ 10,891	-\$ 1,764	-\$ 588	-\$ 133,263
RSVA - Power, GA only	-\$ 315,917	\$ 246,991	\$ -	-\$ 562,908	-\$ 1,899	-\$ 3,831	-\$ 3,038	\$ 402,883	\$ 6,186	-\$ 965,791	-\$ 9,224	-\$ 14,197	-\$ 4,732	-\$ 993,945
<b>Change:</b>														
RSVA - Power, Exclude GA	\$ -	\$ -	-\$ 231,267	-\$ 231,267	\$ -	\$ -	\$ -	\$ -	\$ -	-\$ 231,267	\$ -	-\$ 3,400	-\$ 1,133	-\$ 235,800
RSVA - Power, GA only	\$ -	\$ -	\$ 231,267	\$ 231,267	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 231,267	\$ -	\$ 3,400	\$ 1,133	\$ 235,800

### Deferral and Variance Account Continuity Schedule

60.

Reference: IRR Board staff # 30 (b), pages 53-54

The entries shown on these two pages appear to be correcting the error in account 1595. However, the debit side of the entry indicates that the accounts were originally credited to commodity sales.

Please provide the original entry that is being corrected by the entries provided on pages 53-54.

*The original entries that are being corrected by the entries provided on pages 53-54 for Board Staff IRR # 30 (b) are shown below in Table 60:*

**Table 60**  
**Original Entries for 2010 GA Sub Account Recording Error**

<u>Month</u>	<u>Account</u>	<u>Description</u>	<u>Debit</u>	<u>Credit</u>
May-10	4010	Revenue - Commercial		195.15
	4015	Revenue - Industrial		2,426.22
	4006	Revenue - Residential		196.91
	4705	Cost of Power - Energy	2,818.28	
Jun-10	4010	Revenue - Commercial		1,103.06
	4015	Revenue - Industrial		14,486.16
	4006	Revenue - Residential		1,752.70
	4010	Revenue - Commercial		47.12
	4030	Revenue - Street Lights		5.65
	4025	Revenue - Sentinel Lights		543.07
	4705	Cost of Power - Energy	17,937.76	
Jul-10	4010	Revenue - Commercial		1,324.87
	4015	Revenue - Industrial		17,165.19
	4006	Revenue - Residential		1,946.02
	4010	Revenue - Commercial		24.54
	4030	Revenue - Street Lights		5.65
	4025	Revenue - Sentinel Lights		488.82
	4705	Cost of Power - Energy	20,955.09	
Aug-10	4010	Revenue - Commercial		1,495.66
	4015	Revenue - Industrial		20,212.84
	4006	Revenue - Residential		3,129.81
	4010	Revenue - Commercial		24.54
	4030	Revenue - Street Lights		5.65
	4025	Revenue - Sentinel Lights		552.28
	4705	Cost of Power - Energy	25,420.78	
Sep-10	4010	Revenue - Commercial		1,223.95
	4015	Revenue - Industrial		16,532.94
	4006	Revenue - Residential		2,079.83
	4010	Revenue - Commercial		26.79
	4030	Revenue - Street Lights		5.65
	4025	Revenue - Sentinel Lights		609.23
	4705	Cost of Power - Energy	20,478.39	
Oct-10	4010	Revenue - Commercial		1,342.44
	4015	Revenue - Industrial		19,739.83
	4006	Revenue - Residential		2,927.97
	4010	Revenue - Commercial		24.54
	4030	Revenue - Street Lights		5.65
	4025	Revenue - Sentinel Lights		659.80
	4705	Cost of Power - Energy	24,700.23	
Nov-10	4010	Revenue - Commercial		1,122.05
	4015	Revenue - Industrial		16,699.61
	4006	Revenue - Residential		2,130.16
	4010	Revenue - Commercial		26.39
	4030	Revenue - Street Lights		5.65
	4025	Revenue - Sentinel Lights		768.83
	4705	Cost of Power - Energy	20,752.69	
Dec-10	4010	Revenue - Commercial		1,464.54
	4015	Revenue - Industrial		19,881.33
	4006	Revenue - Residential		2,611.38
	4010	Revenue - Commercial		24.54
	4030	Revenue - Street Lights		5.65
	4025	Revenue - Sentinel Lights		814.22
	4705	Cost of Power - Energy	24,801.66	
May-Dec	4055	Revenue - Retailer		3,154.09
	4055	Revenue - Retailer		12,123.20
	4055	Revenue - Retailer		5,410.61
	4055	Revenue - Retailer		50.38
	4055	Revenue - Retailer		11.30
	4055	Revenue - Retailer		30,553.70
	4055	Revenue - Retailer		1,755.25
	4705	Cost of Power - Energy	53,058.53	

## **PILs - Tax Rates used for True-up Calculations**

**61.**

Reference: IRR Board staff # 35 / p. 62

RSL's auditors agreed with the income tax rates that appeared in the PILs tax notes contained in RSL's audited financial statements for the years 2001 through 2005. Board staff provided these income tax rates directly from RSL's financial statements in the table which appears on page 62 of RSL's responses to OEB staff interrogatories.

- a) Why did RSL not use these tax rates that were audited by RSL's external auditors in determining the recalculated balance in PILs account 1562?

*The notes to the financial statements for 2001 to 2005 regarding income taxes reflect an accounting approach to the determination of the PILs expense recorded on the profit and loss statement. It uses net income per financial statements prior to tax as an initial proxy for taxable income, applies a proxy tax rate (not a precise tax rate for the level of taxable income assumed) and adjusts for the tax impacts of differences between financial statement and tax return revenues and expenses.*

*Tax rates used for financial statement accounting purposes are not appropriate to use for true-up purposes in the 1562 PILS regulatory accounting determination process.*

*The rates are proxies and the level of assumed taxable income (net income per financial statements) is not consistent with the level of regulatory taxable income that was used to determine the PILs that were approved and included in the rates.*

*RSL believes the true-up rates should be determined on a utility specific basis taking into consideration the following three factors:*

- *The level of taxable income set equal to regulatory taxable income used in the PILs determination models which were used to calculate the amount of PILs that were included in rates;*
- *The level of taxable capital as per either the actual Federal T2 tax returns or ratebase used as a proxy to determine if small business reductions to tax rates were appropriate; and*
- *The actual level of legislated annual federal and provincial income tax rates used for the specific years.*

*This approach properly reflects the intent of the SIMPILS process to capture changes in legislated tax rates only and is consistent with the principles established in the Combined Proceeding (EB- 2208-0381). The PILs included in rates were determined well in advance of the actual tax years using proxies for what the actual tax rates would be. Utilizing the actual tax rates that would be applicable to the same level of regulatory net income as used to set PILs in rates properly captures the changes in legislation. This captures the difference between the rates used to determine PILs included in rates and what the PILs would have been if they were set in the actual tax year with full knowledge of any changes in tax rates.*

- b) RSL prepared and released its audited financial statements using these audited income tax rates. Why should these audited income tax rates not be regarded by RSL as more correct than the revised tax rates (which have not been audited by RSL's auditors) that were used in the revised SIMPIL models?

See response to 61 a) above.

## **PILs - Continuity Schedule**

**62.**

Reference: IRR Board Staff # 39

Please file an updated EDDVAR model that shows the **credit** balance of \$156,173 in PILs account 1562, to be refunded to customers.

*An updated EDDVAR model that shows the credit balance of \$156,173 in PILs account 1562, to be refunded to customers is included as Appendix 62.*

## **PILs - Interest Expenses**

**63.**

References: IRR Board Staff # 40(j); SIMPIL TAXCALC sheets

In the SIMPIL TAXCALC sheets for 2001, 2002 and 2003, the interest expense used in the true-up calculations does not agree with Exhibit 40J, page 73, of the responses to OEB staff interrogatories.

- a) Please confirm that there should not be any discrepancies between these two references.

*RSL agrees that there should not be any discrepancies between the two references.*

- b) If necessary, please provide a revised Exhibit 40J.

<b>Rideau St. Lawrence Distribution Inc.</b>						
<b>Interest Expense</b>						
<u>Acct</u>	<u>Description</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
6005	Long Term Debt - BMO	\$5,239				
6030	Shareholder Notes	\$5,767	\$48,394	\$41,985	\$45,962	\$45,836
6035	Bank Of Montreal Loans	\$0	\$39,164	\$34,313	\$29,677	\$25,606
	Customer Deposits	\$0	\$3,377	\$3,362	\$3,868	\$3,635
	IESO Prudentials		\$4,284	\$8,568	\$8,568	\$8,568
	Other Payables			\$2,685	\$508	\$1,544
	<b>Total Interest Expense</b>	<b>\$11,006</b>	<b>\$95,219</b>	<b>\$90,913</b>	<b>\$88,583</b>	<b>\$85,189</b>
	Reg. Asset Interest		\$40,814	\$48,622		
	PILS Tax Returns	\$11,006	\$136,033	\$139,535	\$88,583	\$85,189

- c) If necessary please correct the SIMPIL models for 2001-2003.

*This will not be required, as RSL has revised Exhibit 40J.*



**TECHNICAL REVIEW OF HYDRO ONE's ANTI-ISLANDING CRITERIA  
FOR MICROFIT PV GENERATORS**

**Kinectrics Inc. Report No.: K-418086-RA-001-R00**

**Client Purchase Order: 4500123143**

November 22, 2011

Nicolas Wrathall  
Stephen Cress  
Yury Tsimberg

Distribution Asset Management Department

**PRIVATE INFORMATION**

**Contents of this report shall not be disclosed without authority of the client.  
Kinectrics Inc., 800 Kipling Avenue, Toronto, Ontario M8Z 6C4**

**TECHNICAL REVIEW OF HYDRO ONE's ANTI-ISLANDING CRITERIA  
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## **DISCLAIMER**

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**REVISIONS**

<b>Revision Number</b>	<b>Date</b>	<b>Comments</b>	<b>Approved</b>

# TECHNICAL REVIEW OF HYDRO ONE'S ANTI-ISLANDING CRITERIA FOR MICROFIT PV GENERATORS

## EXECUTIVE SUMMARY

This report provides the results of a technical review of Hydro One's anti-islanding criteria for microFIT PV generators, and the limitations these criteria place on the penetration of PV solar generation that can be connected to Hydro One's power system. The study was conducted by Kinectrics Inc. at the request of Hydro One.

Hydro One imposes several limits on the amount of PV solar generation that can be connected to their distribution system in order to preserve reliability and quality of supply to existing load customers and distributed generators. One of these limits is driven by the need to prevent unintentional islanding, that is, unintentional energization of a portion of the system that has become disconnected from the utility supply. To accomplish this, Hydro One limits microFIT PV solar penetration on the utility's F- and M-class feeders to 7% and 10% of the peak feeder load, respectively.

The criteria being used by Hydro One are based on the following:

- The maximum allowable amount of PV generation should not exceed one third of the feeder minimum load, as stated in the Institute of Electrical and Electronics Engineers (IEEE) standard IEEE1547 *Standard for Interconnecting Distributed Resources with Electric Power Systems*.
- The ratio of minimum to peak feeder load is assumed to be 20% for F-class feeders and 30% for M-class feeders.

Proponents and manufacturers of microFIT PV installations have questioned these constraints and noted that inverters are certified to the Canadian Standards Association (CSA) standard C22.2 No. 107.1-01 *General Use Power Supplies* and should cease to energize an island following unplanned islanding.

To assess Hydro One's position regarding anti-islanding constraints, Kinectrics performed the following tasks:

- examined relevant CSA, International Electrotechnical Commission (IEC), IEEE, and Underwriters Laboratories (UL) Standards
- conducted a survey of utilities
- conducted a survey of microFIT PV inverter manufacturers
- carried out a literature review
- analyzed Hydro One's documentation and system requirements
- evaluated preliminary load data from Hydro One's Kent TS pilot project.

Based on the results of this study, Kinectrics Inc. has found that Hydro One's current position is reasonable, given the information that is available. The Hydro One limit has its basis in a relevant IEEE Standard, and Hydro One's estimations of feeder minimum loading appear to be representative according to data collected to-date from Smart Meters. However, a review of Standards and technical documentation indicates that there may be opportunities to revise the existing anti-islanding generation-to-load constraints under certain circumstances. These opportunities will require further study.

For instance, the current CSA anti-islanding certification might support a Hydro One decision to revise the generation-to-load limits, provided all of the following are found to be true:

- further investigation reveals that all certified PV inverters have anti-islanding protections in addition to frequency and voltage protection,
- testing indicates that PV inverter clearing times meet Hydro One requirements with respect to reclosing times,
- studies demonstrate that the quality factor used in the CSA anti-islanding test is appropriate for Hydro One's system, and
- the impact of the presence of multiple DGs on inverter anti-islanding protections is addressed.

Depending on the outcome of these studies, the CSA testing requirements may need to be supplemented by a yet-to-be-developed Hydro One laboratory test to ensure reliable anti-islanding protection on the Hydro One system. In this case, microFIT distributed generation (DG) equipment would need to be subjected to additional testing.

Furthermore, a single anti-islanding limit for all M- and F- class feeders may be replaced by several limits depending on specific factors, such as feeder class, reclosing time, actual feeder load profile, etc.

Therefore, Kinectrics recommends maintaining the existing anti-islanding constraints until appropriate studies and tests aimed at establishing new quantifiable anti-islanding limits are completed. A number of specific actions aimed at facilitating the establishment of these new, likely less stringent, limits are provided below.

- Study the probability and consequences of islanding to quantify the risks of unintentional islanding to Hydro One staff, customers, and equipment.
- Consider the gaps between the CSA certification testing and Hydro One requirements and develop supplemental laboratory testing to compliment CSA certification
- Continue with the Smart Meter load data pilot project and consider expanding the scope to include other stations
- Further investigate the possible use of technical mitigating measures that may facilitate revision of the existing limits

It should be noted, however, that even if the 7% and 10% limits are relaxed, other technical constraints such as feeder thermal capacity and voltage regulation will likely limit microFIT penetration unless distribution system upgrades are completed. These upgrades could include reconductoring feeder sections, converting feeder sections from single-phase to three-phase, or installing voltage regulating equipment. The costs associated with these upgrades may be disproportionately large when compared against the size and cost associated with typical microFIT installations.

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## **TECHNICAL REVIEW OF HYDRO ONE'S ANTI-ISLANDING CRITERIA FOR MICROFIT PV GENERATORS**

### **1.0 INTRODUCTION**

This report provides the results of a technical review of Hydro One's anti-islanding criteria for microFIT PV generators and the limitations these criteria place on the penetration of PV solar that can be connected to Hydro One's power system. The study was conducted by Kinectrics Inc. at the request of Hydro One.

### **1.1 Background**

The addition of Distributed Generation (DG), including photovoltaic solar inverters and other generators, to a medium voltage radial distribution system requires assessment of the numerous impacts that the DG may have on the power quality, reliability, and personnel and equipment safety. Specific impacts such as excessive fault currents, voltage and frequency excursions, and uncontrolled islands must be understood and measures must be taken to address these issues. While ongoing technology development may ultimately provide resolution to some of these issues, others will likely continue to require limitations on the amount and type of DG that can be connected on typical distribution systems.

One of the numerous considerations is to ensure that unintentional islanding of DG sources does not occur. That is, DG sources should not continue to supply sections of the distribution system that are isolated from the host utility's main supply. In other words, DGs should "cease to energize" the distribution system within a prescribed period of time. Otherwise, an unacceptable prolonged "islanding" event would leave the voltage and frequency in the island uncontrolled, and could lead to unsafe and damaging voltage and frequency fluctuations. Prolonged islanding could also defeat automatic reclosing schemes, degrade system reliability, and even pose a safety risk to utility workers and the general public. Islands are formed when system protective devices operate to sectionalize and isolate a section of the distribution system. It is recognized in the industry that an effective method of anti-islanding is essential to reliable and safe operation.

The acceptable length of time for which an island can occur varies depending on the consequences considered. Long duration islands lasting several seconds or more could pose a safety hazard for the

public and utility workers when working on supposedly de-energized equipment which could be inadvertently energized in an unplanned island. Alternatively, short duration islands lasting hundreds of milliseconds to several seconds are unlikely to pose a safety hazard, but may cause equipment damage and/or reliability issues as described above. Because both safety and equipment damage need to be avoided, the subsequent analysis will focus on short duration islands, as this will also ensure that both equipment damage and safety issues are addressed.

Although PV inverters certified to Canadian and international standards are designed to protect against islands, unintentional islanding can occur in the event of equipment failure or under power system circumstances that fall within the non-detection zones of inverter protection. For instance, unintentional islanding could occur if there is a failure in an inverter that interferes with the anti-islanding protections. One such unintentional islanding event occurred in Ontario and was the subject of a recent Electrical Safety Authority (ESA) Bulletin [4]. In this event, a 10kW PV inverter failed to disconnect because of a generic problem with its software that prevented the inverter from responding correctly after the island was detected. Unintentional islanding could also occur if the conditions at the time of the islanding event were such that the inverter's anti-islanding protection systems were unable to detect the island.

Some research indicates that the probability of an unintentional island involving small PV inverters lasting longer than five seconds is negligible due to load and generation variability, resulting in voltage and frequency variations that activate inverters' anti-islanding protections (Verhoeven, 2002). Although this indicates that long-duration unintentional islands are unlikely to occur, it does not address the issue of short-duration islands. Even the best-designed and tested protection systems may experience component failure, so anti-islanding protection, like any other protection system, can never be guaranteed and personnel should therefore always follow safe operating procedures to protect themselves.

Ensuring that an island with a live source does not survive longer than acceptable can be achieved in a number of ways. One means of achieving this is to ensure that the amount or "penetration" of generation is low enough that the generators cannot possibly support the system load and will shut down based on their inherent protection schemes. Another relies on specific anti-islanding protection schemes to detect the loss of the utility source and trip the DG. Each of these approaches has technical limitations and a mix of these approaches is generally used at North American utilities to prevent islanding.

Hydro One has adopted measures in their microFIT screening process to ensure that prolonged unintentional islanding, as well as other potential negative impacts of DG, does not occur. Specifically, Hydro One's screening criteria limits the aggregate amount of microFIT DG penetration on a distribution feeder to one third of the minimum feeder load. This is intended to ensure that the load to generation ratio in an island will be sufficiently imbalanced as to trigger the operation of the DG's over/under voltage or frequency protection, which will disconnect the DG before reclosing.

This one third generation to minimum load translates to a limit on microFIT generation of 7% of the peak load for F-class feeders, and 10% for M-class feeders, based on the assumption that feeder minimum loads are equal to 20% and 30% of peak for F-class and M-feeders, respectively.

These constraints on allowable DG penetration on the Hydro One system have been questioned by proponents of microFIT PV solar generation.

Hydro One has hired Kinectrics Inc. as independent 3<sup>rd</sup> party to review the technical criteria and rationale used for anti-islanding protection of the Hydro One systems.

## **2.0 OBJECTIVES AND SCOPE**

### **2.1 Objectives**

The objective of this Kinectrics investigation was to review the technical information available from Hydro One and from other industry sources related to anti-islanding criteria, and the limitations that they may place on the amount of photovoltaic microFIT generation that can be safely and reliably allowed on the Hydro One system.

A related objective was to compare the criteria that Hydro One employs to ensure adequate anti-islanding protection with the rationale and practices used in other jurisdictions.

Kinectrics' objective was also to establish if there was some opportunity to modify Hydro One's existing criteria and constraints.

A further objective of the Kinectrics investigation was to recommend actions that might ultimately lead to a revision of the technical criteria related to anti-islanding protection and perhaps a revision of the limitations on the penetration of microFIT DG on Hydro One feeders. These could include such undertakings as: required technical studies, industry and utility surveys, studies, equipment testing and computer simulations.

### **2.2 Scope**

The scope of this preliminary review was limited to a subset of the issues that may affect the penetration of DG on power system feeders. This investigation deals with the issue of islanding of microFIT generation, anti-islanding protections, and the DG penetration limits that a utility could impose to ensure effective anti-islanding protection. The scope of this investigation was limited to the systems, equipment and issues listed below:

- MicroFIT PV solar inverters less than or equal to 10 kW, single or three phase
- Anti-islanding requirements
- Hydro One's M-class and F-class feeders
- Inverter protection capabilities
- Standards and testing requirements for PV inverters

It is important to re-iterate that there are many issues that impact allowable penetration of DG on a distribution system. Only one of these, anti-islanding, was within the scope of this investigation.

### 3.0 METHODOLOGY

In order to satisfy the preceding objectives and to examine the technical rationale for ensuring timely de-energization of islands, Kinectrics Inc. conducted a review focusing on the information sources listed below.

- Industry Standards relevant to DG Interconnection and anti-islanding protection, including:
  - Canadian Standards Association (CSA) standard CSA C22.2 107.1-01, *General Use Power Supplies*
  - CSA C22.3 No.9-08, *Interconnection of Distributed Resources and Electricity Supply*
  - International Electrotechnical Commission (IEC) standard IEC 61727, *Photovoltaic (PV) systems – Characteristics of the Utility Interface*
  - IEC 62116, *Test Procedure of Islanding Prevention Measures for Utility-Interconnected Photovoltaic Inverters*
  - Institute of Electrical and Electronics Engineers (IEEE) standard IEEE 1547, *IEEE Standard for Interconnecting Distributed Resources with Electric Power Systems*
  - IEEE 1547.1, *Standard for Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems*
  - Federal Energy Regulatory Commission (FERC) procedure, *FERC Small Generator Interconnection Procedures*
  - *Ontario Distribution System Code*
  - Underwriters Laboratories (UL) standard UL 1741, *Standard for Inverters, Converters, and Controllers for Use in Independent Power Systems*
- A Kinectrics utility survey requesting information on anti-islanding practices
- A Kinectrics microFIT PV inverter manufacturer survey on anti-islanding protections
- A Literature Review of relevant texts and papers from industry publications
- System information and feeder loading data provided by Hydro One
- Relevant Hydro One standards and documentation

In reviewing this information, Kinectrics found that the use of a generation to load ratio as means of achieving anti-islanding protection is based on a number of technical “pillars”. The method employed was then to examine each of these technical pillars to assess their validity. Kinectrics’ ultimate comments on the “reasonableness” of Hydro One’s 7% and 10% micrFIT generation to peak load criteria are based on the following examination of each of the pillars upon which these criteria are based.

## 4.0 REVIEW AND ANALYSIS

The basis and rationale for Hydro One's 7% and 10% generation-to-load limits were assessed by considering the fundamental technical pillars upon which these limits were based. These pillars included:

- Minimum Feeder Loading
- Generation-to-Load Ratio
- Reclosing Considerations
- Anti-Islanding Certification Testing
- Passive/Active Anti-Islanding Protection

### 4.1 Minimum Feeder Loading

The size of the load in an islanded feeder or feeder section is often considered to be important because if the DG cannot supply this load the DG will disconnect, thus achieving the desirable de-energization of the island. Therefore, minimum load situations have become important, as they could be considered to impose the most severe limit on DG penetration.

Historically, it was not necessary for Hydro One to measure minimum feeder loading. Specifically, Hydro One's distribution system was designed for load connections, which are constrained by peak flows. Therefore, Hydro One's 7% and 10% generation to peak load limits are based on an estimation that minimum load is 20% of peak on F-class feeders and 30% on M-class feeders. A higher minimum feeder load will result in an increase in the overall DG penetration limit.

Hydro One has an ongoing pilot project at Kent TS that uses customer Smart Meter kWh data to calculate minimum feeder loading, based on hourly measurements recorded over a 12-month period between April 2010 and March 2011. Preliminary results indicate:

- The average daytime (7am to 8pm EST) annual minimum load for all feeder sections<sup>1</sup> is 18.5% of peak (18.5% for F-class feeders and 15.8% for M-class feeders)
- The daytime annual minimum loads for F-class feeder sections range from 8% to 35% of peak (see Figure 1 for this distribution)
- The daytime annual minimum loads for M-class feeder sections range from 1% to 36% of peak

These results are preliminary and still need to be further validated.

Based on the limited data currently available, Hydro One's assumed minimum to peak load ratios appear to be reasonable overall, if not somewhat high. However, with the variability of over approximately 3000 distribution feeders it is expected that the assumed 20% and 30% ratios may be low for some feeders and high for others. Further refinement of the pilot project data and additional feeder section minimum load measurements from different stations will be required to determine representative load distributions.

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<sup>1</sup> Hydro One defines a "feeder section" as any portion of a feeder bounded upstream by a sectionalizing device and downstream by the end of the feeder. This means that some portions may be included in more than one "feeder section."

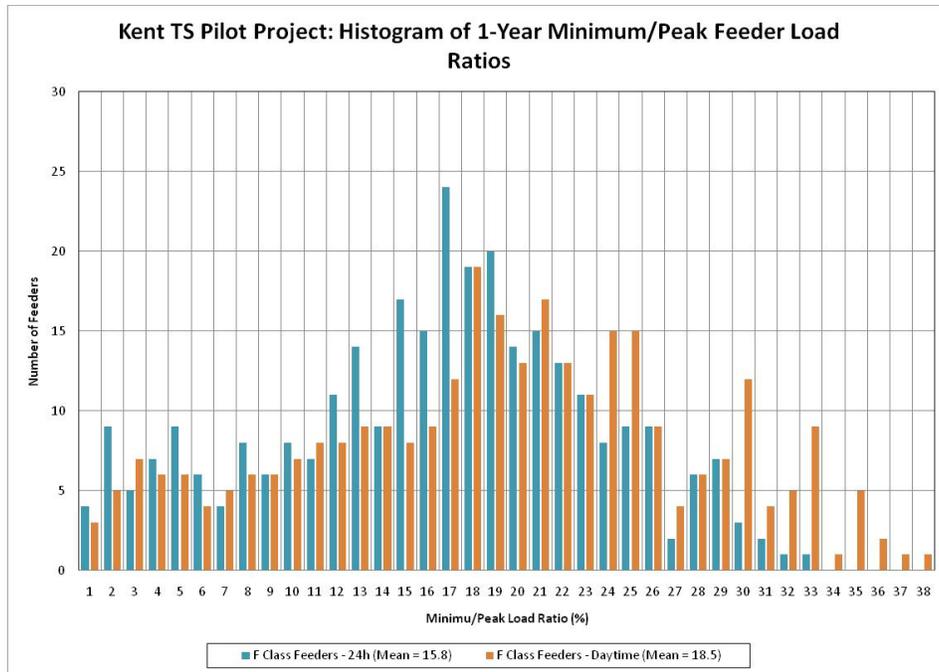


Figure 1: Histogram of 1-Year Minimum/Peak F-Class Feeder Load Ratios

#### 4.2 Generation to Load Ratio

Hydro One currently limits microFIT penetration on a feeder to one-third of minimum load to prevent unintentional islanding. The intention of this limit is to ensure that the ratio of generation to load in an island will always be sufficiently low to cause the voltage and frequency in the island drop to a point where they trigger inverters’ under frequency and/or under voltage protections. This limit still relies on the inverters’ passive anti-islanding protections and is not intended to prevent unintentional islanding due to inverter failure, such as the event described by ESA Bulletin DSB-07/11 [4].

Because Hydro One does not currently measure minimum feeder loading, minimum load is assumed to be 20% and 30% for F- and M-class feeders respectively. The one-third limit, when combined with these minimum load assumptions, results in Hydro One’s microFIT penetration limits of 7% and 10% of feeder peak load for F- and M-class feeders respectively.

The use of a one-third generation to minimum load anti-islanding penetration limit is supported by the IEEE 1547 Standard in a footnote to section 4.4.1, which states [14]:

“Some examples by which (the requirement that the distributed resource, or DR, shall detect and cease to energize the area electric power system within two seconds) may be met are:

1. The DR aggregate capacity is less than one-third of the minimum load of the local electric power system.
2. The DR is certified to pass an applicable non-islanding test.
3. ...
4. The DR contains other non-islanding means, such as ...”

IEEE 1547 is an industry-accepted standard and Hydro One's reliance on the information contained in this section is justified. However, our review indicates two potential weaknesses with this section of IEEE 1547. Firstly, the one-third limit is listed as one of several examples in a footnote to the main clause and whether these examples are intended to be guidelines or intended as only suggestions has been the subject of some debate. Moreover, it is also unclear if the intention is that each of these examples should be relied upon individually (i.e.: should generation be limited to one-third if it is certified to pass an "applicable" non-islanding test?), or in combination (see Section 4.4 for a discussion on the "applicability" of CSA and UL certification tests).

Secondly, upon further investigation, the basis for the one-third limit itself is debatable, especially as it relates to PV generation. As explained in IEEE 1547.2: "the origin of this 3-to-1 load-to-generation factor is an IEEE paper [6] based on simulations and field tests of induction and synchronous generation islanded with various amounts of power factor-correcting capacitive kilovolt amperes reactive." As microFIT generators, which are usually PV inverters, typically do not involve synchronous or induction machines equipped with power factor-correcting capacitors, the applicability of this limit to the microFIT situation is questionable.

As a potential alternative to the one-third limit documented in IEEE 1547, FERC's *Small Generator Interconnection Procedures* (SGIP) were reviewed [5]. The limit stated in this procedure is often cited as an alternative to that of IEEE 1547. According to section 2.2.1.2 of the SGIP:

"For interconnection of a proposed Small Generating Facility to a radial distribution circuit, the aggregated generation, including the proposed Small Generating Facility, on the circuit shall not exceed 15% of the line section annual peak load ..."

This 15% limit is used by some US utilities and is described in the SGIP as a part of a screening process to determine which interconnection procedure in the document should be applied to a particular generator and no specific reference to anti-islanding is given. An Interstate Renewable Energy Council (IREC) presentation delivered at the Spring 2011 Utility Wind Integration Group (UWIG) technical workshop and annual meeting suggests that this screen is intended for anti-islanding and the 15% limit is derived from a 50% generation to minimum load limit and an assumption that the minimum load is 30% of peak. However, Kinectrics' investigations were unable to substantiate this or find any basis for the SGIP 50% generation to minimum load limit mentioned in this presentation. Informal interviews with industry professionals who participated in the development of the FERC SGIP indicate that the 15% screen did not originate from a technical study, but rather resulted from the consensus of those involved in the development process.

No similar limits could be found in IEC standards.

Although two industry-accepted standards were found to provide guidance on the maximum level of DG penetration, acceptable justification could not be found for either the IEEE 1547 one-third or the FERC SGIP 15% limits and no other industry-accepted limits were found. Therefore, it is recommended that Hydro One study the use of a generation to minimum load ratio as an anti-islanding criterion for limiting PV penetration to determine if:

- a limiting ratio guaranteeing that an inverter's built-in under/over-frequency/voltage protections will clear any island exists,
- the presence of other DG types impacts this limit, and
- the built-in PV inverter anti-islanding protections are reliable and CSA certification testing is sufficient (see Section 4.4).

These issues should be addressed through simulations and laboratory experimentation.

Hydro One's adoption of the one-third anti-islanding limit found in IEEE 1547 is acceptable for the time being, in light of the fact that it is an industry-accepted standard and specifically related to anti-islanding. Further study of the relationship between DG penetration and anti-islanding should lead to the development of a new penetration limit that is acceptable for Hydro One's system.

### 4.3 Reclosing Considerations

Typical North American distribution systems, including the Hydro One system, utilize reclosing over-current protection schemes in order to reduce the duration of customer outages due to momentary or transient faults. When a fault occurs on the power system the breaker or recloser upstream of the fault is set to open the system and then reclose again. It is known that 70 to 80% of the faults on overhead distribution systems are temporary in nature and thus the opening of the protective device may allow the fault to clear and the subsequent reclosing will re-connect the customers to the now unfaulted system.

The short duration in which the recloser remains open before it re-energizes the system is termed the reclosing interval. Any DG downstream of the recloser is required to disconnect from the system before the end of the recloser's first reclosing interval. If the DG has not disconnected within this time, there is a danger that the utility source will reclose onto an energized island that has shifted in frequency and voltage from the utility supply.

Hydro One employs a variety of reclosing relay and breakers schemes as well as independent line and station reclosers to achieve reclosing protection on their M-class (primarily 3-wire 44kV and 27.6kV feeders) and their F-class (4-wire, 27.6 kV and below feeders).

Reclosing intervals for Hydro One's M-class feeders are as follows:

- Relays and feeder breakers: 0.5 to 1.0s
- Reclosers: 1.5 to 2.0s
  - Hydraulic: 1.5s
  - Electronic: adjustable (Hydro One typical 2s)

For F-class feeders the Reclosing Intervals are:

- Reclosers: 1.5 to 2.0s
  - Hydraulic: 1.5s
  - Electronic: adjustable (Hydro One typical 2s)

These reclosing times are selected based on a complex set of requirements, such as: equipment limitations (hydraulic reclosers), protection coordination (fuse saving scheme), and reliability of supply to customers.

In this review, two fundamental reclosing scenarios were considered to be relevant in establishing a time in which a DG supply must disconnect from the Hydro One system.

1. Feeder section isolation – no fault:

A feeder section may become isolated even though there is no fault on the system. This may be due to a planned switching operation or some erroneous switching operation. In this scenario it was considered highly unlikely that the system would be remotely or locally switched in a short duration. In such instances, as long as the DG protection detects the island and ceases to energize in the time allotted by standard anti-islanding testing (2s), there should be little possibility of switching in that brief period onto an energized island. The public or utility safety hazard of

mistakenly contacting the unintentionally energized system would exist, in this case, for the time it takes the anti-islanding scheme to operate.

2. Feeder section isolation – fault:

In the scenario that there is a fault on a section of the feeder, the upstream recloser will operate. In this case it is expected that the DG protection system will see the fault and trip quickly on voltage and/or frequency. However, in some situations the fault may be remote from a particular DG source and the DG protections may not see the fault. In this case it is imperative that the DG anti-islanding protection detect the loss of the utility source and disconnect the generation before the recloser closes onto the energized island.

In the latter scenario, it is important that the DG anti-islanding protection operate in less time than the reclosing interval of the particular recloser on that Hydro One feeder. In some situations the reclosing interval may be as low as 0.5s. The CSA/IEC/UL 2s required clearing time therefore will not be adequate for feeders with reclosing times shorter than 2s. It is even possible that the 2s test time may not be adequate for feeders with reclosing times of 2s due to a need for an additional margin of time required for the fault to clear before reclosing occurs.

#### 4.4 Certification Testing

Four standards describe the common anti-islanding certification tests for PV inverters:

- CSA C22.2 No. 107-01: *General Use Power Supplies* [3]
- IEC 62116: *Test Procedure of Islanding Prevention Measures for Utility-Interconnected Photovoltaic Inverters* [11]
- IEEE 1547.1: *IEEE Standard Conformance Test Procedures for Equipment Interconnecting Distributed Resources with Electric Power Systems* [13]
- UL 1741: *Inverters, Converters, Controllers and Interconnection System Equipment for Use With Distributed Energy Resources* [20]

UL 1741 and CSA C22.2 No. 107-01 (hereafter referred to as UL and CSA) are the relevant inverter testing standards in the United States and Canada respectively. The inverter interconnection testing requirements for UL 1741 and IEEE 1547.1 are identical, as UL 1741 simply refers to IEEE 1547.1 for testing requirements; for simplicity, IEEE 1547.1 will be omitted from the subsequent discussion.

The CSA, IEC, and UL anti-islanding tests are similar, with a few notable distinctions. For all three standards, the test circuit shown in Figure 2 is used; it is comprised of the unit under test (inverter), a RLC circuit, and a utility source. Only one inverter is tested at a time.

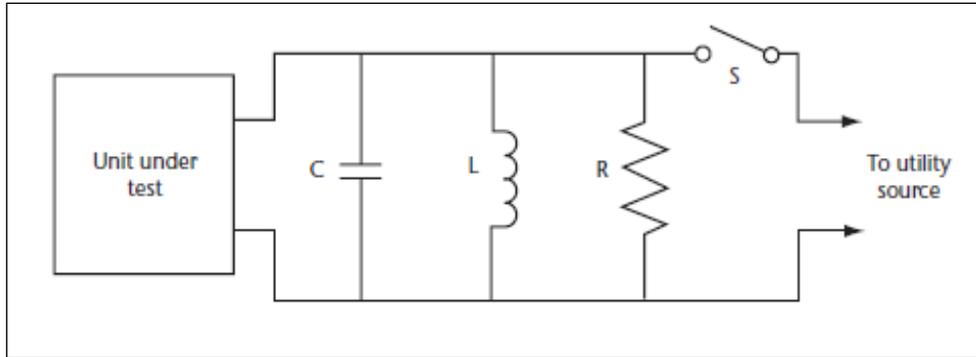


Figure 2: Anti-islanding test circuit [3]

During the test, the RLC circuit is adjusted such that the power output by the inverter is balanced by the power consumed by the load, which means that there is no power flowing from the utility source. With respect to real and reactive power, balanced conditions within the island present the “worst case” scenario for islanding.

The RLC circuit is then tuned to resonate at 60 Hz with a specific “quality factor”. This 60 Hz resonating circuit makes it difficult for the inverter to detect the island, as it acts to stabilize the frequency within the island. The quality factor is a measure of the stored energy in the RLC circuit relative to the rate of energy dissipation per cycle, and it describes the tendency of the islanded loads to operate at a frequency of 60 Hz; a higher 60 Hz quality factor will produce a more stable island that is more difficult for an inverter’s over/under frequency protection to detect and clear.

After the RLC circuit is properly adjusted, the utility source is disconnected thus “islanding” the inverter and load. The test is repeated at different inverter power output levels and the inverter passes the test if it ceases to energize the load within two seconds after the island is formed.

The notable differences between the tests described by IEC, CSA, and UL are:

- UL balances the real and reactive power in the island by repeating the test with incremental changes in reactive power, while IEC and CSA adjust the circuit before testing to obtain balanced conditions. This difference is not significant.
- In addition to testing balanced conditions, IEC also tests some unbalanced conditions (up to  $\pm 10\%$ ). Because of the method used to balance the real and reactive power, the UL test also tests some unbalanced conditions.
- UL repeats the tests at 33%, 66%, and 100% of the inverter’s rated power output. CSA repeats the tests at 25%, 50%, 75%, 100%, and maximum output. IEC repeats the tests using ranges of 25% - 33%, 50% - 66%, and maximum output. Although the different ranges are not significant, it is important to note that the CSA and IEC tests do not assume the inverter’s maximum output to be 100% of rated; the maximum output could be greater than the nameplate rating.
- The RLC circuit prescribed by IEC and UL has a quality factor of 1.0, while CSA prescribes a quality factor of 2.5. With respect to the quality factor, the CSA anti-islanding test is more difficult for an inverter to pass.
- All three standards require the inverter to clear an island within two seconds, but IEC and UL specify that the actual clearing times be recorded while CSA does not. This additional information contained in the IEC and UL certification reports would be valuable for utilities attempting to assess PV inverters connecting to feeders with reclosing intervals less than two seconds.

Kinectrics' review indicated that CSA certification could possibly form a starting point for developing a supplemental laboratory test that would be adequate to allow revision or possibly elimination of Hydro One's anti-islanding generation-to-load limits, **but only after** the following issues are studied and found to be acceptable for Hydro One's system:

- Appropriateness of the 2s clearing time required by the CSA given that Hydro One uses reclosing intervals as low as 0.5s.
- Suitability of the CSA anti-islanding certification test to demonstrate that the inverter will cease to energize an island in the presence of other distribution-connected generators (PV inverter, induction, synchronous). Due to the high level of participation in Ontario's FIT program, it is likely that a PV inverter will be connected in close proximity to other generation and its anti-islanding should be satisfactory for this situation.
- Adequacy of the resonating RLC circuit used in the CSA tests to represent an islanded Hydro One feeder section. The resonating circuit with a specific quality factor should approximate the tendency of rotating machines to stabilize the frequency in the island.

If studies resolve the issues listed above and CSA certification is proven to be sufficient, Hydro One could possibly increase the 7% and 10% generation-to-load anti-islanding limits or even eliminate them altogether. If however, the results of these studies discover gaps between CSA certification and the requirements of Hydro One's system, an additional Hydro One anti-islanding supplemental laboratory test may need to be developed and required for all PV inverters before the existing limits are relaxed. It should also be made clear that anti-islanding is only one of numerous factors that determine the penetration limits of DG on a distribution system. If the anti-islanding limit on the amount of DG penetration is relaxed, other technical factors such as short circuit capacity, voltage constraints, and power quality may limit the penetration of microFIT DG.

#### **4.5 Passive/Active Anti-Islanding**

Anti-islanding protections used by PV inverters can be divided into two categories: passive and active. Passive anti-islanding protections detect an island by monitoring normal system parameters for specific conditions such as under/over frequency, under/over voltage, a sudden change in frequency, or sudden change in the phase difference between voltage and current signals. Active protections, in contrast, attempt to detect an island by actively perturbing the system slightly. As an example of active anti-islanding protection, an inverter could inject a slightly distorted current signal; the voltage waveform is unaffected in the presence of the utility supply, but the injected distortion becomes visible in the voltage waveform when the utility supply becomes isolated and the island can be detected.

Due to the requirements of CSA testing, all certified PV inverters have a form of passive anti-islanding protection; under/over frequency and voltage (UOFV) protections are tested during certification and must be functional. However, UOFV protection will not necessarily effectively detect all islanding conditions. This type of protection depends on the mismatch between real and reactive power supplied by generation and consumed by loads in the island; a large mismatch will produce an abnormal voltage and/or frequency that can be detected by UOFV protections. However, this type of protection can have a large non-detection zone (NDZ), where real and reactive power is close to balanced (Figure 3). This NDZ can be avoided by limiting the penetration of DG on a feeder section such that the power mismatch between generation and load in an island is always outside of the NDZ for UOFV protection. IEEE 1547's one-third and Hydro One's 7% and 10% generation-to-load limits are intended to ensure that this mismatch is guaranteed.

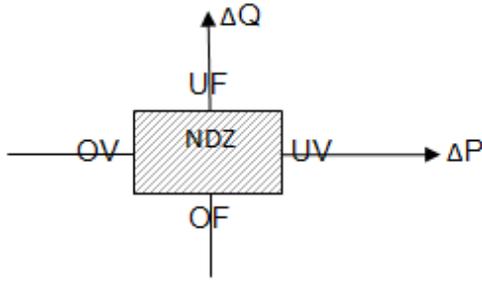


Figure 3: UOFV NDZ – depends on P and Q

The preliminary results of Kinectrics’ review indicate that most, but not all, CSA-certified inverters also have some form of active anti-islanding protection. The advantage of active protections is that their NDZ, although still present, may no longer be dependent on the power balance, as shown in Figure 4. In this figure, the labels X and Y could refer to real and reactive power, or other parameters such as harmonic impedance, quality factor, or the inertia of rotating loads. This means that the combination of passive and active anti-islanding protections will have a smaller NDZ than either the passive or active protections alone, and will increase the effectiveness of the anti-islanding protection. However, it should also be noted that increasing the aggressiveness of anti-islanding protections could increase the frequency of DG nuisance tripping and a deterioration of power quality due to the distorted signals injected by active methods.

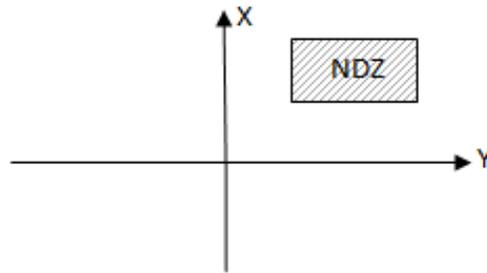


Figure 4: Active anti-islanding NDZ – does not depend on P and Q

Proper inverter anti-islanding protection may allow for a higher PV anti-islanding penetration limit, provided inverters pass a certification test that satisfies Hydro One requirements with respect to reclosing times and the presence of multiple DGs.

## 5.0 UTILITY SURVEY RESULTS

Kinectrics conducted a survey of over 60 North American and international utilities as part of another Hydro One sponsored project, and some of the results are relevant to this review of Hydro One's microFIT anti-islanding criteria. This section provides a general description of the relevant survey results. Charts showing how Hydro One compares to the respondents in several survey categories can be found in Appendix A.

Eighteen utilities responded to the survey, including Hydro One. These respondents span a wide range in terms of utility size, type, and the level of DG penetration. The following is a summary of the pertinent results. In this survey, "small generators" refers to single-phase generators with rated power less than or equal to 15 kW. For confidentiality reasons, the respondents are not identified here.

Of the eighteen respondents, three were identified as being comparable to Hydro One with respect to the number of feeders, system load, total DG penetration, and the penetration of small generators. All of these three utilities were identified as having a mix of both urban and rural feeders.

With respect to anti-islanding limits for small generators, of the eighteen utilities that responded (including Hydro One):

- 2, including Hydro One, use the one-third generation to minimum load limit described in IEEE 1547
- 0 use the 15% generation to peak load limit described by FERC SGIP
- 2 limit the generation to load ratio for small generators to 10% of peak load
- 7 do not use a generation to load ratio, but:
  - 3 performed case-by-case studies
    - 1 is one of the three comparable to Hydro One
  - 1 limits generation such that the thermal limit of the weakest feeder element is not exceeded
  - 1 requires voltage supervision of reclosing if the penetration of generation exceeds 50% of minimum load
  - 1 has different requirements for different DG penetration levels
    - This respondent is one of the three comparable to Hydro One
  - 1 has the "cost of impact mitigation provided"
- 7 do not indicate any anti-islanding limits for small generators
  - 1 is one of the three comparable to Hydro One

With respect to the certification requirements for small inverter-connected generators, of the eighteen utilities that responded:

- 14, including Hydro One, require CSA and/or UL certification
  - 1 is one of the three comparable to Hydro One
- 2 allow non-certified generators, but require customized anti-islanding protections
  - 1 is one of the three comparable to Hydro One
- 2 require no certification of any kind
  - 1 is one of the three comparable to Hydro One

With respect to utility-controlled anti-islanding protections, of the twelve utilities that responded to date:

- 1 implemented utility controlled anti-islanding for small generators
  - The technology was direct transfer-trip
  - This respondent was not one of the three comparable to Hydro One
- 17, including Hydro One, have not implemented these protections. The primary reasons cited were:
  - Penetration levels too low
  - Certification testing is considered to be sufficient
  - Not considered economical

Additionally, one utility indicated that they had experienced an unintentional islanding event on their distribution system. This event involved an 8 MW hydroelectric generator that islanded for 12 seconds because of a failed protection relay. This event did not involve any small generators.

The correct interpretation of these survey results should also consider the similarities and differences between Hydro One and other respondents. Although three respondents were found to be comparable in some respects, Hydro One is known to have a geographically-dispersed distribution system with many long, lightly-loaded M- and F-class radial feeders and it is unclear if any of the respondents have comparable distribution systems. Furthermore, Hydro One has a large number of DG applications and short timelines within which to assess them; no information with respect to procedures and timelines was collected during the survey. While some of the respondents may share some of the characteristics of the Hydro One system, it is the combination of system characteristics, DG penetration and a required screening approval process that may lead to Hydro One's overall uniqueness in this DG arena.

It is clear from the survey responses received that the industry has not yet come to a consensus with respect to anti-islanding protection requirements and assessments for small generators, as the survey responses showed considerable variation in these areas. Therefore, it is likely that Hydro One will need to conduct further studies and investigations to determine the appropriate resolution to the issue of unintentional islanding and to augment existing industry standards and publications.

## 6.0 MANUFACTURER SURVEY RESULTS

Kinectrics conducted a survey of PV inverter manufacturers on their products' anti-islanding protection systems. As of the date that this report was issued, responses were received from five manufacturers. For confidentiality reasons, the survey participants are not identified.

The results of this survey that are relevant to this report are summarized here. Detailed survey results can be found in *Hydro One PV Inverter Manufacturer Survey 2011* [16].

### Relevant Survey Results:

- MicroFIT Products:
  - Four out of five respondents are offering products for sale in Ontario for the microFIT program.
  - The manufacturer that does not currently offer a microFIT product responded to the survey for their product which may be sold in Ontario in the future.
- Product Certification:
  - All surveyed manufacturers' products are certified to IEEE 1547.1, UL1741 and CSA C22.2 No. 107.1.
  - Three respondents provided ranges of disconnection times from their certification tests. The disconnection times are measured from the time the island is created to the time when the inverter ceases to energize the island. Times reported by the three respondents are:
    - 0.3 to 1 seconds
    - 0.01 to 1.5 seconds
    - 0.08 to 0.12 seconds
- Active anti-islanding protection:
  - Four out of five manufacturers responded that their inverters have some form of active anti-islanding protection.
  - One manufacturer indicated (and confirmed in follow up correspondence) that their products do not have active anti-islanding protection.
- Protection settings:
  - 3 manufacturers indicated that inverter protection settings are password protected
    - One requires interaction with manufacturer customer service for any setting change.
    - One requires a signed letter of consent from the LDC for any setting change.
    - One indicated that settings can only be changed using a computer running special software connected to the inverter through a serial interface. This software is password protected.
  - 1 indicated that protection settings are factory pre-set.
  - 1 manufacturer did not respond to the question.
- Additional Testing:
  - None of the respondents indicated that their anti-islanding protections have undergone additional anti-islanding tests aside from those conducted during certification.
- Islanding Events
  - One respondent indicated experience with an islanding event: "We experienced one occasion in which the anti-islanding protection was not properly activated due to a software bug in the higher level protection coordination routine of an old firmware version. We did not have any failure related to the anti-islanding detection logic itself."
  - This event is the subject of ESA Distributor Safety Bulletin DSB-07/11 [4].
- Nuisance Tripping

- None of the respondents indicated that their products had experienced nuisance tripping related to anti-islanding protections.

## 7.0 ADDITIONAL CONSIDERATIONS

A number of additional considerations need to be taken into account when investigating possible means of revising generation-to-load limits while, at the same time, ensuring that the existing load and generation customers are not negatively impacted by new PV generators.

### 7.1 Impact of multiple and diverse DGs on anti-islanding protection

An island may have more than one PV solar microFIT generator, as well as other DG types that may or may not be subject to transfer trip requirements (synchronous machine, wind turbine, biomass, etc.). It is not clear at this time how the presence of several DGs of various types in the same island will affect the behavior of each individual generator following the creation of an island, however it is expected that the reliability of active anti-islanding protections will be degraded. This will depend on a variety of factors, such as protection capability and coordination of each unit, relative location of DGs and loads in the island, DG's ability to provide reactive power support, island system voltage and impedance, etc. Some of these aspects may need to be studied further in laboratory tests.

### 7.2 Post-installation setting changes

There is evidence that generator settings, notably maximum output and anti-islanding protection settings are sometimes adjusted intentionally by a DG owner; the former may be adjusted to maximize revenue and the latter to minimize a number of nuisance instances when generators are disconnected from the system.

When testing PV generators for both CSA certification and potential Hydro One-specified supplemental laboratory testing, default protection settings and maximum output should be used in order to ensure that appropriate anti-islanding limits are set. If these settings are tampered with, reliability and quality of supply may be degraded, and safety hazards may result.

### 7.3 Consequences of unintentional islanding

Unintentional islanding may produce undesirable consequences:

1. Variation of voltage and frequency in an island may damage industrial equipment and home appliances, cause defects in manufactured products, and result in damage to generators in an island.
2. Islanded generation may energize a fault for longer than expected and degrade distribution system reliability due to failed reclosing and defeated fuse-saving protection schemes.
3. Reclosing onto an unsynchronized island may damage loads, generators, and distribution system equipment.
4. The presence of unplanned islands may potentially introduce a safety hazard.

### 7.4 Probability of islanding

In order for an island to be sustained, active and reactive power generated by DGs in the island must be balanced with the active and reactive power of islanded loads. The probability that this balance will occur at any given time for different generation penetration levels can be estimated by analyzing load and

generation profiles. The probability of an island occurring is an important factor in determining the risks associated with unintentional islanding.

#### 7.5 Other known limitations on DG penetration beyond anti-islanding

It is important to realize that anti-islanding constraints are not the only restrictions on the amount of microFIT generation allowed to be connected to Hydro One's distribution system. If anti-islanding constraints are relaxed or removed, generation penetration may still be limited by other factors, such as:

1. Steady-state voltage
2. Voltage variation and regulation
3. Feeder section thermal limits
4. Short circuit limits
5. Unbalance
6. Transmission system limitations

A detailed assessment of these factors is beyond the scope of this project.

#### 7.6 Mitigating measures

Beyond the anti-islanding protection schemes associated with DG installations, there may be some technologies that could allow revision of the anti-islanding limitation on DG penetration. These could include:

- Power line carrier communications to facilitate island detection
- Impedance insertion after the isolation of a feeder section to disrupt load and generation balance and to facilitate the collapse of an island
- SCADA supervision or local control to detect balanced load and generation conditions and trigger preventative action, such as: preemptively tripping generators, activating secondary protection zones, and intelligent blocking or delaying reclosing operations
- Voltage supervision to check if voltage is present on a feeder before any reclosing is performed (this only prevents reclosing out of synchronism, but does not prevent islanding)

The feasibility of implementing these technologies and their applicability to Hydro One is unknown and should be studied.

#### 7.7 Economic considerations

In addition to considering mitigating technologies to avoid a penetration limit associated with anti-islanding, it is also important to consider the costs of these techniques and who will bear such costs in the regulatory environment of Ontario. The economic implications of alternative means of resolving anti-islanding generation-to-load limits would have to be studied further.

#### 7.8 Accounting for load growth

Particular attention has been paid to the role of minimum load in establishing a DG penetration limit. It should be noted that connected load on a distribution feeder may grow and allow for more DG penetration

or, conversely, could decline and further restrict DG penetration. This fact would support the need for a periodic review of allowable DG penetration and the use of a conservative penetration limit so that DG would not have to be disconnected should load decrease.

## 8.0 CONCLUSIONS

Upon considering the technical background and after conducting the analysis described in the prior sections, Kinectrics Inc. can make the following conclusions regarding Hydro One's anti-islanding criteria and its relation to the penetration of microFIT generation on Hydro One feeders.

1. Based on currently available information and technical facts, Kinectrics considers that Hydro One's 7% and 10% generation to peak load criteria appears to be reasonable. It was found that these criteria had basis in the facts that:
  - Hydro One's 20% min/peak load assumptions appear to be reasonable and are possibly high on average, based on results to date.
  - The one-third limit of generation to minimum load is one example of a method to achieve effective anti-islanding which is contained in an industry-accepted standard (IEEE 1547).
  - No technical basis was found to support the FERC 15% generation to peak load ratio screening criterion.
2. There is potential for revision of the 7% and 10% generation to peak load criteria for anti-islanding protection. The possibility to revise these criteria is based on the following findings:
  - The technical basis of the one-third generation to minimum load limit, found in IEEE 1547, may not be as applicable to PV inverters. Utility survey results indicate that only one of the respondents (other than Hydro One) use the one third rule and alternative approaches, such as case-by-case studies, different DG penetration limits, or voltage supervision to block reclosing, are currently being used by utilities with similar DG penetration.
  - The majority of utilities rely to some degree on CSA/UL certification.
  - A survey of PV inverter manufacturers indicated that most, but not all, CSA-certified PV inverters have both passive and active anti-islanding protections, which limit the NDZ and reduces the dependency on load/generation imbalance.
3. CSA inverter testing could possibly be used as the starting point for developing Hydro One supplemental laboratory tests that may result in increasing the existing PV penetration levels, but only if all of the following are found to be true:
  - Further investigation reveals that all certified PV inverters have anti-islanding protections in addition to UOFV protection.
  - Testing indicates that PV inverter clearing times meet Hydro One requirements with respect to reclosing times.
  - Studies demonstrate that the quality factor used in the CSA anti-islanding test is appropriate for Hydro One's system.
  - The impact of the presence of multiple DGs on inverter anti-islanding protections is addressed.
4. A single anti-islanding limit may not be suitable for all cases, due to the variability of the following factors:
  - minimum loading on feeder sections,
  - reclosing times,
  - inverter anti-islanding protection capabilities, and
  - presence of multiple DGs.

## 9.0 RECOMMENDATIONS

Based on the review, analysis and the preceding conclusions, Kinectrics Inc. recommends the following actions to further address and resolve outstanding issues related to the anti-islanding protection and the associated limitations on DG penetration.

1. Kinectrics recommends that Hydro One maintain the 7% and 10% generation to peak load criteria until Hydro One has conducted further investigation to determine the following:
  - The actual unintentional islanding clearing times for CSA-certified inverters
    - The CSA non-islanding test specification presently has a 2s pass/fail criteria. Since Hydro One's typical reclosing times are shorter than 2s, it must be demonstrated that PV inverters will cease to energize an island with a timeframe that is compatible with Hydro One's reclosing times.
  - The suitability of the CSA non-islanding test for situations when multiple generators could be islanded together
    - The CSA non-islanding test is only performed with a single generator connected in the island. Due to the high DG penetration levels on Hydro One's distribution system, it is likely that multiple generators could be islanded together. Any non-islanding certification should ideally provide some assurance that certified inverters will not island in the presence of other generators.
  - The appropriateness of simulating an islanded feeder section with an RLC circuit with a quality factor of 2.5
    - The CSA non-islanding test uses a resonating RLC circuit with a quality factor of 2.5. Due to the unique nature of Hydro One's distribution system (long feeders, light loading, etc.), this test circuit may not adequately represent the possible islanding scenarios that may occur on Hydro One's feeders.
  - The "worst case" generation to minimum load ratio
    - The "worst case" generation to minimum load ratio should exist. This limit will guarantee that the frequency and/or voltage in an island will collapse to a level such that a generator's UOFV protection will operate within acceptable timeframes. If DG penetration is limited such that this ratio is not exceeded, the frequency and/or voltage in an island will exceed acceptable limits and passive frequency and voltage protections will detect and clear any island. This ratio could be determined through studies and experimentation and could possibly replace the 7% and 10% in the short term, until the CSA-certification issues described above are addressed.
  - The probability of an unintentional islanding event
    - The probability that the balanced real and reactive power conditions required for unintentional islanding occurring at the time when a feeder section is isolated is intuitively low. The presence of active anti-islanding protections will most likely further lower the probability of unintentional islanding. The probabilities of these events occurring on Hydro One's system should be studied.
  - The possible consequences of an unintentional islanding event
    - The consequences of both sustained and short-duration unintentional islanding on Hydro One's distribution system could include damage to equipment (load customers, generation customers, utility) due to uncontrolled voltage and frequency and/or unsynchronized reclosing. Long-duration unintentional islands could also present a safety hazard to utility staff. These consequences should be investigated. Together, the probability and consequences can be used to quantify the risks associated with unintentional islanding. A sufficiently low risk could support relaxing the current anti-islanding limits.

- The technical and economic effectiveness of utility-controlled anti-islanding schemes
    - Several practical and theoretical utility-controlled anti-islanding schemes exist, but these schemes need to be studied to determine their effectiveness on Hydro One’s distribution system. Additionally, the implementation of these schemes may not be economical in some, or even all, situations. Some examples of utility-controlled anti-islanding schemes include switched impedances and power line carrier signals. The use of voltage supervision to block reclosing operations when an island is detected, although not technically an anti-islanding scheme, should also be considered.
2. Depending on the results of the studies described above, Kinectrics recommends that the following actions be considered:
- The current generation to minimum load anti-islanding limits could be eliminated if it is proven that inverter anti-islanding protections will operate correctly in the presence of other generators, the risks associated with unintentional islanding are low, and CSA inverter certification is adequate. However, it must be noted that, even if the current anti-islanding limits are relaxed or eliminated, there will certainly be other technical constraints that will limit the penetration of microFIT generators.
  - The current generation to minimum load anti-islanding limits could be relaxed, depending on the outcome of the studies described above. If, for example, the risks associated with unintentional islanding are found to be low and the CSA certification addresses most foreseeable situations, it may be possible relax the current anti-islanding constraints to some degree, but possibly only for specific cases. The implementation of utility-controlled anti-islanding schemes could also lead to relaxed constraints.
  - In the event that the results of the studies described above do not support relaxing the current anti-islanding constraints, the current generation to minimum load anti-islanding limits could still possibly be modified. Measured load profiles and the experimentally-determined load to generation ratio that is guaranteed to prevent unintentional islanding described above may indicate that the 7% and 10% limits currently used should be different (either lower or higher).

It is possible that different limits may be required for different feeder sections and DG connection scenarios

3. It is recommended that Hydro One complete a study on the probability and consequences of creating an unintentional electrically-live island. Further knowledge of the risks associated with unintentional islands may have some impact on the limits that are put in place to avoid such islanding.
4. Further information should be obtained by Hydro One regarding the minimum loading on M-class and F-class feeders in order to better understand the lowest possible load that could be on a feeder in the event that an island occurs. This could be achieved by expanding the existing pilot project to use Smart Meter energy data.
5. Kinectrics recommends that Hydro One conduct a detailed study of the CSA certification testing procedures to determine the gaps between the current test standard and a test standard that would be adequate for ensuring the avoidance of islanding on the Hydro One system. It is anticipated that the detailed study (gap analysis) will need to, as a minimum, explore the following issues:
- The RLC test circuit and the appropriate quality factor for Hydro One
  - The interaction of multiple generators connected in an island and the implications for certification

- The maximum clearing time appropriate for Hydro One's distribution system
6. Pending the results of the study described above, there may be need for Hydro One develop a set of tests that will address the gaps between Hydro One's requirements and CSA certification. This would ensure that units which pass the new requirements will have acceptable anti-islanding performance for the Hydro One system.
  7. Kinectrics recommends that Hydro One investigate how relaxing the anti-islanding limit may affect other technical considerations that impact the PV penetration limit.

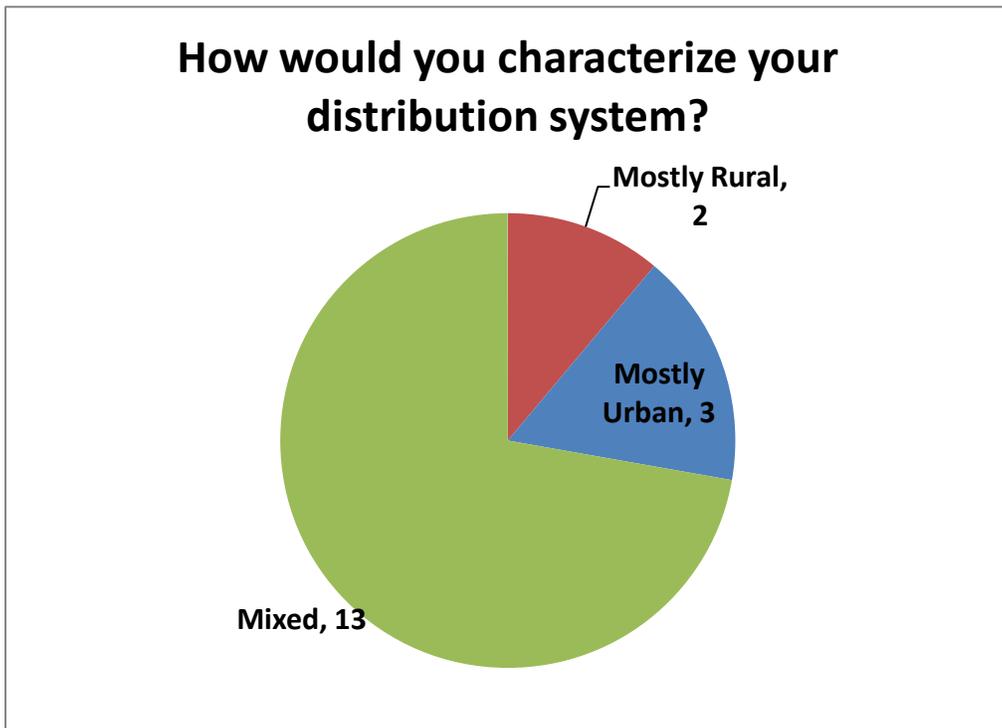
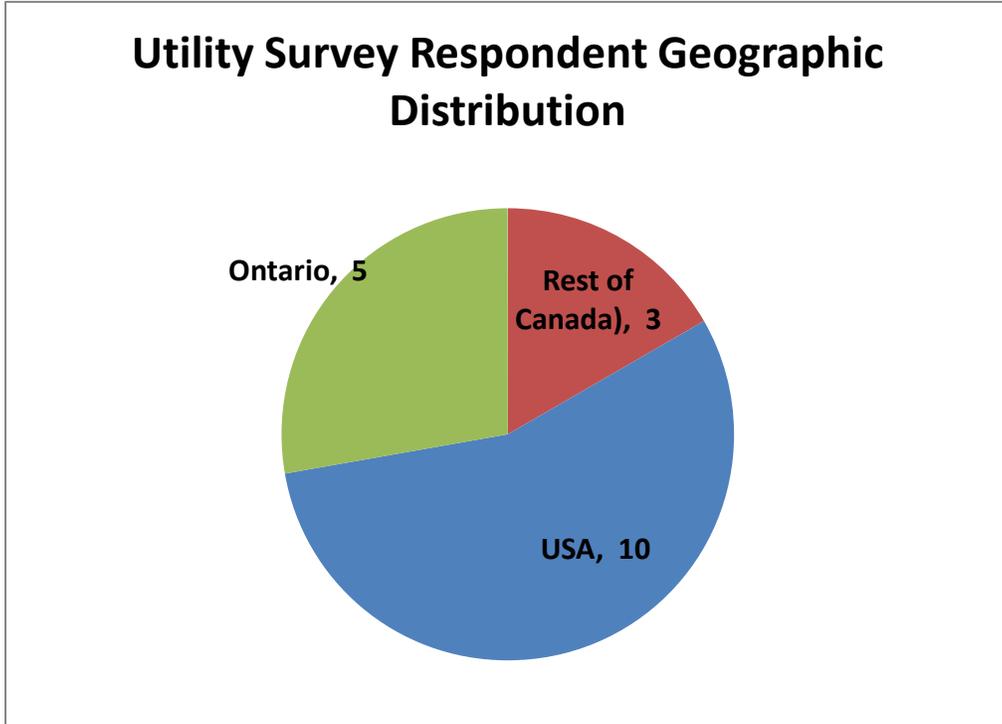
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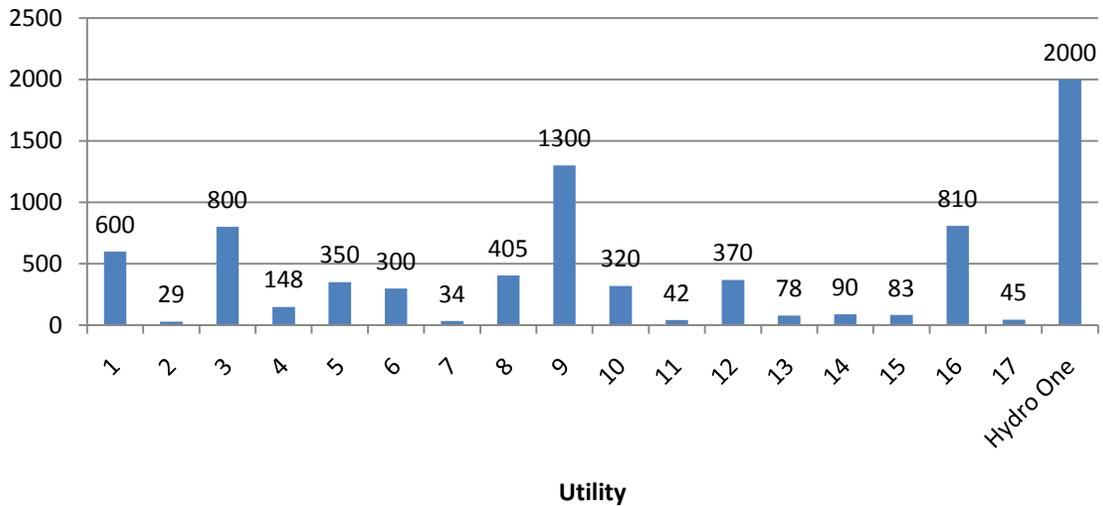


**APPENDIX A: UTILITY SURVEY CHARTS**

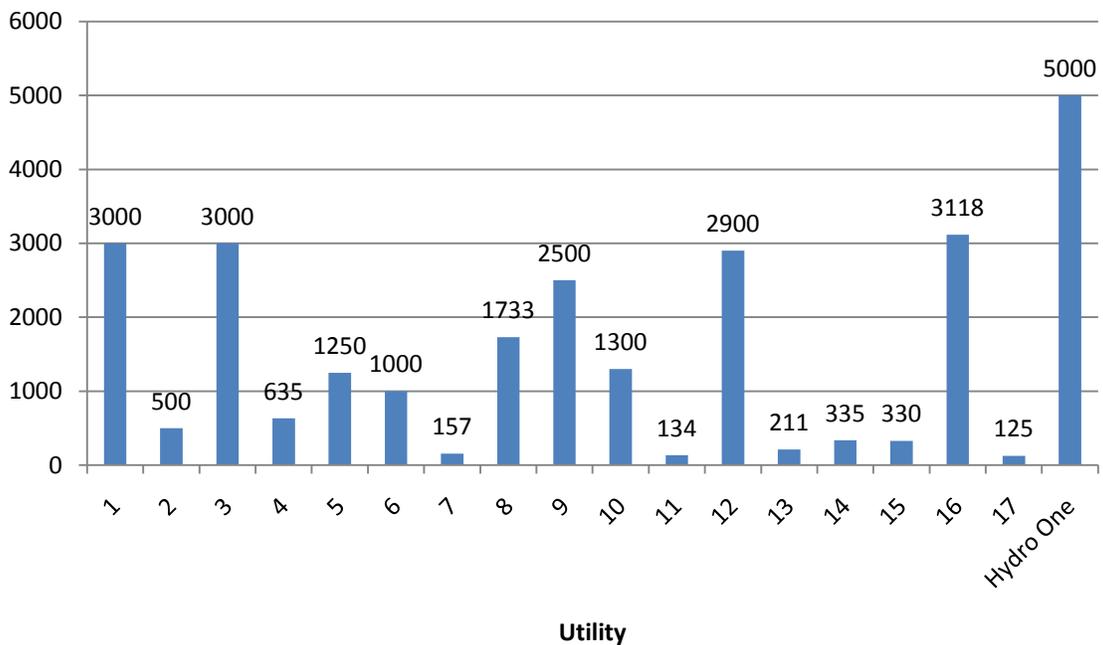
The following charts show utility survey responses. Each chart (except the first chart) is titled with survey question, as posed in the survey. Eighteen utilities responded to the survey.



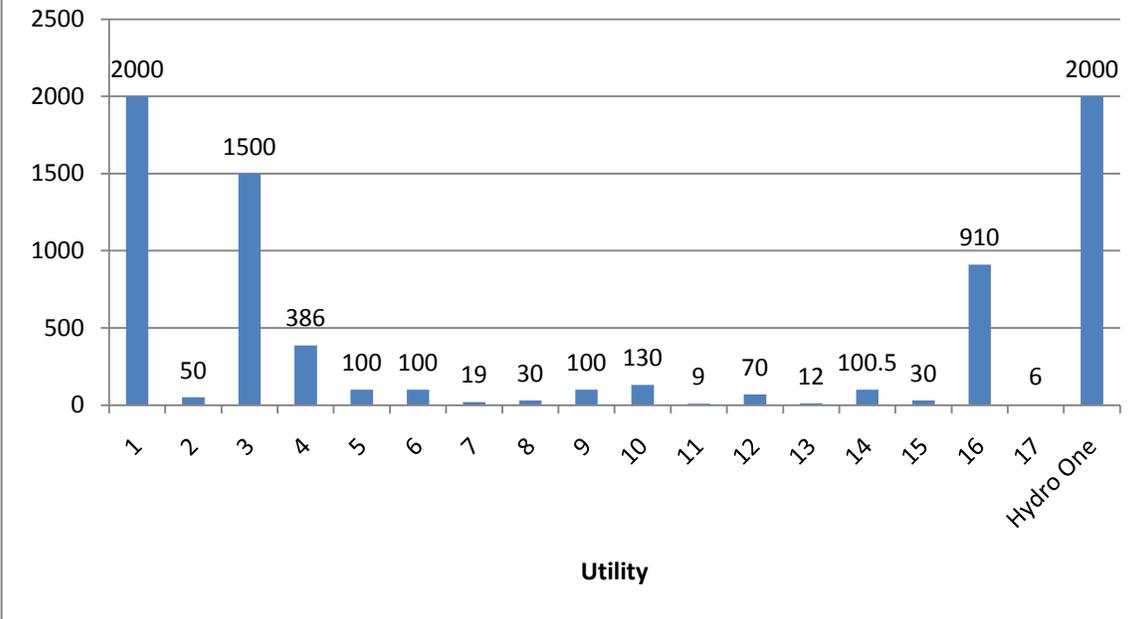
## How many distribution stations are in your system?



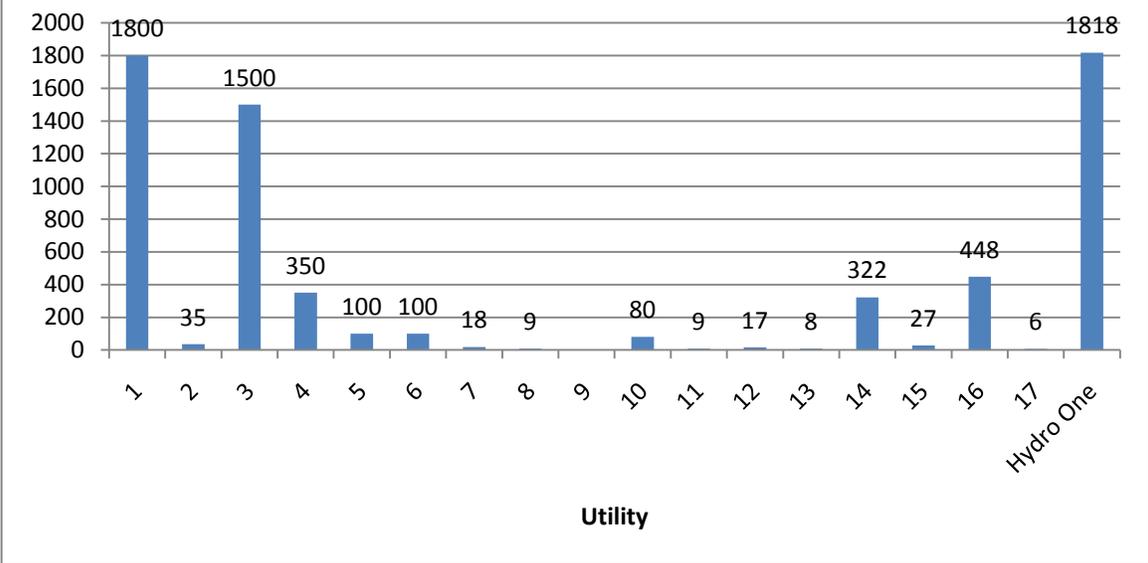
## How many radial distribution feeders, at 34.5kV or under, are in your system?



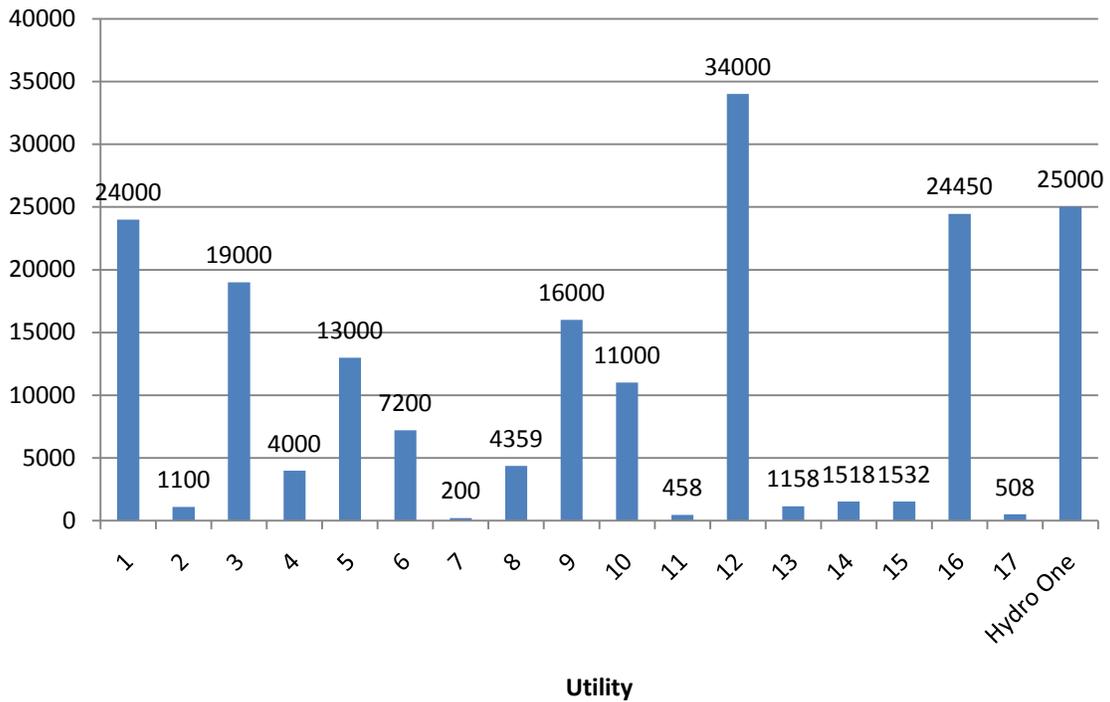
### How many of these (radial distribution feeders, at 34.5kV or under) have some distributed generation connected?



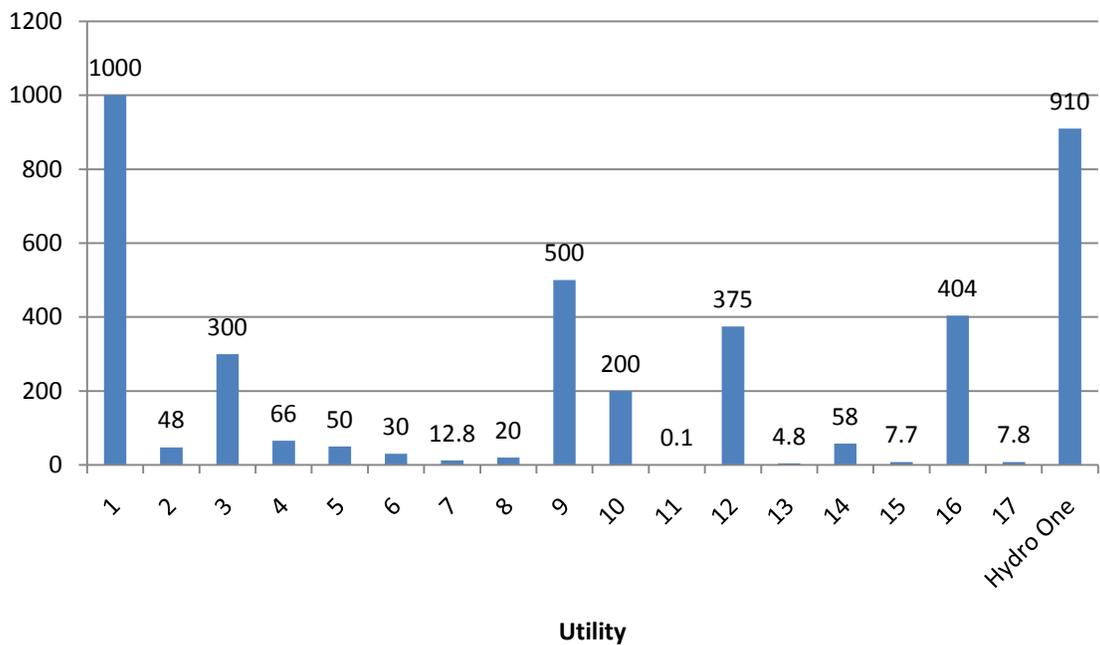
### How many of these (radial distribution feeders, at 34.5kV or under) have small (less than 15kW) distributed generators connected?



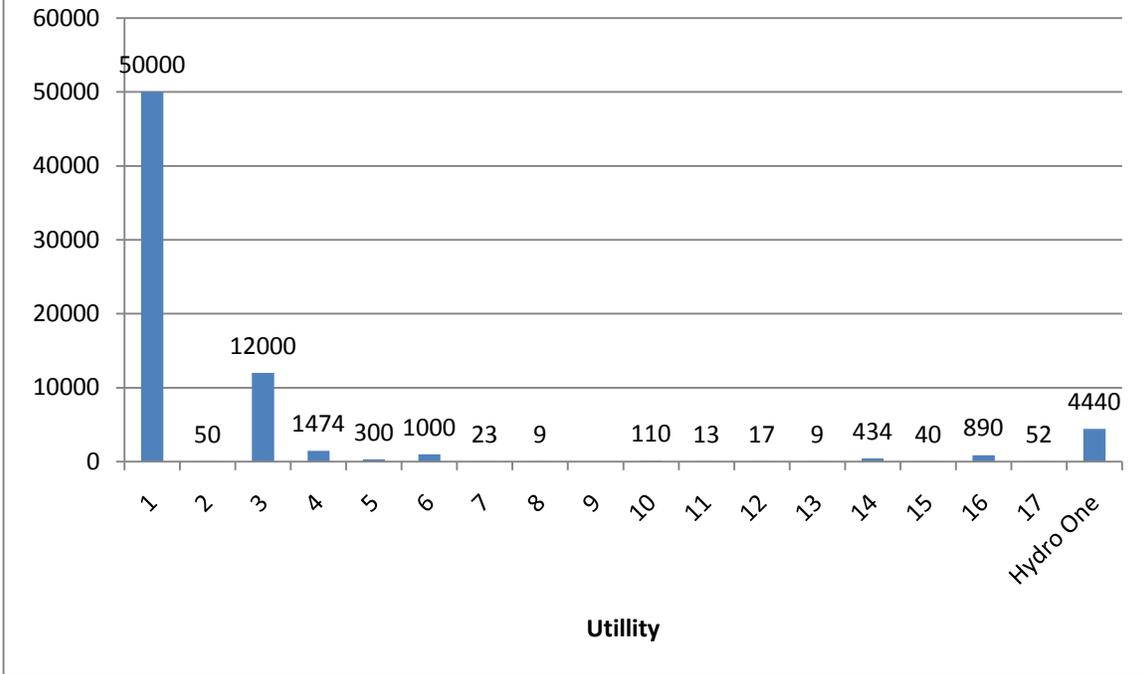
### What is your total system load (MW)?



### What is the total installed capacity of all distribution-connected generation (MW)?



## How many small (less than 15kW) generators are connected to your distribution system?





Ontario Energy Board

**Deferral / Variance  
Account Work Form**

**Choose Your Utility:**

Renfrew Hydro Inc.

Rideau St. Lawrence Distribution Inc.

Sioux Lookout Hydro Inc.

**File Number:**

EB-2011-0274

**Rate Year:**

2012

**Application Contact Information**

Name:

Title:

Phone Number:

Email Address:

**General Notes**

1. Please ensure that your macros have been enabled. (Tools -> Macro -> Security)
2. Due to the time lag of deferral/variance account dispositions, this model assumes that all opening balances include previously disposed of amounts. Accordingly, all "Board Approved Dispositions" are deducted from the opening balance.
3. Please provide information in this model since the last time your balances were disposed.
4. For all Board-Approved dispositions, please ensure that the disposition amount has the same sign (e.g: debit balances are to have a positive figure and credit balance are to have a negative figure) as per the related Board decision.

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Ontario Energy Board  
**Deferral / Variance Account Work Form**  
**Continuity Schedule**



#N/A

B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	AB
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	----	----

Account Descriptions	Account Number	2005												2006													
		Opening Principal Amounts as of Jan-1-05	Transactions Debit/ (Credit) during 2005 excluding interest and adjustments <sup>6</sup>	Board-Approved Disposition during 2005	Adjustments during 2005 - other <sup>7</sup>	Closing Principal Balance as of Dec-31-05	Opening Interest Amounts as of Jan-1-05	Interest Jan-1 to Dec-31-05	Board-Approved Disposition during 2005	Adjustments during 2005 - other <sup>7</sup>	Closing Interest Amounts as of Dec-31-05	Opening Principal Amounts as of Jan-1-06	Transactions Debit/ (Credit) during 2006 excluding interest and adjustments <sup>6</sup>	Board-Approved Disposition during 2006 - 2A	Adjustments during 2006 - other <sup>7</sup>	Closing Principal Balance as of Dec-31-06	Opening Interest Amounts as of Jan-1-06	Interest Jan-1 to Dec-31-06	Board-Approved Disposition during 2006 - 2A	Adjustments during 2006 - other <sup>7</sup>	Closing Interest Amounts as of Dec-31-06	Opening Principal Amounts as of Jan-1-07	Transactions Debit/ (Credit) during 2007 excluding interest and adjustments <sup>6</sup>	Board-Approved Disposition during 2007	Adjustments during 2007 - other <sup>7</sup>		
<b>Group 1 Accounts</b>																											
LV Variance Account	1550																										
RSVA - Wholesale Market Service Charge	1580	\$ 171,661	\$ 97,668		\$ 269,319	\$ 28,507	\$ 16,876			\$ 45,383	\$ 269,319	\$ 483,736	\$ 171,661	\$ 46,697	\$ 46,697	\$ 45,383	\$ 81,150	\$ 45,101		\$ 8	\$ 8	\$ 46,697	\$ 74,241				
RSVA - Retail Transmission Network Charge	1584	\$ 12,169	\$ 40,575		\$ 52,744	\$ 2,138	\$ 106			\$ 2,032	\$ 52,744	\$ 15,513	\$ 80,732	\$ 70,716	\$ 58,240	\$ 2,032	\$ 3,329	\$ 1,191				\$ 58,240	\$ 43,315				
RSVA - Retail Transmission Connection Charge	1586	\$ 7,465	\$ 5,020		\$ 2,435	\$ 988	\$ 787			\$ 1,783	\$ 2,435	\$ 46,268	\$ 396,095	\$ 403,550	\$ 41,248	\$ 1,783	\$ 2,738	\$ 15,177		\$ 14,901		\$ 41,248	\$ 4,103				
RSVA - Power (excluding Global Adjustment)	1588	\$ 251,227	\$ 82,178		\$ 169,049	\$ 27,222	\$ 27,962			\$ 55,184	\$ 169,049	\$ 94,579	\$ 251,227		\$ 12,401	\$ 55,184	\$ 1,226	\$ 51,507				\$ 12,401	\$ 431,687				
RSVA - Power - Sub-Account - Global Adjustment	1588		\$ 292,345		\$ 292,345	\$ 4,354				\$ 4,354	\$ 292,345	\$ 404,752		\$ 112,408	\$ 4,354	\$ 2,820						\$ 112,408	\$ 45,539				
Recovery of Regulatory Asset Balances	1590																										
Disposition and Recovery of Regulatory Balances (2008) <sup>10</sup>	1595																										
Disposition and Recovery of Regulatory Balances (2009) <sup>10</sup>	1595																										
<b>Group 1 Sub-Total (including Account 1588 - Global Adjustment)</b>		\$ 403,255	\$ 312,410		\$ 90,845	\$ 58,863	\$ 41,166			\$ 100,029	\$ 90,845	\$ 46,186	\$ 394,939	\$ 379,531	\$ 29,252	\$ 100,029	\$ 91,262	\$ 20,392	\$ 14,893	\$ 3,268	\$ 29,252	\$ 370,110	\$ -	\$ -			
<b>Group 1 Sub-Total (excluding Account 1588 - Global Adjustment)</b>		\$ 403,255	\$ 20,065		\$ 383,190	\$ 58,863	\$ 45,520			\$ 104,383	\$ 383,190	\$ 450,938	\$ 394,939	\$ 379,531	\$ 83,156	\$ 104,383	\$ 88,443	\$ 20,392	\$ 14,893	\$ 10,442	\$ 83,156	\$ 415,649	\$ -	\$ -			
<b>RSVA - Power - Sub-Account - Global Adjustment</b>	1588		\$ 292,345		\$ 292,345	\$ 4,354				\$ 4,354	\$ 292,345	\$ 404,752		\$ 112,408	\$ 4,354	\$ 2,820					\$ 112,408	\$ 45,539	\$ -	\$ -			
<b>Group 2 Accounts</b>																											
Other Regulatory Assets - Sub-Account - OEB Cost Assessments	1508	\$ 4,887	\$ 8,067		\$ 12,954	\$ 70	\$ 475			\$ 545	\$ 12,954	\$ 27,469	\$ 20,663		\$ 19,760	\$ 545	\$ 207	\$ 542		\$ 210	\$ 19,760	\$ 7,398					
Other Regulatory Assets - Sub-Account - Pension Contributions	1508																										
Other Regulatory Assets - Sub-Account - Deferred IFRS Transition Costs	1508																										
Other Regulatory Assets - Sub-Account - Incremental Capital Charges	1508																										
Other Regulatory Assets - Sub-Account - Other <sup>7</sup>	1508																										
Retail Cost Variance Account - Retail	1518	\$ 5,884	\$ 5,314		\$ 11,198		\$ 1,074			\$ 1,074	\$ 11,198	\$ 1,997	\$ 5,884		\$ 7,311	\$ 1,074	\$ 554	\$ 1,068			\$ 560	\$ 7,311	\$ 555				
Misc. Deferred Debits	1525	\$ 8,170			\$ 8,170		\$ 1,776			\$ 1,776	\$ 8,170	\$ 8,951	\$ 17,121		\$ 1	\$ 1,776	\$ 197	\$ 1,973			\$ 0	\$ 1					
Renewable Generation Connection Capital Deferral Account	1531																										
Renewable Generation Connection O&M Deferral Account	1532																										
Renewable Generation Connection Funding Adder Deferral Account	1533																										
Smart Grid Capital Deferral Account	1534																										
Smart Grid O&M Deferral Account	1535																										
Smart Grid Funding Adder Deferral Account	1536																										
Retail Cost Variance Account - STR	1548																										
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Capital	1555	\$ 17,745	\$ 4,671		\$ 22,416		\$ 2,960			\$ 2,960	\$ 22,416	\$ 11,508	\$ 17,745		\$ 16,190	\$ 2,960	\$ 840	\$ 3,254			\$ 546	\$ 16,190	\$ 16,423				
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Recoveries	1555																										
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Stranded Meter Costs	1555																										
Smart Meter O&M Variance	1556																										
Conservation and Demand Management (CDM) Expenditures and Recoveries	1565																										
CDM Contra	1566																										
Qualifying Transition Costs <sup>5</sup>	1570	\$ 339,135	\$ 58,001		\$ 281,134	\$ 85,063	\$ 15,926			\$ 100,989	\$ 281,134	\$ 234,217	\$ 46,917		\$ 100,989	\$ 6,794	\$ 107,783				\$ 0	\$ 0					
Pre-market Opening Energy Variance <sup>5</sup>	1571	\$ 336,899			\$ 336,899	\$ 78,006	\$ 20,354			\$ 98,360	\$ 336,899	\$ 336,899			\$ 98,360	\$ 12,213	\$ 110,573				\$ -	\$ -					
Extra-Ordinary Event Costs	1572																										
Deferred Rate Impact Amounts	1574																										
RSVA - One-time	1582	\$ 31,037	\$ 6,918		\$ 37,955	\$ 2,642	\$ 2,402			\$ 5,044	\$ 37,955	\$ 31,037	\$ 562	\$ 6,356	\$ 5,044	\$ 1,067	\$ 5,642				\$ 469	\$ 6,356					
Other Deferred Credits	2425																										
<b>Group 2 Sub-Total</b>		\$ 743,757	\$ 33,030		\$ 710,727	\$ 165,781	\$ 44,968			\$ 210,749	\$ 710,727	\$ 44,442	\$ 663,566	\$ 47,478	\$ 44,124	\$ 210,749	\$ 21,751	\$ 230,835		\$ 1,665	\$ 44,124	\$ 10,465	\$ -	\$ -			
Deferred Payments in Lieu of Taxes	1562	\$ 60,050	\$ 12,694		\$ 123,688	\$ 2,614	\$ 6,758			\$ 4,145	\$ 123,688		\$ 5,205	\$ 128,893	\$ 4,145	\$ 6,892				\$ 11,036	\$ 128,893		\$ -	\$ -			
PILs and Tax Variance for 2006 and Subsequent Years (excludes sub-account and contra account below)	1592																										
PILs and Tax Variance for 2006 and Subsequent Years - Sub-Account HST/OVAT Input Tax Credits (ITCs)	1592																										
<b>Total of Group 1 and Group 2 Accounts (including 1562 and 1592)</b>		\$ 1,147,011	\$ 345,440		\$ 801,572	\$ 224,644	\$ 86,134			\$ 310,778	\$ 801,572	\$ 1,744	\$ 1,058,505	\$ 332,053	\$ 73,376	\$ 310,778	\$ 69,511	\$ 251,227	\$ 14,893	\$ 4,933	\$ 73,376	\$ 380,575	\$ -	\$ -			
<b>Special Purpose Charge Assessment Variance Account</b>	1521																										
<b>Total including Account 1521<sup>1</sup></b>		\$ 1,147,011	\$ 345,440		\$ 801,572	\$ 224,644	\$ 86,134			\$ 310,778	\$ 801,572	\$ 1,744	\$ 1,058,505	\$ 332,053	\$ 73,376	\$ 310,778	\$ 69,511	\$ 251,227	\$ 14,893	\$ 4,933	\$ 73,376	\$ 380,575	\$ -	\$ -			
<b>The following is not included in the total claim but are included on a memo basis:</b>																											
Deferred PILs Contra Account <sup>8</sup>	1563	\$ 60,050	\$ 12,694		\$ 123,688	\$ 2,614	\$ 6,758			\$ 4,145	\$ 123,688		\$ 5,205	\$ 128,893	\$ 4,145	\$ 6,892				\$ 11,036	\$ 128,893		\$ -	\$ -			
Board-Approved CDM Variance Account	1567																										
PILs and Tax Variance for 2006 and Subsequent Years - Sub-Account HST/OVAT Contra Account	1592																										
Disposition and Recovery of Regulatory Balances <sup>10</sup>	1595																										

**For all Board-Approved dispositions, please ensure that the disposition amount has the same sign (e.g. debit balances are to have a positive figure and credit balance are to have a negative figure) as per the related Board decision.**

<sup>1</sup> Applicants may wish to propose kWh as the allocator for account 1521, pending a final decision of the Board.

<sup>2</sup> Provide supporting statement indicating whether due to denial of costs in 2006 EDR by the Board, 10% transition costs, write-off, etc.

<sup>3A</sup> Adjustments instructed by the Board include deferral/variance account balances moved to Account 1590 as a result of the 2006 EDR and account 1595 during the 2008 EDR and subsequent years as ordered by the Board.

<sup>3B</sup> Please provide explanations for the nature of the adjustments. If the adjustment relates to previously Board Approved disposed balances, please provide amounts for adjustments and include supporting documentations.

<sup>4</sup> Although the Global Adjustment Account is not reported separately under 2.1.7, please provide a breakdown in rows 28 and 29.

<sup>5</sup> Closed April 30, 2002.

<sup>6</sup> For RSVA accounts only, report the net variance to the account during the year. For all other accounts, record the transactions during the year.

<sup>7</sup> Please describe "other" components of 1508 and add more component lines if necessary.

<sup>8</sup> 1563 is a contra-account and is not included in the total but is shown on a memo basis. Account 1562 establishes the obligation to the ratepayer.

<sup>9</sup> If the LDC's 2011 rate year started January 1, 2011 to April 30, 2012 on the December 31, 2010 balance adjusted for the disposed balances approved by the Board in the 2011 rate decision. If the LDC's 2011 rate year started May 1, 2011 to April 30, 2011 on the December 31, 2010 balance. The projected interest is recorded from May 1, 2011 to April 30, 2012 on the December 31, 2010 balance adjusted for the disposed balances approved by the Board in the 2011 rate decision.

<sup>10</sup> Include Account 1595 as part of Group 1 accounts (line 31) for review and disposition if the recovery (or refund) period has been completed, and the audited financial statements support the underlying residual balance in account 1595. If the recovery (or refund) period has not been completed, include the balances in Account 1595 on a memo basis only (line B2).





**Deferral/ Variance Account Work Form**
**Variance Explanations**

#N/A

Accounts that produced a variance on the 2012 continuity schedule are listed below.

Account Descriptions	Account Number	Variance RRR vs. 2010 Balance (Principal + Interest)	Explanation
<b>Group 1 Accounts</b>			
RSVA - Power (excluding Global Adjustment)	1588	\$ (231,267.23)	For 2010 our billing system was setup incorrectly - the RSVA GA Sub-account from EB-2009-0248, was being posted to the Energy Sub-account, not the RSVA Sub-account (1595). The error was discovered during our Year End, and adjustments
RSVA - Power - Sub-Account - Global Adjustment	1588	\$ (0.31)	
Recovery of Regulatory Asset Balances	1590	\$ 0.16	
Disposition and Recovery of Regulatory Balances (2008) <sup>10</sup>	1595	\$ (0.05)	
<b>Group 2 Accounts</b>			
Other Regulatory Assets - Sub-Account - OEB Cost Assessments	1508	\$ 0.34	0.0147
Other Regulatory Assets - Sub-Account Deferred IFRS Transition Costs	1508	\$ 0.24	
Retail Cost Variance Account - Retail	1518	\$ 0.20	
Misc. Deferred Debits	1525	\$ 0.18	
Renewable Connection Capital Deferral Account	1531	\$ (351.27)	
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Capital	1555	\$ (0.29)	
Smart Meter OM&A Variance	1556	\$ (0.03)	
Qualifying Transition Costs <sup>5</sup>	1570	\$ (0.39)	
<b>Special Purpose Charge Assessment Variance Account</b>	<b>1521</b>	<b>\$ 0.37</b>	
Disposition and Recovery of Regulatory Balances <sup>10</sup>	1595	\$ (0.26)	

REQUESTOR NAME	VECC
INFORMATION REQUEST ROUND NO:	# 2
TO:	Rideau St. Lawrence Distribution Inc.
DATE:	June 4, 2012
CASE NO:	EB-2011-0274
APPLICATION NAME	2012 Cost of Service Electricity Distribution Rate Application

---

## **LOAD FORECAST AND REVENUE OFFSETS**

### **1. Reference: VECC #12 e) and VECC #15 a)**

- a) With respect to VECC #12 e), please confirm that the predicted 2011 monthly values shown in the response are based on weather normal values for CDD and HDD whereas the 2011 Actual Purchases shown will reflect the actual HDD and CDD values for each month.

*RSL confirms the predicted kWhs are weather normal values for CDD and HDD.*

*The 2011 actual purchases are the kWhs purchased from the IESO for the month which have been uplifted by the Supply Facilities Loss Factor.*

- b) With respect to VECC #15 a), please confirm whether the predicted value shown (115,241,655) was based on actual or weather normal HDD and CDD values.

*RSL confirms the predicted value for 2011 of 115,241,655 is based on the regression analysis using weather normal HDD and CDD values.*

## OPERATING COSTS

2. Reference: Exhibit 4, Schedule 2, Table 4.3/Exhibit 11, Schedule 15, Table 15.2

- a) Please explain the difference between the \$97,473 in 2012 forecast meter costs shown at Table 4.3 and the \$82,473 in smart meter costs shown at Table 15.2.

*The difference of \$15,000 represents the cost of in-house labour for meter reading problem investigations.*

- b) Please provide a breakdown and explanation of the \$18,160 in Change Management and \$11,561 in Administration costs related to smart meters as shown in Table 15.2.

*An explanation and breakdown of the \$18,160 in Change Management and \$11,561 in Administration costs related to smart meters as shown in Table 15.2, is listed below:*

<i>Harris Computer – Software Support (TOU billing)</i>	<i>\$4,000</i>
<i>ITM – File Automation</i>	<i>2,000</i>
<i>Training</i>	<i>1,660</i>
<i>Operational Data Store Service and support</i>	<i><u>10,500</u></i>
	<i>\$18,160</i>

*Administration costs are annual software support costs from Elster Metering.* *\$11,561.*

3. Reference: Board Staff IR #12 / VECC IR # 22 /Exhibit 4, Schedule 5, Table 4.9, page 23

The response to both interrogatories Board Staff #12 and VECC #22 states Table 4.9 shows the costs to Rideau St. Lawrence Utilities (Utilities) of \$46,840 for water meter reading. Yet for meter reading Table 4.9 purports to show services from RSL to Utilities.

- a) Does RSL provide any meter reading services to Utilities?

*RSL does not provide any meter reading services to Utilities.*

- b) Please clarify Appendix 2-L to show the total costs incurred by RSL for the services and the amount paid by the affiliates (Utilities and Services) for these services and/or the total costs incurred by Utilities or Services and the amounts paid by RSL for the services.

*Exhibit 4, Schedule 5, description, as shown on pages 21 and 22 of RSL's application EB-2011-0274, filed on February 7, 2012 explains the Shared Services/Corporate Cost Allocation methodology adopted in 2008 and carried through into 2012. The exception is for the meter reading costs. 2012 meter reading cost for RSL is for demand/Industrial meters only, and has dropped from \$74,000 (all meters) in 2011 to \$32,800 (Industrial meters only) in 2012 due to the Smart Meter Project.*

*Appendix 2-L has been reformatted, and reproduced below to provide better clarity. Please refer to our response to Board Staff IR 53.*

**4. Reference: Board Staff #19 b)**

- a) Please explain why the Billing and Collecting weighting factor for GS<50 is less than that for Residential.

*The weighting factor for GS<50 is less than that for Residential due to the relative amount of effort involved in the collection of accounts. The Arrears Management Program has increased the amount of scrutiny and follow up required to manage the Residential accounts.*

**COST ALLOCATION**

**5. Reference: Board Staff #18 and #20 b)**

- a) Has RSL completed its review of the number of USL connections and is the value used in the revised Cost Allocation (per Board Staff #20 b)) the appropriate value? If not, please provide and update the cost allocation as required.

*RSL has completed its review of the number of USL connections and will update the Cost Allocation (per Board Staff #20 b)) with the appropriate value during final submissions. The changes, as a result of the review, do not create*

*any significant impact. There may be other items that will have a more significant impact, and RSL proposes to include all changes in the final update.*

**6. Reference: Board Staff #19 b)**

- b) Please explain why the Billing and Collecting weighting factor for GS<50 is less than that for Residential.

*Please see the response VECC question 4, Round 2.*

**7. Reference: Board Staff #19 b) and #20 b)**

- a) Did the Cost Allocation run used to determine the results set out in Board Staff #20 b) include both the changes described in #20 a) and those outlined in #19 b)?
- b) If yes, please provide an electronic copy of the updated Cost Allocation model that supports the results in Board Staff #20 b).
- c) If not, please provide a revised Cost Allocation model run that reflects the changes described in both Board Staff #19 b) and #20 a).

*Yes, the changes have been incorporated into the Cost Allocation model. An electronic copy of the model has been provided.*

**RATE DESIGN**

**8. Reference: Board Staff #22 and VECC #30**

- a) Please confirm what year the kW values shown in the response to Board Staff #22 are for.

*The kW values shown in the response to Board Staff #22 are for 2010.*

b) If they are 2012 forecast values, how were they calculated and what were the actual 2011 billing values?

*They are not 2012 forecast values.*

*Actual 2011 billing values are:*

*Network 236,742 kW, Connection 247,004 kW*

**\*\*\*End of Document\*\*\***

## Cost Allocation Model (“CA Model”) version 2

### Instructions Sheet 1.1

#### General:

These instructions are included with the OEB CA Model version 2 as a reference.

The instructions are organized by input sheet (I1 to I9), followed by suggestions of how to use output sheets O1, O3.1 and O3.6. The remaining output sheets and exhibit sheets (E1 to E5) and the procedure for closing the files are unchanged from version 1.2 of the cost allocation model except for incidental adjustments that do not require any attention from the model user.

There are numerous references in these instructions to specific Excel cells in the Revenue Requirement Work Form (“RRWF”), which will be filed in support a cost-of-service distribution rate application at the same time as the CA Model. The cross-references to RRWF are intended to ensure consistency within the application. If the applicant plans on completing the Cost Allocation before the RRWF is complete, the best practice is to input the required information from the primary sources that will be used later in the RRWF. As an alternative, a less-than-best option is to leave the required inputs blank temporarily, and overlook the corresponding error messages in the rose-coloured diagnostic cells. Once the RRWF is completed, the necessary information should be included in the CA Model.

The following additional information is available on the OEB’s website in EB-2010-0219;

<http://www.ontarioenergyboard.ca/OEB/Industry/Regulatory+Proceedings/Policy+Initiatives+and+Consultations/Cost+Allocation+Policy>:

- Electricity CA Model version 2 Instruction Sheet 1.1 explains how version 2 of the CA Model differs from version 1.2; and
- Board Staff Implementation of the Board’s Findings on the Review of Electricity Cost Allocation Policy documentation of the rationale for changes to the previous model.

The original model and related documents are on the web-site in EB-2005-0317;

<http://www.ontarioenergyboard.ca/OEB/Industry/Regulatory+Proceedings/Policy+Initiatives+and+Consultations/Archived+OEB+Key+Initiatives/Cost+Allocation+Review>.

#### Worksheet I1 Introduction

This input worksheet is for basic information about the utility.

- Inputs to Cells B2, C9, C13 and C15 are carried forward to the heading on all worksheets, and do not require updating after the initial set-up.
- Include test year in Cell B2 e.g. ‘2012 COS Cost Allocation’.
- The date in Cell C15 should be updated every time a new run of the model is filed (Interrogatories, draft rate order, etc.).

#### Worksheet I2 LDC Classes

The rate classes are defined in this input worksheet.

- Input to Cell C-17 is copied to the header of all worksheets. When the CA Model is modified for a specific reason, such as a run using final proposed rates for the purposes of a draft rate order, a new description should be entered in Cell C-17.

- Cell C20 and below shows common rate class names. Substitute the proper name if applicable. Any input to Column D will appear as the column headings if different from Column C;
- In Column E, choose Yes or No as applicable for the proposed customer classes, and click Update.
- Do not include microFIT as a rate classification in CA Model until further notice in the Filing Requirements.
- If the distributor is a Host Distributor, select Yes for Embedded Distributor class. (For exception, see 'Filing Requirements' section 2.10.1).
- Be aware that the "Update" button hides and unhides columns, nothing more. If you have entered data for a class in an input sheet, the data will remain unless you delete it. (If you enter data for a class, subsequently change to 'No' for that class in I-2, and click Update but neglect to delete data, the hidden data will continue to affect range totals and allocators.).
- For the user's convenience, a space is available at B46 to describe a scenario (customer classes, load data, choice of allocators, etc.) to keep track of alternative cost allocation outcomes as they are being studied. Cell C 17 should describe the scenario.

### **Worksheet I3 Trial Balance Data**

- The account balances are placed and adjusted in this input worksheet.
- Steps 3 – 7 of the instructions on I3 require the user to enter data into Cells F10 – F13 and F15. The data should be consistent with the RRWF, when this information has been prepared.
- The following checks should be made:
  - Cell F10 should equal RRWF H33 in tab 8 Revenue Deficiency/ Sufficiency;
  - Cell F11 should equal RRWF H31 in tab 8 Revenue Deficiency/ Sufficiency;
  - Cell F12 should equal RRWF H22 in tab 8 Revenue Deficiency/ Sufficiency;
  - Cell F13 should equal RRWF F22 in tab 9 Revenue Requirement ; and
  - Cell F15 should equal RRWF G18 in tab 4 Rate Base.
- Starting at Row 20, the CA Model has new Rows that have been added where necessary in worksheet I-3 and as required in the subsequent worksheets. These new Rows are new accounts or are inserted to enable finer granularity within existing accounts.
- Column D contains the forecast amounts for the test year, and is to match the amounts in the rate application. For asset accounts, enter the mid-year average amounts matching the corresponding amounts in the rate base;
- Column F is available to re-assign amounts among the accounts in Column D. Generally if costs are removed from one USoA account and added to another account, the rationale for the re-assignment is to be provided by the distributor in its prefiled evidence.
- Column F is especially useful for removing part of the cost from a parent account and adding the same amount into a sub-account that is allocated by a different allocator than the parent account. If the sub-account has been set up in version 2 of the model e.g. 4235-1, the rationale for making the adjustment in Column F is not required.

- Row 252 has been added, to allow for separate allocation of revenue from the SSS Administration Charge. Enter the amount of the sub-account at Cell F252 and enter negative the same amount (i.e. positive) in Cell F250. No explanation is required.
- Rows 265 and 266 have been added, to allow for separate allocation of the Account Set-Up Charges sub-account distinct from other revenue streams in Account 4235. Enter the sub-account amount at Cell F265 and F266 and enter negative the same amounts at F264. No explanation is required.
- Column I has drop-down menus in the Rows where there are new Rows. Use the menu to select the allocator for the account that the distributor considers most appropriate. (The model on the website has an allocator already selected at the suggestion of the CA Working Group, but the distributor is ultimately responsible for selecting the most appropriate allocator considering how it uses the sub-account in question.).
- The model has several placeholder Rows that will make it easy to incorporate any new account that may become necessary with IFRS. There is one such Row for capital cost account, at Row 129, and four O&M placeholder Rows starting at Row 424 for operating cost. Replace the placeholder with the appropriate account name.
- Column I provides a drop-down menu to select an allocator for any new IFRS-related accounts.
- Column G is used for costs that are directly allocated. Put the appropriate total amount in Column G, and repeat for the appropriate class in worksheet I9.
- Note that the model has Rows in I9 for most capital and OM&A accounts, but not revenue accounts. If an account has no corresponding Row in I9, the model does not provide a ready means of direct allocation.

### **Worksheet I4 Break Out Assets**

This input worksheet is for breaking the asset accounts into a more granular level.

- Cell C12 requires data entry from the RRWF tab 4. Rate Base, Cell G14 to ensure consistency between the cost allocation model and the rest of the application.

### **Worksheet I5.1 Miscellaneous Data**

There are two new input cells in version 2 of the input worksheet:

- In Cell D19, enter the percentage of OM&A plus Cost of Power that is included as working capital, i.e. 15%, or a percentage based on the distributor's lead-lag study; and
- Cell D21 yields a weighting factor to attribute pole access revenue in proportion to the corresponding costs. Considering all poles that yield pole rental revenue, enter the estimated percentage of NBV in poles that are at Secondary voltage, as distinct from the NBV of those at Primary voltage.

### **Worksheet I5.2 Weighting Factors**

This worksheet is used to input each class' weighting factor for services and Billing and Collection. Use a single factor suitable for the whole class. See examples in the boxes below.

- Row 11: calculate weighting factors reflecting only installed capital costs recorded in Account 1855 – Services.
- Row 15: calculate weighting factors reflecting costs in Account 5315 – Customer Billing, Account 5320 – Collecting, and Account 5340 – Miscellaneous Customer Account Expenses.
- Default weights are no longer provided in the model. The weights previously provided in version 1.2 can be found in the Board staff’s implementation documentation [EB-2010-0219].

**Example: Weighting Factor for Services:**

Assume that the amount recorded in 1855 for a typical residential customer is \$1,000.

Assume that there are 500 customers in the GS>50 class.

Assume that 100 of them are industrial customers served by a single span of overhead conductor. The amount remaining on the books in Account 1855 is small, but the current cost of replacing the service including labour would be \$5,000.

Assume that 100 customers have underground service that required extensive permits, street repairs, and labour costs, as well as materials. The services are recent, and the amount recorded in 1855 averages \$25,000.

Assume 300 customers have no costs recorded in Account 1855, and would have no cost recorded even if replaced (per distributor’s accounting practice and conditions of service)

Calculation:

$$\text{➤ } [(100 * \$5,000) + (100 * \$25,000) + (300 * \$0)] / 500 = \$6,000 \text{ per customer}$$

$$\text{Weighting factor for residential} = \$1,000 / \$1,000 = 1.00$$

$$\text{Weighting factor for GS>50 kW} = \$6,000 / \$1,000 = 6.00$$

**Example: Weighting Factor for Billing and Collecting:**

Assume that the Residential cost averaged over all residential customers is \$1.50 for bill preparation and mailing, \$0.50 to record revenue from a normal payment, and \$1.00 per bill on average for other costs associated with collecting, etc. that are recorded in accounts 5315, 5320 and 5340. Total \$3 per residential bill.

Assume that there are 15 customers in the USL class:

Assume that 5 of the customers have a large number of devices and the number of devices changes from time to time, so additional clerical attention is required each month amounting to \$50 over the group (\$10 per bill). Including \$1.00 postage and incidental costs, the cost of billing is \$11 per bill. Including the costs of recording revenue at the same as for residential @ \$0.50 and there are no other collecting issues results in \$11.50 per bill.

Assume the other 10 USL customers have a small number of devices and require the same amount of effort as a typical residential customer. There are less issues with collecting, so the incidental costs are \$0.50 per month. Total cost is \$2.50 per bill

Calculation:

$$\text{➤ } [(5 * \$11.50) + (10 * \$2.50)] / 15 = \$5.50 \text{ per bill.}$$

$$\text{Weighting factor for Residential} = \$3.00 / \$3.00 = 1.00$$

$$\text{Weighting factor for USL} = \$5.50 / \$3.00 = 1.83$$

## Worksheet I6.1 Revenue

This input sheet has been modified in version 2 to calculate the test year revenues based on the test year volumetric forecast and the current rates.

- Cells B10, B13, B16 and B19 are inputs from application exhibits: the first two from Exhibit 3 Load Forecast, and the latter two from the RRWF.
- CA Model version 2 has been adapted to calculate class revenues at existing rates and forecast billing quantities. (The previous versions required class revenues as inputs to worksheet O1.).
- Cell B10 – from Exhibit 3 of the application, input total energy from the test year load forecast, adjusted downward for distribution line losses.
- Cell B13 – from Exhibit 3 of the application, input the total billing demands of all demand-billed classes.
- Cell B16 –from RRWF tab 8 Revenue Deficiency/Sufficiency H16.
- Cell B19 – enter data from RRWF tab 8. Revenue Deficiency/Sufficiency F18.
- Rows 25 and 26: enter weather-normalized load after line losses. These quantities will be the results found in the distributor’s load forecast Exhibit 3.
- Rows 31, 44, 50 and 51 no longer play a role in the model, as long as Rows 25 and 26 are based on normalized weather load forecasts. Version 2 now relies on the distributor’s load forecast rather than the analysis provided originally by Hydro One.
- Rows 33-36 - enter the currently approved rates for each class;
- Row 37 – a placeholder Row for any other rate (e.g. separate rates per street lighting fixture and kW demand);
- Row 39– the revenue formula is based on fixed monthly revenue from billing the largest of customer / connection / devices from Rows 18, 19 and 21 in worksheet I6.2. If this is not appropriate for the distributor’s rate structure, the distributor should correct the formula for the applicable class(es) in Row 39. (For example, if USL is billed per customer, per device and per kW, the formula will require inputs from Rows 27, 33, 35, 37, and worksheet I6.2 Rows 18 & 21).
  
- As an alternative run of the CA Model, but not for submission with the application, to check the internal consistency of the application it may be informative to enter the rates that are being proposed in the application in Rows 33-36. See notes to Worksheet O-1 below.
- If the Conditions of Service for a class of large customers require that all customers supply their own transformation, Row 26 and/or Row 36 should be entered as zero for that class.

## Worksheet I6.2 Customer Data

This input sheet is for inputting the various customer data by rate class, such as number of bill, number of customers, etc.

- Row 18 ‘Number of devices’ has been added in version 2 of the model. Generally this will require input for the Street Lighting and Unmetered Scattered Load classes;
- The number of devices (Row 18) should be equal to or greater than the number of connections (Row 19); and
- The number of connections should be equal to or greater than the number of customers (Row 21).

## **Worksheet I7.1 Meter Capital**

The purpose of this input worksheet is to derive the weighting factor of each class for the allocator CWMC, which is used to allocate accounts 1860 Meters, 5065 Meter Expense, and 5175 Maintenance. It does not affect the deferral account 1555 Smart Meter Capital and Recovery VA.

- As a general rule, include one meter per customer in this worksheet, i.e. include smart meter or standard meter, not both.
- Replace meter descriptions in Column C with new descriptions that match the meters actually in use, and input the applicable average installed replacement cost of each type of meter.
- During the transitional period, until all smart meters are in the Rate Base, include in the documentation of the application an explanation of which unit cost is being used. Since the weighting factor will remain unchanged during the IRM period, the distributor may consider including smart meters rather than the soon-to-be-stranded meters, even though not all smart meters have been transferred to account 1860 at the time of the cost-of-service application.
- If the cost of equipment used to download billing data is included in Account 1860 – Meters, the cost of such equipment should be considered in this worksheet. Version 2 of the model does not make provision for doing this. The user may add a Row or Rows for the cost (cost per customer and number of customers) of such equipment. The additional Row(s) should be added above Row 37 in order to be included in the @sum function.
- Note that Account 1920 – Computer Hardware, Account 1925 – Computer Software and Account 1955 – Communications Equipment are allocated to the customer classes by the composite allocator Net Fixed Assets (excluding credit for capital contributions). If equipment for automated meter-reading and data storage are recorded in these accounts, the distributor may consider moving capital costs to Account 1860 – Meters in worksheet I-3 and reflecting this in the meter capital weighting factors, with the objective of reaching a more accurate allocation of these costs.
- Entries for USL, Street lighting and Sentinel Lighting in worksheet I7.1 and I7.2 are 0. For any cost of estimating or verifying unmetered loads, see note re direct allocation below, under worksheet I9.

## **Worksheet I7.2 Meter Reading**

The purpose of this input worksheet is to derive the weighting factors for the allocator CWMR, which is used only to allocate costs that are recorded in account 5310 Meter Reading Expense. The data in Column C are relative amounts, with the typical Residential reading having a weight of 1.0.

Version 2 of this worksheet has not been modified to reflect automated meter reading. The Rows in worksheet I7.2 reflect differences in customer density, relative difficulty in reaching the meter, and frequency of reading the meter in the respective classes. To the extent that these factors are now more nearly uniform due to automated meter reading, the distributor may find that the appropriate weights are close to 1.0 for all classes.

## Worksheet I8 Demand Data

This input sheet is to record the various coincident and non-coincident peaks by rate class, which are used as cost allocators in the CA Model.

- No changes in version 2 of this worksheet.

## Worksheet I9 Direct Allocation

This input worksheet allows for directly allocating costs to specific rate classes.

- Remember that costs associated with revising estimated consumption of unmetered loads may be allocated directly to the applicable class. [EB-2005-0317, Cost allocation Review, Board Directions, p. 87].
- Additional information on direct allocations can be found above in the notes for Column G in input sheet I3 Trial Balance.

## Worksheet O1

This is an output worksheet that shows the allocated revenue requirements and the revenue-to-cost ratios by rate class. Use this sheet to check that the allocated costs reconcile to the filed evidence in the application.

- In these instructions for Worksheet 01, “RRWF” means RRWF tab 8. Revenue Sufficiency / Deficiency.
- “Appendix O” means Appendix 2-O in 2012 Filing Requirements.
- Row 18 – Distribution Revenue at Existing Rates:
  - Cell C18 should equal the total in RRWF Cell F17 – Distribution Revenue at Currently Approved Rates”, and
  - Cells D18 and beyond are the inputs to Appendix O, Table (b), Column 7B.
- Row 19 – Miscellaneous Revenue:
  - Cell C19 should equal RRWF Cell F18,
  - Cells D19 and beyond are the inputs to Appendix O, Table (b), Column 7E, and
  - Note the diagnostic test in Row 20 for Miscellaneous Revenue. The model calculates the status quo rates from the test year Service Revenue Requirement less Miscellaneous Revenue. If Miscellaneous Revenue is entered inaccurately, the status quo rates and status quo ratios in Row 75 will also be inaccurate for the respective classes.
- Cell C21 – Total Revenue at Existing Rates should be equal to RRWF Cell F19;
- Row 23 – Distribution Revenue at Status Quo Rates”:
  - Cell C23 should equal RRWF, sum of Cells H16 & H17, and
  - Cells D23 and beyond are the hypothetical distribution revenue, by class, if there were no rate re-balancing. These cells are the inputs to Appendix O, Table (b), Column 7C.
- Cell C25 should equal RRWF Cell H19 – Total Revenue.
- Row 40 – Revenue Requirement (includes NI):
  - Cell C40 is the total revenue requirement, and should be equal to RRWF worksheet tab 9 Revenue Requirement, Cell F22; and
  - Cells D40 and beyond are inputs to Appendix O, table (a), Column 7A.
- Row 75 – Revenue to Expenses Status Quo:
  - Cell C75 should equal 100%, and

- Cells D75 and beyond are the inputs to Appendix O, table (c), second column “Status Quo Ratios”.
- Cells C71 and C81 should equal the corresponding target returns on equity (RRWF Column H).

The 2012 Filing Requirements do not require a version of the model with proposed rates. However, it may be helpful to the user to verify the proposed distribution rates and ratios by substituting proposed rates in place of currently approved ones.

It may also be useful to run an updated version when preparing a Draft Rate Order:

- At worksheet I3, modify Miscellaneous Income accounts if necessary, along with forecast capital and OM&A accounts, if any of these have changed as a result of a Decision or settlement agreement.
- At worksheet I6.1, modify the class load forecast inputs if it has changed since the original application, at Rows 25 and 26.
- At worksheet I6.1, substitute the proposed rates at Rows 33 – 36.
- At worksheet I8, data may need to be changed if the load forecast has been changed.
- On worksheet O1:
  - Cell C22 should now equal 1.00 and Rows 18 and 23 should be identical.
  - Cells D75 and beyond should show the proposed revenue to cost ratios.

### **Worksheet O3.1**

The purpose of this output worksheet is to provide information on the cost per unit of providing customers with transformation service.

- Row 27, expresses the transformer costs in per kW terms. The amount found in Row 27 is not necessarily identical to the cost that would be saved if the customer provides its own transformer. While it is useful information, the value in Row 27 should not be presented as the sole evidence to support changing the Transformer Ownership Allowance.

### **Worksheet O3.6**

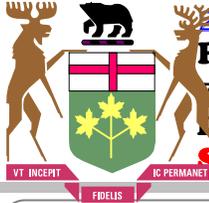
The purpose of this output worksheet is to provide information to be used to update the provincial standard monthly charge for microFIT installations.

- Check that Cell 23 is equal to O-2 Cell D132 less Cell D81, which is an update of the information that underpins the current rate; and
- Cells C24 and C25 have been added in version 2 of the model per Board Report (p. 8).

If the distributor intends to propose a microFIT charge based on its own costs, this will require sub-account information as per the Board’s FAQ # 18, December 23, 2010. The information from Worksheet O-3.6 will not likely be considered relevant for approval of a non-uniform charge.

E3	PLCC	Backup documentation for calculating Peak Load Carrying Capability.
E4	Trial Balance Index	Exhibit showing 1. how accounts are grouped for reporting, how accounts are categorized and how accounts are allocated
E5	Reconciliation	Exhibit showing reconciliation of accounts included and excluded from the allocation study to TB balance





**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**  
**December-29-11**

**Sheet 12 Class Selection - IR Round 2**

**Instructions:**

- Step 1:** Please input your existing classes
- Step 2:** If this is your first run, select "First Run" in the drop-down menu below
- Step 3:** After all classes have been entered, Click the "Update" button in row E41

Please Provide a summary of this Run

IR Round 2

		Utility's Class Definition	Current
1	Residential	Residential	YES
2	GS <50	General Service Less than 50 kW	YES
3	GS>50-Regular	General Service 50 to 4,999 kW	YES
4	GS> 50-TOU		NO
5	GS >50-Intermediate		NO
6	Large Use >5MW		NO
7	Street Light	Street Lighting	YES
8	Sentinel	Sentinel Lighting	YES
9	Unmetered Scattered Load	Unmetered Scattered Load	YES
10	Embedded Distributor		NO
11	Back-up/Standby Power		NO
12	Rate Class 1		NO
13	Rate class 2		NO
14	Rate class 3		NO
15	Rate class 4		NO
16	Rate class 5		NO
17	Rate class 6		NO
18	Rate class 7		NO
19	Rate class 8		NO
20	Rate class 9		NO

Update

**\*\* Space available for additional information about this run**

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**Rideau St. Lawrence Distribution Inc.**  
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**December-29-11**

**Sheet I4 Break Out Worksheet - IR Round 2**

**Instructions:**  
 This is an input sheet for the Break Out of Distribution Assets, Contributed Capital, Amortization, and Amortization Expenses.  
 \*\*Please see Instructions tab for detailed instructions\*\*

Enter Net Fixed Assets from the Revenue Requirement Work Form, Rate Base sheet, cell G14	\$5,359,538
--	-------------

RATE BASE AND DISTRIBUTION ASSETS		BALANCE SHEET ITEMS									EXPENSE ITEMS			
		Break out Functions	BREAK OUT (%)	BREAK OUT (\$)	After BO	Contributed Capital - 1995	Accumulated Depreciation - 2105 Capital Contribution	Accumulated Depreciation - 2105 Fixed Assets Only	Accumulated Depreciation - 2120	Asset net of Accumulated Depreciation and Contributed Capital	5705	5710	5715	5720
Account	Description									Amortization Expense - Property, Plant, and Equipment	Amortization of Limited Term Electric Plant	Amortization of Intangibles and Other Electric Plant	Amortization of Electric Plant Acquisition Adjustments	
1840-3	Underground Conduit - Bulk Delivery			\$0	-	\$0				-				
1840-4	Underground Conduit - Primary		26.00%	\$9,584	9,584			\$ (74,720)		65,136	\$9,114			
1840-5	Underground Conduit - Secondary		74.00%	\$27,278	27,278			\$ (212,662)		185,384	\$25,943			
1845	Underground Conductors and Devices	\$807,248		(\$807,248)	-									
1845-3	Underground Conductors and Devices - Bulk Delivery			\$0	-					-				
1845-4	Underground Conductors and Devices - Primary		26.00%	\$209,885	209,885	(\$13,845)	\$3,528	\$ (35,154)		164,413	\$5,193			
1845-5	Underground Conductors and Devices - Secondary		74.00%	\$597,364	597,364			\$ (100,059)		497,305	\$14,778			
1850	Line Transformers	\$1,061,223		\$0	1,061,223	(\$213,218)	\$54,416	\$ (347,447)		554,974	\$46,648			
1855	Services	\$291,637		\$0	291,637	58,028	14,774	\$ (18,813)		229,569	\$5,052			
1860	Meters	\$1,490,244		\$0	1,490,244			\$ (213,080)		1,277,164	\$33,695			
1880	IFRS Placeholder Account	\$0		\$0	-					-				
<b>Total</b>		<b>\$7,002,613</b>		<b>\$0</b>	<b>\$7,002,613</b>	<b>(\$360,988)</b>	<b>\$92,024</b>	<b>(\$2,260,932)</b>	<b>\$0</b>	<b>4,472,718</b>	<b>\$296,969</b>	<b>\$0</b>	<b>\$0</b>	
<b>SUB TOTAL from I3</b>		<b>\$7,002,613</b>												

5705	5710	5715	5720
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**Sheet I4 Break Out Worksheet - IR Round 2**

**Instructions:**  
 This is an input sheet for the Break Out of Distribution Assets, Contributed Capital, Amortization, and Amortization Expenses.  
 \*\*Please see Instructions tab for detailed instructions\*\*

Enter Net Fixed Assets from the Revenue Requirement Work Form, Rate Base sheet, cell G14	\$5,359,538
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RATE BASE AND DISTRIBUTION ASSETS		BALANCE SHEET ITEMS										EXPENSE ITEMS			
		Break out Functions	BREAK OUT (%)	BREAK OUT (\$)	After BO	Contributed Capital - 1995	Accumulated Depreciation - 2105 Capital Contribution	Accumulated Depreciation - 2105 Fixed Assets Only	Accumulated Depreciation - 2120	Asset net of Accumulated Depreciation and Contributed Capital	Amortization Expense - Property, Plant, and Equipment	Amortization of Limited Term Electric Plant	Amortization of Intangibles and Other Electric Plant	Amortization of Electric Plant Acquisition Adjustments	
Account	Description										5705	5710	5715	5720	
General Plant		Break out Functions				Contributed Capital - 1995	Accumulated Depreciation - 2105 Capital Contribution	Accumulated Depreciation - 2105 Fixed Assets Only	Accumulated Depreciation - 2120	Net Asset	Amortization Expense - Property, Plant, and Equipment	Amortization of Limited Term Electric Plant	Amortization of Intangibles and Other Electric Plant	Amortization of Electric Plant Acquisition Adjustments	
1905	Land	\$0			-					\$ -					
1906	Land Rights	\$0			-					\$ -					
1908	Buildings and Fixtures	\$0			-					\$ -					
1910	Leasehold Improvements	\$8,796			8,796					\$ 8,796					
1915	Office Furniture and Equipment	\$0			-					\$ -					
1920	Computer Equipment - Hardware	\$173,688			173,688			\$ (162,582)		\$ 11,105	23,695				
1925	Computer Software	\$189,827			189,827			\$ (10,158)		\$ 179,669	3,343				
1930	Transportation Equipment	\$627,095			627,095					\$ 627,095					
1935	Stores Equipment	\$0			-					\$ -					
1940	Tools, Shop and Garage Equipment	\$142,984			142,984			\$ (82,830)		\$ 60,154	16,974				
1945	Measurement and Testing Equipment	\$0			-					\$ -					
1950	Power Operated Equipment	\$0			-					\$ -					
1955	Communication Equipment	\$0			-					\$ -					
1960	Miscellaneous Equipment	\$0			-					\$ -					
1970	Load Management Controls - Customer Premises	\$0			-					\$ -					
1975	Load Management Controls - Utility Premises	\$0			-					\$ -					
1980	System Supervisory Equipment	\$0			-					\$ -					
1990	Other Tangible Property	\$0			-					\$ -					
2005	Property Under Capital Leases	\$0			-					\$ -					
2010	Electric Plant Purchased or Sold	\$0			-					\$ -					
<b>Total</b>		<b>\$1,142,390</b>		<b>\$0</b>	<b>\$1,142,390</b>	<b>\$0</b>	<b>\$0</b>	<b>(\$255,570)</b>	<b>\$0</b>	<b>\$886,820</b>	<b>\$44,011</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	
SUB TOTAL from I3		\$1,142,390													
I3 Directly Allocated		\$0													
<b>Grand Total</b>		<b>\$8,145,003</b>		<b>\$0</b>	<b>\$8,145,003</b>	<b>(\$360,988)</b>	<b>\$92,024</b>	<b>(\$2,516,501)</b>	<b>\$0</b>	<b>\$5,359,538</b>	<b>\$340,980</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	





**Instructions:**  
 This is an input sheet for the Break Out  
 \*\*Please see Instructions tab for details

Enter Net Fixed Assets from the Revenue Requirement Work Form, Rate Base sheet, cell G14

**RATE BASE AND DISTRIBUTION ASSETS**

Account	Description
1565	Conservation and Demand Management
1805	Land
1805-1	Land Station >50 kV
1805-2	Land Station <50 kV
1806	Land Rights
1806-1	Land Rights Station >50 kV
1806-2	Land Rights Station <50 kV
1808	Buildings and Fixtures
1808-1	Buildings and Fixtures > 50 kV
1808-2	Buildings and Fixtures < 50 KV
1810	Leasehold Improvements
1810-1	Leasehold Improvements >50 kV
1810-2	Leasehold Improvements <50 kV
1815	Transformer Station Equipment - Normally Primary above 50 kV
1820	Distribution Station Equipment - Normally Primary below 50 kV
1820-1	Distribution Station Equipment - Normally Primary below 50 kV (Bulk)
1820-2	Distribution Station Equipment - Normally Primary below 50 kV (Primary)
1820-3	Distribution Station Equipment - Normally Primary below 50 kV (Wholesale Meters)
1825	Storage Battery Equipment
1825-1	Storage Battery Equipment > 50 kV
1825-2	Storage Battery Equipment <50 kV
1830	Poles, Towers and Fixtures
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery
1830-4	Poles, Towers and Fixtures - Primary
1830-5	Poles, Towers and Fixtures - Secondary
1835	Overhead Conductors and Devices
1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery
1835-4	Overhead Conductors and Devices - Primary
1835-5	Overhead Conductors and Devices - Secondary
1840	Underground Conduit



2012 CO  
**Rideau St.**  
**EB-2011-027**  
**December-2011**  
**Sheet I4 B**

**Instructions:**  
 This is an input sheet for the Break Out c  
 \*\*Please see Instructions tab for detailec

Enter Net Fixed Assets from the Revenue Requirement Work Form, Rate Base sheet, cell G14

**RATE BASE AND DISTRIBUTION ASSETS**

Account	Description
1840-3	Underground Conduit - Bulk Delivery
1840-4	Underground Conduit - Primary
1840-5	Underground Conduit - Secondary
1845	Underground Conductors and Devices
1845-3	Underground Conductors and Devices - Bulk Delivery
1845-4	Underground Conductors and Devices - Primary
1845-5	Underground Conductors and Devices - Secondary
1850	Line Transformers
1855	Services
1860	Meters
1880	IFRS Placeholder Account
<b>Total</b>	
<b>SUB TOTAL from I3</b>	



2012 CO  
**Rideau St.**  
**EB-2011-027**  
**December-2011**  
**Sheet I4 B**

**Instructions:**  
 This is an input sheet for the Break Out c  
 \*\*Please see Instructions tab for detailec

Enter Net Fixed Assets from the Revenue Requirement Work Form, Rate Base sheet, cell G14

**RATE BASE AND DISTRIBUTION ASSETS**

Account	Description
<b>General Plant</b>	
1905	Land
1906	Land Rights
1908	Buildings and Fixtures
1910	Leasehold Improvements
1915	Office Furniture and Equipment
1920	Computer Equipment - Hardware
1925	Computer Software
1930	Transportation Equipment
1935	Stores Equipment
1940	Tools, Shop and Garage Equipment
1945	Measurement and Testing Equipment
1950	Power Operated Equipment
1955	Communication Equipment
1960	Miscellaneous Equipment
1970	Load Management Controls - Customer Premises
1975	Load Management Controls - Utility Premises
1980	System Supervisory Equipment
1990	Other Tangible Property
2005	Property Under Capital Leases
2010	Electric Plant Purchased or Sold
<b>Total</b>	
SUB TOTAL from I3	
I3 Directly Allocated	
<b>Grand Total</b>	



2012 CO  
**Rideau St.**  
**EB-2011-027**  
**December-2011**  
**Sheet I4 B**

**Instructions:**  
 This is an input sheet for the Break Out c  
 \*\*Please see *Instructions tab* for details

Enter Net Fixed Assets from the Revenue Requirement Work Form, Rate Base sheet, cell G14

**RATE BASE AND DISTRIBUTION ASSETS**

Account	Description
---------	-------------

**To be Prorated**

1995	Contributed Capital - 1995
2105	Accumulated Depreciation - 2105
2120	Accumulated Depreciation - 2120
<b>Total</b>	
<b>Net Assets</b>	

**Amortization Expenses**

5705	Amortization Expense - Property, Plant, and Equipment	
5710	Amortization of Limited Term Electric Plant	
5715	Amortization of Intangibles and Other Electric Plant	
5720	Amortization of Electric Plant Acquisition Adjustments	<b>Balanced</b>
<b>Total Amortization Expense</b>		



**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

**Sheet 15.1 Miscellaneous Data Worksheet - IR Round 2**

kMs of Roads in Service Area Where  
Distribution Lines Exist

101.9282

Deemed Equity Component  
of Rate Base (%)

40%

Working Capital Allowance to be  
included in Rate Base

15%

Portion of pole leasing revenue from  
Secondary - Remainder assumed to be  
Primary (%)

42%

Insert Approved Monthly Service  
Charge

	1	2	3	7	8	9
	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
	10.28	24.34	281.39	2.29	1.24	7.41



**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**  
**EB-2011-0274**

**Sheet 15.2 Weighting Factors Worksheet - IR Round 2**

	1	2	3	7	8	9
	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
Insert Weighting Factor for Services	1	1.2993	3.9692	0.4477	0.6223	0.8373

Insert Weighting Factor for Billing and  
Collecting

	1	0.85	3	20	0.5	0.5
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**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**  
**EB-2011-0274**  
**December-29-11**  
**Sheet I6.1 Revenue Worksheet - IR Round 2**

Total kWhs from Load Forecast	104,537,301
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Total kW from Load Forecast	130,796
-----------------------------	---------

Deficiency from RRWF	- 570,329
----------------------	-----------

Miscellaneous Revenue	207,543
-----------------------	---------

		1	2	3	7	8	9	
ID	Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load	
<b>Billing Data</b>								
Forecast kWh	CEN	104,537,301	44,584,446	19,806,495	38,166,401	1,441,722	108,277	429,961
Forecast kW	CDEM	130,796			126,652	3,843	301	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		62,908			62,908			
Optional - Forecast kWh, included in CEN, from customers that receive a line transformation allowance on a kWh basis. In most cases this will not be applicable and will be left blank.		-						
KWh excluding KWh from Wholesale Market Participants	CEN EWMP	104,537,301	44,584,446	19,806,495	38,166,401	1,441,722	108,277	429,961
kWh - 30 year weather normalized amount		-	-	-	-	-	-	-
Existing Monthly Charge			\$10.28	\$24.34	\$281.39	\$2.29	\$1.24	\$7.41
Existing Distribution kWh Rate			\$0.0117	\$0.0074				\$0.0340
Existing Distribution kW Rate					\$1.2473	\$8.7393	\$9.0716	
Existing TFOA Rate			\$0.60	\$0.60	\$0.60	\$0.60	\$0.60	\$0.60
Additional Charges								
Distribution Revenue from Rates		\$1,995,545	\$1,140,450	\$371,470	\$379,497	\$80,544	\$3,846	\$19,737
Transformer Ownership Allowance		\$37,745	\$0	\$0	\$37,745	\$0	\$0	\$0
Net Class Revenue	CREV	\$1,957,800	\$1,140,450	\$371,470	\$341,752	\$80,544	\$3,846	\$19,737
<b>Data Mismatch Analysis</b>								
Revenue with 30 year weather normalized kWh		-	-	-	-	-	-	-

**Weather Normalized Data from Hydro One**

Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
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kWh - 30 year weather normalized amount

-						
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Loss Factor

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**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**  
**EB-2011-0274**  
**December-29-11**  
**Sheet I6.2 Customer Data Worksheet - IR Round 2**

			1	2	3	7	8	9
	ID	Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
<b>Billing Data</b>								
Bad Debt 3 Year Historical Average	BDHA	\$43,147	\$27,223	\$6,994	\$8,930	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$52,000	\$29,000	\$12,000	\$11,000			
Number of Bills	CNB	60,780	49,494	9,318	792	72	408	696
Number of Devices						1,709	75	58
Number of Connections (Unmetered)	CCON	1,841				1,709	75	58
Total Number of Customers	CCA	5,990	5,016	770	66	6	75	58
Bulk Customer Base	CCB	-						
Primary Customer Base	CCP	5,990	5,016	770	66	6	75	58
Line Transformer Customer Base	CCLT	5,978	5,016	770	53	6	75	58
Secondary Customer Base	CCS	5,966	5,016	768	43	6	75	58
Weighted - Services	CWCS	7,045	5,016	998	171	765	47	48
Weighted Meter -Capital	CWMC	1,510,245	982,520	311,570	216,155	-	-	-
Weighted Meter Reading	CWMR	33,392	18,058	2,772	11,762	800	-	-
Weighted Bills	CWNB	61,782	49,494	7,920	2,376	1,440	204	348

**Bad Debt Data**

Historic Year: 2009	53,374	21,142	15,443	16,789				
Historic Year: 2010	36,067	35,527	540	-				
Historic Year: 2011	40,000	25,000	5,000	10,000				
Three-year average	43,147	27,223	6,994	8,930	-	-	-	-

Smart Meter Project Allocation

Prepared: 27-Jan-12

<u>PO</u>	<u>Description</u>	<u>Res</u>	<u>Com</u>	<u>Qty</u>	<u>Unit Price</u>	<u>total</u>
	Commercial - % of total Meter Costs & Weighted Average cost per Meter				68.0%	\$92.32

Commercial - % of total Meter Costs & Weighted Average cost per Meter	32.0%	\$252.40
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	<u>Res</u>	<u>Com</u>	<u>Res.</u>	<u>Com.</u>	<u>Project total</u>
Purchased Meters	85.3%	14.7%			
Intalled meters	86.7%	13.3%			
<b>Total Project Capital costs</b>					<b>\$1,294,090</b>
Less meter Costs per Project 1.1.1			\$507,652	\$238,513	\$746,165
Support systems & Infrastructure	86.7%	13.3%	<u>\$474,868</u>	<u>\$73,057</u>	<u>\$547,925</u>
Project cost by Customer class			\$982,520	\$311,570	\$1,294,090
<b>Project cost by Customer class - Percentage</b>			<b>75.9%</b>	<b>24.1%</b>	
<b>Legacy Industrial Meters</b>					<b>\$216,155</b>

<u>Stranded Meter Costs</u>	<u>Res.</u>	<u>Com.</u>	<u>Total</u>
Stranded costs	\$122,764	\$57,678	\$180,442
Customer count - 2012 average	5,016	770	5,786
SMRR	\$2.04	\$6.24	







2012 COS COST ALLOCATION

Rideau St. Lawrence ]

EB-2011-0274

December-29-11

Sheet 17.2 Meter Reading Worksheet - IR Round 2

Weighting Factors based on Contractor Pricing

Description	1			2			3			7			8			9			TOTAL		
	Residential			General Service Less than 50 kW			General Service 50 to 4,999 kW			Street Lighting			Sentinel Lighting			Unmetered Scattered Load					
	Units	Weighted Factor	Weighted Average Costs	Units	Weighted Factor	Weighted Average Costs	Units	Weighted Factor	Weighted Average Costs	Units	Weighted Factor	Weighted Average Costs	Units	Weighted Factor	Weighted Average Costs	Units	Weighted Factor	Weighted Average Costs	Units	Weighted Factor	Weighted Average Costs
Allocation Percentage Weighted Factor	54.08%			8.30%			35.22%			2.40%			0.00%			0.00%			100.00%		
Cost Relative to Residential Average Cost	1.00			1.00			49.50			444.44			0.00			0.00			495.95		
<b>Total</b>	<b>60,192</b>	<b>18,058</b>	<b>0.30</b>	<b>9,240</b>	<b>2,772</b>	<b>0.30</b>	<b>792</b>	<b>11,762</b>	<b>14.85</b>	<b>6</b>	<b>800</b>	<b>133.33</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>-</b>	<b>-</b>	<b>0</b>	<b>70,230</b>	<b>33,392</b>	<b>149</b>
<b>Factor</b>																					
Residential - Urban - Outside	1.00	0		0			0			0			0			0			-		-
Residential - Urban - Outside with other services	1.00	0		0			0			0			0			0			-		-
Residential - Urban - Inside	2.00	0		0			0			0			0			0			-		-
Residential - Urban - Inside - with other services	1.00	0		0			0			0			0			0			-		-
Residential - Rural - Outside		0		0			0			0			0			0			-		-
Residential - Rural - Outside with other services		0		0			0			0			0			0			-		-
Smart Meters (Based on \$0.30 per month)	0.30	60,192	18,058	9,240	2,772			0			0			0			0		69,432	20,830	
LDC Specific 2		0		0			0			0			0			0			-		-
GS - Walking	2.00	0		0			0			0			0			0			-		-
GS - Walking - with other services	3.00	0		0			0			0			0			0			-		-
GS - Vehicle without other services	10.00	0		0			120	1,200			0			0			0		120	1,200	
GS - Vehicle with other services	6.67	0		0			624	4,162			0			0			0		624	4,162	
LDC Specific 3		0		0			0			0			0			0			-		-
LDC Specific 4	0.00	0		0			0			0			0			0			-		-
Interval (based on \$50 per month)	133.33	0		0			48	6,400		6	800			0			0		54	7,200	
LDC Specific 5		0		0			0			0			0			0			-		-
LDC Specific 6		0		0			0			0			0			0			-		-



**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distri**  
**EB-2011-0274**  
**December-29-11**

**Sheet 18 Demand Data Worksheet - IR Round 2**

This is an input sheet for demand

<b>CP TEST RESULTS</b>	<b>4 CP</b>
<b>NCP TEST RESULTS</b>	<b>4 NCP</b>

<b>Co-incident Peak</b>	<b>Indicator</b>
<b>1 CP</b>	<b>CP 1</b>
<b>4 CP</b>	<b>CP 4</b>
<b>12 CP</b>	<b>CP 12</b>

<b>Non-co-incident Peak</b>	<b>Indicator</b>
<b>1 NCP</b>	<b>NCP 1</b>
<b>4 NCP</b>	<b>NCP 4</b>
<b>12 NCP</b>	<b>NCP 12</b>

**Customer Classes**

		1	2	3	7	8	9	
		Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
<b>CO-INCIDENT PEAK</b>								
<b>1 CP</b>								
Transformation CP	TCP1	20,771	9,474	2,163	8,735	332	25	43
Bulk Delivery CP	BCP1	20,771	9,474	2,163	8,735	332	25	43
Total Sytem CP	DCP1	20,771	9,474	2,163	8,735	332	25	43
<b>4 CP</b>								
Transformation CP	TCP4	76,463	35,927	11,117	28,063	1,078	81	197
Bulk Delivery CP	BCP4	76,463	35,927	11,117	28,063	1,078	81	197
Total Sytem CP	DCP4	76,463	35,927	11,117	28,063	1,078	81	197
<b>12 CP</b>								
Transformation CP	TCP12	194,297	88,121	32,015	71,701	1,742	131	587
Bulk Delivery CP	BCP12	194,297	88,121	32,015	71,701	1,742	131	587
Total Sytem CP	DCP12	194,297	88,121	32,015	71,701	1,742	131	587
<b>NON CO INCIDENT PEAK</b>								
<b>1 NCP</b>								
Classification NCP from Load Data Provider								
Primary NCP	DNCP1	24,950	11,598	3,862	9,078	332	25	55
Line Transformer NCP	LTNCP1	20,345	11,598	3,862	4,473	332	25	55
Secondary NCP	SNCP1	19,054	11,563	3,834	3,245	332	25	55
<b>4 NCP</b>								
Classification NCP from Load Data Provider								
Primary NCP	DNCP4	95,459	45,059	14,598	34,161	1,327	100	214
Line Transformer NCP	LTNCP4	78,131	45,059	14,598	16,833	1,327	100	214
Secondary NCP	SNCP4	73,270	44,925	14,493	12,212	1,327	100	214
<b>12 NCP</b>								
Classification NCP from Load Data Provider								
Primary NCP	DNCP12	239,784	107,314	40,893	86,709	3,982	299	587
Line Transformer NCP	LTNCP12	195,801	107,314	40,893	42,725	3,982	299	587
Secondary NCP	SNCP12	183,455	106,993	40,598	30,996	3,982	299	587



**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution**  
**EB-2011-0274**  
**December-29-11**  
**Sheet 19 Direct Allocation Worksheet - IR Round 2**

**Instructions:**  
 More Instructions provided on the first tab in this workbook.

USOA Account #	Accounts	Direct Allocation	Total Allocated to Rate Classifications?	1 Residential	2 Service Les	3 Service 50 to 4	7 Street Light	8 Tunnel Light	9 Unmetered Scattered Load
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**Instructions:**  
 To Allocate Capital Contributions by Rate Classification, Input Allocation on Next Line

1995	Contributions and Grants - Credit	\$0	Yes						
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**Instructions:**  
 The Following is Used to Allocate Directly Allocated Costs from I3 to Rate Classifications

1805	Land	\$0	Yes						
1806	Land Rights	\$0	Yes						
1808	Buildings and Fixtures	\$0	Yes						
1810	Leasehold Improvements	\$0	Yes						
1815	Transformer Station Equipment - Normally Primary above 50 kV	\$0	Yes						
1820	Distribution Station Equipment - Normally Primary below 50 kV	\$0	Yes						
1825	Storage Battery Equipment	\$0	Yes						
1830	Poles, Towers and Fixtures	\$0	Yes						
1835	Overhead Conductors and Devices	\$0	Yes						
1840	Underground Conduit	\$0	Yes						
1845	Underground Conductors and Devices	\$0	Yes						
1850	Line Transformers	\$0	Yes						
1855	Services	\$0	Yes						
1860	Meters	\$0	Yes						
1880	IFRS Placeholder Asset Account	\$0	Yes						
1905	Land	\$0	Yes						
1906	Land Rights	\$0	Yes						
1908	Buildings and Fixtures	\$0	Yes						
1910	Leasehold Improvements	\$0	Yes						
1915	Office Furniture and Equipment	\$0	Yes						
1920	Computer Equipment - Hardware	\$0	Yes						
1925	Computer Software	\$0	Yes						
1930	Transportation Equipment	\$0	Yes						
1935	Stores Equipment	\$0	Yes						
1940	Tools, Shop and Garage Equipment	\$0	Yes						
1945	Measurement and Testing Equipment	\$0	Yes						
1950	Power Operated Equipment	\$0	Yes						
1955	Communication Equipment	\$0	Yes						
1960	Miscellaneous Equipment	\$0	Yes						
1970	Load Management Controls - Customer Premises	\$0	Yes						
1975	Load Management Controls - Utility Premises	\$0	Yes						
1980	System Supervisory Equipment	\$0	Yes						
1990	Other Tangible Property	\$0	Yes						
2005	Property Under Capital Leases	\$0	Yes						
2010	Electric Plant Purchased or Sold	\$0	Yes						
2050	Completed Construction Not Classified-Electric	\$0	Yes						
2105	Accum. Amortization of Electric Utility Plant - Property, Plant, & Equipment	\$0	Yes						
2120	Accumulated Amortization of Electric Utility Plant - Intangibles	\$0	Yes						
	<b>Directly Allocated Net Fixed Assets</b>			\$0	\$0	\$0	\$0	\$0	\$0
5005	Operation Supervision and Engineering	\$0	Yes						
5010	Load Dispatching	\$0	Yes						
5012	Station Buildings and Fixtures Expense	\$0	Yes						
5014	Transformer Station Equipment - Operation Labour	\$0	Yes						
5015	Transformer Station Equipment - Operation Supplies and Expenses	\$0	Yes						
5016	Distribution Station Equipment - Operation Labour	\$0	Yes						
5017	Distribution Station Equipment - Operation Supplies and Expenses	\$0	Yes						
5020	Overhead Distribution Lines and Feeders - Operation Labour	\$0	Yes						
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	\$0	Yes						
5030	Overhead Subtransmission Feeders - Operation	\$0	Yes						
5035	Overhead Distribution Transformers - Operation	\$0	Yes						
5040	Underground Distribution Lines and Feeders - Operation Labour	\$0	Yes						
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	\$0	Yes						
5050	Underground Subtransmission Feeders - Operation	\$0	Yes						
5055	Underground Distribution Transformers - Operation	\$0	Yes						
5065	Meter Expense	\$0	Yes						
5070	Customer Premises - Operation Labour	\$0	Yes						
5075	Customer Premises - Materials and Expenses	\$0	Yes						
5085	Miscellaneous Distribution Expense	\$0	Yes						
5090	Underground Distribution Lines and Feeders - Rental Paid	\$0	Yes						

5095	Overhead Distribution Lines and Feeders - Rental Paid	\$0	Yes							
5096	Other Rent	\$0	Yes							
5105	Maintenance Supervision and Engineering	\$0	Yes							
5110	Maintenance of Buildings and Fixtures - Distribution Stations	\$0	Yes							
5112	Maintenance of Transformer Station Equipment	\$0	Yes							
5114	Maintenance of Distribution Station Equipment	\$0	Yes							
5120	Maintenance of Poles, Towers and Fixtures	\$0	Yes							
5125	Maintenance of Overhead Conductors and Devices	\$0	Yes							
5130	Maintenance of Overhead Services	\$0	Yes							
5135	Overhead Distribution Lines and Feeders - Right of Way	\$0	Yes							
5145	Maintenance of Underground Conduit	\$0	Yes							
5150	Maintenance of Underground Conductors and Devices	\$0	Yes							
5155	Maintenance of Underground Services	\$0	Yes							
5160	Maintenance of Line Transformers	\$0	Yes							
5175	Maintenance of Meters	\$0	Yes							
5305	Supervision	\$0	Yes							
5310	Meter Reading Expense	\$0	Yes							
5315	Customer Billing	\$0	Yes							
5320	Collecting	\$0	Yes							
5325	Collecting- Cash Over and Short	\$0	Yes							
5330	Collection Charges	\$0	Yes							
5335	Bad Debt Expense	\$0	Yes							
5340	Miscellaneous Customer Accounts Expenses	\$0	Yes							
5405	Supervision	\$0	Yes							
5410	Community Relations - Sundry	\$0	Yes							
5415	Energy Conservation	\$0	Yes							
5420	Community Safety Program	\$0	Yes							
5425	Miscellaneous Customer Service and Informational Expenses	\$0	Yes							
5505	Supervision	\$0	Yes							
5510	Demonstrating and Selling Expense	\$0	Yes							
5515	Advertising Expense	\$0	Yes							
5520	Miscellaneous Sales Expense	\$0	Yes							
5605	Executive Salaries and Expenses	\$0	Yes							
5610	Management Salaries and Expenses	\$0	Yes							
5615	General Administrative Salaries and Expenses	\$0	Yes							
5620	Office Supplies and Expenses	\$0	Yes							
5625	Administrative Expense Transferred Credit	\$0	Yes							
5630	Outside Services Employed	\$0	Yes							
5635	Property Insurance	\$0	Yes							
5640	Injuries and Damages	\$0	Yes							
5645	Employee Pensions and Benefits	\$0	Yes							
5650	Franchise Requirements	\$0	Yes							
5655	Regulatory Expenses	\$0	Yes							
5660	General Advertising Expenses	\$0	Yes							
5665	Miscellaneous General Expenses	\$0	Yes							
5670	Rent	\$0	Yes							
5675	Maintenance of General Plant	\$0	Yes							
5680	Electrical Safety Authority Fees	\$0	Yes							
5682	IFRS Placeholder Expense Account	\$0	Yes							
5705	Amortization Expense - Property, Plant, and Equipment	\$0	Yes							
5710	Amortization of Limited Term Electric Plant	\$0	Yes							
5715	Amortization of Intangibles and Other Electric Plant Expenses	\$0	Yes							
5720	Amortization of Electric Plant Acquisition Adjustments	\$0	Yes							
6105	Taxes Other Than Income Taxes	\$0	Yes							
6205	Donations	\$0	Yes							
6210	Life Insurance	\$0	Yes							
6215	Penalties	\$0	Yes							
6225	Other Deductions	\$0	Yes							
	Total Expenses			\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Depreciation Expense			\$0	\$0	\$0	\$0	\$0	\$0	\$0

<b>Total Net Fixed Assets Excluding Gen Plant</b>	<b>\$7,002,613</b>	<b>Allocated</b>	Residential	Ice Les	Service 50 to 4	Street Light	Intinel Light	Scattered Load
Approved Total PILs	\$39,129	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Approved Total Return on Debt	\$168,423	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Approved Total Return on Equity	\$272,112	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

**2012 Revenue to Cost % Ratios**

	Updated OEB Cost Allocation Model	Proposed Revenue to Cost Ratios	Board Target	
			Low	High
<b>Residential</b>	103.25	102.00	85	115
<b>GS &lt; 50kW</b>	110.23	110.23	80	120
<b>GS &gt; 50kW</b>	87.69	91.25	80	120
<b>Sentinel Lighting</b>	84.31	84.31	80	120
<b>Street Lighting</b>	80.60	80.60	70	120
<b>USL</b>	93.30	93.30	80	120



**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**  
**EB-2011-0274**  
**December 29-11**  
**Sheet 01 Revenue to Cost Summary Worksheet - IR Round 2**

**Instructions:**  
 Please see the first tab in this workbook for detailed instructions

**Class Revenue, Cost Analysis, and Return on Rate Base**

Rate Base	Total	1 Residential	2 General Service Less than 50 kW	3 General Service 50 to 4,999 kW	7 Street Lighting	8 Sentinel Lighting	9 Unmetered Scattered Load
<b>Assets</b>							
<b>crev</b> Distribution Revenue at Existing Rates	\$1,957,800	\$1,140,450	\$371,470	\$341,752	\$80,544	\$3,846	\$19,737
<b>mi</b> Miscellaneous Revenue (mi)	\$207,543	\$131,162	\$32,075	\$29,319	\$13,485	\$710	\$793
	<b>Miscellaneous Revenue Input equals Output</b>						
<b>Total Revenue at Existing Rates</b>	<b>\$2,165,343</b>	<b>\$1,271,613</b>	<b>\$403,545</b>	<b>\$371,071</b>	<b>\$94,029</b>	<b>\$4,556</b>	<b>\$20,530</b>
Factor required to recover deficiency (1 + D)	1.2913						
Distribution Revenue at Status Quo Rates	\$2,528,129	\$1,472,676	\$479,683	\$441,309	\$104,007	\$4,967	\$25,487
Miscellaneous Revenue (mi)	\$207,543	\$131,162	\$32,075	\$29,319	\$13,485	\$710	\$793
<b>Total Revenue at Status Quo Rates</b>	<b>\$2,735,672</b>	<b>\$1,603,838</b>	<b>\$511,758</b>	<b>\$470,627</b>	<b>\$117,492</b>	<b>\$5,677</b>	<b>\$26,280</b>
<b>Expenses</b>							
<b>di</b> Distribution Costs (di)	\$603,563	\$343,623	\$91,644	\$117,074	\$46,601	\$2,203	\$2,419
<b>cu</b> Customer Related Costs (cu)	\$508,773	\$374,347	\$74,314	\$49,096	\$8,181	\$1,048	\$1,787
<b>ad</b> General and Administration (ad)	\$802,692	\$514,111	\$121,003	\$122,513	\$39,779	\$2,315	\$2,971
<b>dep</b> Depreciation and Amortization (dep)	\$340,989	\$196,256	\$54,878	\$63,913	\$23,725	\$1,059	\$1,148
<b>INPUT</b> PILS (INPUT)	\$39,129	\$22,837	\$6,611	\$7,464	\$2,017	\$93	\$107
<b>INT</b> Interest	\$168,423	\$98,297	\$28,454	\$32,128	\$8,683	\$402	\$459
<b>Total Expenses</b>	<b>\$2,483,560</b>	<b>\$1,549,470</b>	<b>\$376,904</b>	<b>\$392,189</b>	<b>\$128,986</b>	<b>\$7,119</b>	<b>\$8,891</b>
<b>Direct Allocation</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>NI</b> Allocated Net Income (NI)	\$272,112	\$158,813	\$45,972	\$51,908	\$14,029	\$649	\$742
Revenue Requirement (includes NI)	\$2,735,672	\$1,708,283	\$422,876	\$444,097	\$143,016	\$7,768	\$9,633
	<b>Revenue Requirement Input equals Output</b>						
<b>Rate Base Calculation</b>							
<b>Net Assets</b>							
<b>dp</b> Distribution Plant - Gross	\$7,002,613	\$4,059,687	\$1,155,835	\$1,327,226	\$419,512	\$19,091	\$21,262
<b>ap</b> General Plant - Gross	\$1,142,390	\$667,555	\$191,852	\$215,378	\$61,527	\$2,851	\$3,228
<b>accum dep</b> Accumulated Depreciation	(\$2,424,477)	(\$1,383,353)	(\$388,524)	(\$467,505)	(\$169,423)	(\$7,497)	(\$8,175)
<b>co</b> Capital Contribution	(\$360,988)	(\$215,268)	(\$54,588)	(\$54,698)	(\$33,254)	(\$1,567)	(\$1,616)
<b>Total Net Plant</b>	<b>\$5,359,538</b>	<b>\$3,128,622</b>	<b>\$904,577</b>	<b>\$1,020,401</b>	<b>\$278,362</b>	<b>\$12,878</b>	<b>\$14,698</b>
<b>Directly Allocated Net Fixed Assets</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>COP</b> Cost of Power (COP)	\$10,499,095	\$4,477,792	\$1,989,245	\$3,833,203	\$144,798	\$10,875	\$43,183
OM&A Expenses	\$1,915,028	\$1,232,080	\$286,961	\$288,663	\$94,560	\$5,566	\$7,177
Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$12,414,122</b>	<b>\$5,709,873</b>	<b>\$2,276,205</b>	<b>\$4,121,866</b>	<b>\$239,358</b>	<b>\$16,440</b>	<b>\$50,360</b>
Working Capital	\$1,862,118	\$856,481	\$341,431	\$618,283	\$35,904	\$2,466	\$7,554
<b>Total Rate Base</b>	<b>\$7,221,656</b>	<b>\$3,985,103</b>	<b>\$1,246,008</b>	<b>\$1,638,684</b>	<b>\$314,266</b>	<b>\$15,344</b>	<b>\$22,252</b>
	<b>Rate Base Input equals Output</b>						
Equity Component of Rate Base	\$2,888,663	\$1,594,041	\$498,403	\$655,474	\$125,706	\$6,137	\$8,901
Net Income on Allocated Assets	\$272,112	\$54,368	\$134,854	\$78,438	(\$11,494)	(\$1,442)	\$17,389
Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Net Income</b>	<b>\$272,112</b>	<b>\$54,368</b>	<b>\$134,854</b>	<b>\$78,438</b>	<b>(\$11,494)</b>	<b>(\$1,442)</b>	<b>\$17,389</b>
<b>RATIOS ANALYSIS</b>							
REVENUE TO EXPENSES STATUS QUO%	100.00%	93.89%	121.02%	105.97%	82.15%	73.08%	272.82%
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$570,329)	(\$436,670)	(\$19,331)	(\$73,026)	(\$48,967)	(\$3,212)	\$10,897
	<b>Deficiency Input equals Output</b>						
STATUS QUO REVENUE MINUS ALLOCATED COSTS	(\$0)	(\$104,444)	\$88,882	\$26,531	(\$25,524)	(\$2,091)	\$16,647
RETURN ON EQUITY COMPONENT OF RATE BASE	9.42%	3.41%	27.06%	11.97%	-9.14%	-23.50%	195.36%



**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

**Sheet 02 Monthly Fixed Charge Min. & Max. Worksheet - IR Round 2**

Output sheet showing minimum and maximum level for Monthly Fixed Charge

**Summary**

Customer Unit Cost per month - Avoided Cost  
 Customer Unit Cost per month - Directly Related  
 Customer Unit Cost per month - Minimum System with PLCC Adjustment  
 Existing Approved Fixed Charge

	1	2	3	7	8	9
	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	\$6.99	\$9.68	\$68.11	\$0.38	\$1.14	\$2.54
Customer Unit Cost per month - Directly Related	\$11.52	\$15.80	\$112.44	\$0.67	\$1.97	\$4.37
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$18.37	\$24.03	\$146.04	\$6.93	\$8.56	\$9.89
Existing Approved Fixed Charge	\$10.28	\$24.34	\$281.39	\$2.29	\$1.24	\$7.41









**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**  
**EB-2011-0274**  
**December-29-11**

**Sheet 03.1 Line Transformers Unit Cost Worksheet - IR Round 2**

**ALLOCATION BY RATE CLASSIFICATION**

**Description**

	1	2	3	7	8	9	
	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load	
<b>Depreciation on Acct 1850 Line Transformers</b>	\$46,648	\$27,595	\$7,432	\$7,097	\$4,152	\$182	\$190
<b>Depreciation on General Plant Assigned to Line Transformers</b>	\$5,474	\$3,234	\$865	\$821	\$508	\$22	\$23
<b>Acct 5035 - Overhead Distribution Transformers- Operation</b>	\$10,000	\$5,916	\$1,593	\$1,521	\$890	\$39	\$41
<b>Acct 5055 - Underground Distribution Transformers - Operation</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Acct 5160 - Maintenance of Line Transformers</b>	\$51,500	\$30,465	\$8,205	\$7,835	\$4,583	\$201	\$210
<b>Allocation of General Expenses</b>	\$34,748	\$20,540	\$5,551	\$5,326	\$3,056	\$134	\$141
<b>Admin and General Assigned to Line Transformers</b>	\$44,416	\$26,051	\$7,144	\$6,899	\$3,974	\$171	\$177
<b>PILs on Line Transformers</b>	\$4,855	\$2,872	\$774	\$739	\$432	\$19	\$20
<b>Debt Return on Line Transformers</b>	\$20,898	\$12,362	\$3,329	\$3,179	\$1,860	\$82	\$85
<b>Equity Return on Line Transformers</b>	\$33,764	\$19,973	\$5,379	\$5,137	\$3,005	\$132	\$138
<b>Total</b>	<b>\$252,303</b>	<b>\$149,008</b>	<b>\$40,272</b>	<b>\$38,554</b>	<b>\$22,460</b>	<b>\$982</b>	<b>\$1,026</b>
<b>Billed kW without Line Transformer Allowance</b>	0	0	63,744	3,843	301	0	
<b>Billed kWh without Line Transformer Allowance</b>	44,584,446	19,806,495	38,166,401	1,441,722	108,277	429,961	
<b>Line Transformation Unit Cost (\$/kW)</b>	<b>\$0.0000</b>	<b>\$0.0000</b>	<b>\$0.6048</b>	<b>\$5.8446</b>	<b>\$3.2637</b>	<b>\$0.0000</b>	
<b>Line Transformation Unit Cost (\$/kWh)</b>	<b>\$0.0033</b>	<b>\$0.0020</b>	<b>\$0.0010</b>	<b>\$0.0156</b>	<b>\$0.0091</b>	<b>\$0.0024</b>	
<b>General Plant - Gross Assets</b>	\$1,142,390	\$667,555	\$191,852	\$215,378	\$61,527	\$2,851	\$3,228
<b>General Plant - Accumulated Depreciation</b>	(\$255,570)	(\$149,342)	(\$42,920)	(\$48,183)	(\$13,764)	(\$638)	(\$722)
<b>General Plant - Net Fixed Assets</b>	\$886,820	\$518,213	\$148,932	\$167,195	\$47,762	\$2,213	\$2,505
<b>General Plant - Depreciation</b>	\$44,011	\$25,718	\$7,391	\$8,298	\$2,370	\$110	\$124
<b>Total Net Fixed Assets Excluding General Plant</b>	<b>\$4,472,718</b>	<b>\$2,610,409</b>	<b>\$755,645</b>	<b>\$853,207</b>	<b>\$230,600</b>	<b>\$10,665</b>	<b>\$12,192</b>
<b>Total Administration and General Expense</b>	<b>\$802,692</b>	<b>\$514,111</b>	<b>\$121,003</b>	<b>\$122,513</b>	<b>\$39,779</b>	<b>\$2,315</b>	<b>\$2,971</b>
<b>Total O&amp;M</b>	<b>\$1,112,336</b>	<b>\$717,970</b>	<b>\$165,958</b>	<b>\$166,170</b>	<b>\$54,782</b>	<b>\$3,250</b>	<b>\$4,206</b>
<b>Line Transformer Rate Base</b>							
<b>Acct 1850 - Line Transformers - Gross Assets</b>	\$1,061,223	\$627,771	\$169,073	\$161,457	\$94,445	\$4,145	\$4,332
<b>Line Transformers - Accumulated Depreciation</b>	(\$506,250)	(\$299,474)	(\$80,655)	(\$77,022)	(\$45,054)	(\$1,977)	(\$2,066)
<b>Line Transformers - Net Fixed Assets</b>	\$554,974	\$328,297	\$88,418	\$84,435	\$49,391	\$2,168	\$2,265
<b>General Plant Assigned to Line Transformers - NFA</b>	\$110,290	\$65,173	\$17,427	\$16,546	\$10,230	\$450	\$466
<b>Line Transformer Net Fixed Assets Including General Plant</b>	<b>\$665,264</b>	<b>\$393,470</b>	<b>\$105,845</b>	<b>\$100,981</b>	<b>\$59,621</b>	<b>\$2,617</b>	<b>\$2,731</b>
<b>General Expenses</b>							
<b>Acct 5005 - Operation Supervision and Engineering</b>	\$108,000	\$60,782	\$16,689	\$21,403	\$8,329	\$378	\$418
<b>Acct 5010 - Load Dispatching</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Acct 5085 - Miscellaneous Distribution Expense</b>	\$67,000	\$37,708	\$10,354	\$13,278	\$5,167	\$234	\$259
<b>Acct 5105 - Maintenance Supervision and Engineering</b>	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$175,000</b>	<b>\$98,490</b>	<b>\$27,043</b>	<b>\$34,681</b>	<b>\$13,497</b>	<b>\$612</b>	<b>\$677</b>
<b>Acct 1850 - Line Transformers - Gross Assets</b>	\$1,061,223	\$627,771	\$169,073	\$161,457	\$94,445	\$4,145	\$4,332
<b>Acct 1815 - 1855</b>	\$5,342,031	\$3,010,143	\$823,626	\$1,051,418	\$417,110	\$18,911	\$20,823



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**2012 COS COST ALLOCATION**  
**Rideau St. Lawrence Distribution Inc.**  
**EB-2011-0274**  
**December-29-11**  
**Sheet O3.2 Substation Transformers Unit Cost Worksheet - IR Round 2**

**ALLOCATION BY RATE CLASSIFICATION**

Description	Total	1	2	3	7	8	9
		Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting	Unmetered Scattered Load
Depreciation on Acct 1820-2 Distribution Station Equipment	\$19,708	\$8,629	\$3,115	\$7,936	\$0	\$0	\$28
Depreciation on Acct 1825-2 Storage Battery Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation on Acct 1805-2 Land Station <50 kV	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation on Acct 1806-2 Land Rights Station <50 kV	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation on Acct 1808-2 Buildings and Fixtures < 50 KV	\$671	\$315	\$97	\$246	\$9	\$1	\$2
Depreciation on Acct 1810-2 Leasehold Improvements <50 kV	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation on General Plant Assigned to Substation Transformers	(\$29)	\$38	(\$25)	(\$69)	\$24	\$2	\$2
Acct 5012 - Station Buildings and Fixtures Expense	\$1,000	\$470	\$145	\$367	\$14	\$1	\$3
Acct 5016 - Distributon Station Equipment - Labour	\$1,000	\$438	\$158	\$403	\$0	\$0	\$1
Acct 5017 - Distributon Station Equipment - Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 5114 - Maintenance of Distribution Station Equipment	\$71,000	\$31,088	\$11,221	\$28,589	\$0	\$0	\$102
Allocation of General Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Admin and General Assigned to SubstationTransformers	\$52,319	\$22,575	\$8,296	\$21,375	\$0	\$0	\$73
PLs on SubstationTransformers	(\$28)	\$34	(\$22)	(\$62)	\$20	\$2	\$2
Debt Return on Substation Transformers	(\$119)	\$145	(\$97)	(\$268)	\$87	\$7	\$7
Equity Return on Substation Transformers	(\$192)	\$234	(\$156)	(\$433)	\$140	\$11	\$11
<b>Total</b>	<b>\$145,330</b>	<b>\$63,966</b>	<b>\$22,732</b>	<b>\$58,084</b>	<b>\$295</b>	<b>\$22</b>	<b>\$230</b>
Billed kW without Substation Transformer Allowance		0	0	126,652	3,843	301	0
Billed kWh without Substation Transformer Allowance		44,584,446	19,806,495	38,166,401	1,441,722	108,277	429,961
Substation Transformation Unit Cost (\$/kW)		\$0.0000	\$0.0000	\$0.4586	\$0.0767	\$0.0736	\$0.0000
Substation Transformation Unit Cost (\$/kWh)		\$0.0014	\$0.0011	\$0.0015	\$0.0002	\$0.0002	\$0.0005
General Plant - Gross Assets	\$1,142,390	\$667,555	\$191,852	\$215,378	\$61,527	\$2,851	\$3,228
General Plant - Accumulated Depreciation	(\$255,570)	(\$149,342)	(\$42,920)	(\$48,183)	(\$13,764)	(\$638)	(\$722)
General Plant - Net Fixed Assets	\$886,820	\$518,213	\$148,932	\$167,195	\$47,762	\$2,213	\$2,505
General Plant - Depreciation	\$44,011	\$25,718	\$7,391	\$8,298	\$2,370	\$110	\$124
<b>Total Net Fixed Assets Excluding General Plant</b>	<b>\$4,472,718</b>	<b>\$2,610,409</b>	<b>\$755,645</b>	<b>\$853,207</b>	<b>\$230,600</b>	<b>\$10,665</b>	<b>\$12,192</b>
<b>Total Administration and General Expense</b>	<b>\$802,692</b>	<b>\$514,111</b>	<b>\$121,003</b>	<b>\$122,513</b>	<b>\$39,779</b>	<b>\$2,315</b>	<b>\$2,971</b>
<b>Total O&amp;M</b>	<b>\$1,112,336</b>	<b>\$717,970</b>	<b>\$165,958</b>	<b>\$166,170</b>	<b>\$54,782</b>	<b>\$3,250</b>	<b>\$4,206</b>
Substation Transformer Rate Base Gross Plant							
Acct 1820-2 Distribution Station Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 1825-2 Storage Battery Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 1805-2 Land Station <50 kV	\$84,205	\$39,565	\$12,243	\$30,904	\$1,187	\$89	\$217
Acct 1806-2 Land Rights Station <50 kV	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 1808-2 Buildings and Fixtures < 50 KV	\$86,132	\$40,470	\$12,523	\$31,611	\$1,215	\$91	\$222
Acct 1810-2 Leasehold Improvements <50 kV	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$170,338</b>	<b>\$80,035</b>	<b>\$24,766</b>	<b>\$62,515</b>	<b>\$2,402</b>	<b>\$180</b>	<b>\$439</b>
Substation Transformers - Accumulated Depreciation							
Acct 1820-2 Distribution Station Equipment	(\$166,898)	(\$73,078)	(\$26,376)	(\$67,204)	\$0	\$0	(\$240)
Acct 1825-2 Storage Battery Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 1805-2 Land Station <50 kV	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 1806-2 Land Rights Station <50 kV	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 1808-2 Buildings and Fixtures < 50 KV	(\$6,602)	(\$3,102)	(\$960)	(\$2,423)	(\$93)	(\$7)	(\$17)
Acct 1810-2 Leasehold Improvements <50 kV	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>(\$173,500)</b>	<b>(\$76,181)</b>	<b>(\$27,336)</b>	<b>(\$69,627)</b>	<b>(\$93)</b>	<b>(\$7)</b>	<b>(\$257)</b>
Substation Transformers - Net Fixed Assets	(\$3,163)	\$3,854	(\$2,570)	(\$7,111)	\$2,309	\$173	\$182
General Plant Assigned to SubstationTransformers - NFA	(\$583)	\$765	(\$506)	(\$1,394)	\$478	\$36	\$37
Substation Transformer NFA Including General Plant	(\$3,746)	\$4,620	(\$3,076)	(\$8,505)	\$2,787	\$209	\$219
<b>General Expenses</b>							
Acct 5005 - Operation Supervision and Engineering	\$108,000	\$60,782	\$16,689	\$21,403	\$8,329	\$378	\$418
Acct 5010 - Load Dispatching	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 5085 - Miscellaneous Distribution Expense	\$67,000	\$37,708	\$10,354	\$13,278	\$5,167	\$234	\$259
Acct 5105 - Maintenance Supervision and Engineering	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$175,000</b>	<b>\$98,490</b>	<b>\$27,043</b>	<b>\$34,681</b>	<b>\$13,497</b>	<b>\$612</b>	<b>\$677</b>
Acct 1820-2 Distribution Station Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Acct 1825-2 Storage Battery Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Total</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
Acct 1815 - 1855	\$5,342,031	\$3,010,143	\$823,626	\$1,051,418	\$417,110	\$18,911	\$20,823



## 2012 COS COST ALLOCATION

**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

## **Sheet O3.3 Primary Conductors and Poles C**

### ALLOCATION BY RATE CLASSIFICATION

#### Description

Total

Depreciation on Acct 1830-4 Primary Poles, Towers & Fixtures	\$6,949
Depreciation on Acct 1835-4 Primary Overhead Conductors	\$69,466
Depreciation on Acct 1840-4 Primary Underground Conduit	\$9,114
Depreciation on Acct 1845-4 Primary Underground Conductors	\$5,193
Depreciation on General Plant Assigned to Primary C&P	\$8,252
Primary C&P Operations and Maintenance	\$109,747
Allocation of General Expenses	\$52,852
Admin and General Assigned to Primary C&P	\$79,463
PILs on Primary C&P	\$7,327
Debt Return on Primary C&P	\$31,539
Equity Return on Primary C&P	\$50,956
<b>Total</b>	<b>\$430,859</b>
General Plant - Gross Assets	\$1,142,390
General Plant - Accumulated Depreciation	(\$255,570)
General Plant - Net Fixed Assets	\$886,820
General Plant - Depreciation	\$44,011
<b>Total Net Fixed Assets Excluding General Plant</b>	<b>\$4,472,718</b>
<b>Total Administration and General Expense</b>	<b>\$802,692</b>
<b>Total O&amp;M</b>	<b>\$1,112,336</b>
Primary Conductors and Poles Gross Assets	
Acct 1830-4 Primary Poles, Towers & Fixtures	\$312,183
Acct 1835-4 Primary Overhead Conductors	\$1,081,369
Acct 1840-4 Primary Underground Conduit	\$9,584
Acct 1845-4 Primary Underground Conductors	\$209,885
<b>Subtotal</b>	<b>\$1,613,021</b>
Primary Conductors and Poles Accumulated Depreciation	
Acct 1830-4 Primary Poles, Towers & Fixtures	(\$32,432)
Acct 1835-4 Primary Overhead Conductors	(\$622,830)

Acct 1840-4 Primary Underground Conduit	(\$74,720)
Acct 1845-4 Primary Underground Conductors	(\$45,471)
<b>Subtotal</b>	<b>(\$775,454)</b>
Primary Conductor & Pools - Net Fixed Assets	\$837,568
General Plant Assigned to Primary C&P - NFA	\$166,279
Primary C&P Net Fixed Assets Including General Plant	\$1,003,846
Acct 1830-3 Bulk Poles, Towers & Fixtures	\$0
Acct 1835-3 Bulk Overhead Conductors	\$0
Acct 1840-3 Bulk Underground Conduit	\$0
Acct 1845-3 Bulk Underground Conductors	\$0
<b>Subtotal</b>	<b>\$0</b>
Acct 1830-5 Secondary Poles, Towers & Fixtures	\$226,064
Acct 1835-5 Secondary Overhead Conductors	\$783,061
Acct 1840-5 Secondary Underground Conduit	\$27,278
Acct 1845-5 Secondary Underground Conductors	\$597,364
<b>Subtotal</b>	<b>\$1,633,766</b>
<b><u>Operations and Maintenance</u></b>	
Acct 5020 Overhead Distribution Lines & Feeders - Labour	\$2,000
Acct 5025 Overhead Distribution Lines & Feeders - Other	\$0
Acct 5040 Underground Distribution Lines & Feeders - Labour	\$0
Acct 5045 Underground Distribution Lines & Feeders - Other	\$0
Acct 5090 Underground Distribution Lines & Feeders - Rental Paid	\$0
Acct 5095 Overhead Distribution Lines & Feeders - Rental Paid	\$23,189
Acct 5120 Maintenance of Poles, Towers & Fixtures	\$41,200
Acct 5125 Maintenance of Overhead Conductors & Devices	\$103,000
Acct 5135 Overhead Distribution Lines & Feeders - Right of Way	\$41,200
Acct 5145 Maintenance of Underground Conduit	\$2,100
Acct 5150 Maintenance of Underground Conductors & Devices	\$7,374
<b>Total</b>	<b>\$220,063</b>
<b><u>General Expenses</u></b>	
Acct 5005 - Operation Supervision and Engineering	\$108,000
Acct 5010 - Load Dispatching	\$0
Acct 5085 - Miscellaneous Distribution Expense	\$67,000
Acct 5105 - Maintenance Supervision and Engineering	\$0
<b>Total</b>	<b>\$175,000</b>
Primary Conductors and Poles Gross Assets	\$1,613,021
Acct 1815 - 1855	\$5,342,031

**Grouping of Operation and Maintenance**

**Total**

1830	\$	41,200
1835	\$	103,000
1840	\$	2,100
1845	\$	7,374
1830 & 1835	\$	66,389
1840 & 1845	\$	-
<b>Total</b>	<b>\$</b>	<b>220,063</b>

## Lost Pool Worksheet - IR Round 2

1	2	3	7	8
Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting
\$3,638	\$937	\$1,702	\$617	\$27
\$36,368	\$9,368	\$17,020	\$6,172	\$271
\$4,772	\$1,229	\$2,233	\$810	\$36
\$2,719	\$700	\$1,272	\$461	\$20
\$4,320	\$1,105	\$1,996	\$765	\$34
\$56,590	\$14,523	\$28,077	\$9,712	\$426
\$27,630	\$7,142	\$13,036	\$4,637	\$204
\$40,522	\$10,589	\$20,701	\$7,052	\$304
\$3,836	\$988	\$1,795	\$651	\$29
\$16,512	\$4,253	\$7,727	\$2,802	\$123
\$26,677	\$6,872	\$12,485	\$4,527	\$199
<b>\$223,584</b>	<b>\$57,706</b>	<b>\$108,045</b>	<b>\$38,208</b>	<b>\$1,671</b>
\$667,555	\$191,852	\$215,378	\$61,527	\$2,851
(\$149,342)	(\$42,920)	(\$48,183)	(\$13,764)	(\$638)
\$518,213	\$148,932	\$167,195	\$47,762	\$2,213
\$25,718	\$7,391	\$8,298	\$2,370	\$110
<b>\$2,610,409</b>	<b>\$755,645</b>	<b>\$853,207</b>	<b>\$230,600</b>	<b>\$10,665</b>
<b>\$514,111</b>	<b>\$121,003</b>	<b>\$122,513</b>	<b>\$39,779</b>	<b>\$2,315</b>
<b>\$717,970</b>	<b>\$165,958</b>	<b>\$166,170</b>	<b>\$54,782</b>	<b>\$3,250</b>
\$163,437	\$42,100	\$76,488	\$27,738	\$1,217
\$566,129	\$145,829	\$264,946	\$96,080	\$4,217
\$5,018	\$1,292	\$2,348	\$852	\$37
\$109,881	\$28,304	\$51,424	\$18,648	\$818
<b>\$844,464</b>	<b>\$217,526</b>	<b>\$395,205</b>	<b>\$143,318</b>	<b>\$6,290</b>
(\$16,979)	(\$4,374)	(\$7,946)	(\$2,882)	(\$126)
(\$326,070)	(\$83,992)	(\$152,599)	(\$55,339)	(\$2,429)

	(\$39,118)	(\$10,076)	(\$18,307)	(\$6,639)	(\$291)
	(\$23,806)	(\$6,132)	(\$11,141)	(\$4,040)	(\$177)
	<b>(\$405,973)</b>	<b>(\$104,575)</b>	<b>(\$189,993)</b>	<b>(\$68,900)</b>	<b>(\$3,024)</b>
	\$438,491	\$112,951	\$205,212	\$74,418	\$3,266
	\$87,048	\$22,262	\$40,213	\$15,414	\$678
	\$525,540	\$135,213	\$245,425	\$89,832	\$3,944
	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0
	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
	\$139,320	\$37,876	\$26,890	\$20,150	\$884
	\$482,591	\$131,197	\$93,145	\$69,799	\$3,063
	\$16,811	\$4,570	\$3,245	\$2,431	\$107
	\$368,148	\$100,084	\$71,056	\$53,246	\$2,337
	<b>\$1,006,871</b>	<b>\$273,727</b>	<b>\$194,336</b>	<b>\$145,627</b>	<b>\$6,391</b>
	\$1,125	\$297	\$384	\$178	\$8
	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0
	\$0	\$0	\$0	\$0	\$0
	\$13,044	\$3,446	\$4,454	\$2,063	\$91
	\$23,175	\$6,122	\$7,913	\$3,666	\$161
	\$57,936	\$15,304	\$19,783	\$9,164	\$402
	\$23,175	\$6,122	\$7,913	\$3,666	\$161
	\$1,244	\$334	\$319	\$187	\$8
	\$4,367	\$1,173	\$1,119	\$657	\$29
	<b>\$124,064</b>	<b>\$32,797</b>	<b>\$41,884</b>	<b>\$19,580</b>	<b>\$859</b>
	\$60,782	\$16,689	\$21,403	\$8,329	\$378
	\$0	\$0	\$0	\$0	\$0
	\$37,708	\$10,354	\$13,278	\$5,167	\$234
	\$0	\$0	\$0	\$0	\$0
	<b>\$98,490</b>	<b>\$27,043</b>	<b>\$34,681</b>	<b>\$13,497</b>	<b>\$612</b>
	\$844,464	\$217,526	\$395,205	\$143,318	\$6,290
	\$3,010,143	\$823,626	\$1,051,418	\$417,110	\$18,911

<b>Residential</b>	<b>General Service Less than 50 kW</b>	<b>General Service 50 to 4,999 kW</b>	<b>Street Lighting</b>	<b>Sentinel Lighting</b>
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\$	23,175	\$	6,122	\$	7,913	\$	3,666	\$	161
\$	57,936	\$	15,304	\$	19,783	\$	9,164	\$	402
\$	1,244	\$	334	\$	319	\$	187	\$	8
\$	4,367	\$	1,173	\$	1,119	\$	657	\$	29
\$	37,343	\$	9,864	\$	12,751	\$	5,907	\$	259
\$	-	\$	-	\$	-	\$	-	\$	-
<b>\$</b>	<b>124,064</b>	<b>\$</b>	<b>32,797</b>	<b>\$</b>	<b>41,884</b>	<b>\$</b>	<b>19,580</b>	<b>\$</b>	<b>859</b>

---

9

**Unmetered  
Scattered Load**

\$27  
\$268  
\$35  
\$20  
\$33  
\$419  
\$202  
\$296  
\$28  
\$122  
\$196

**\$1,646**

\$3,228  
(\$722)  
\$2,505

\$124

**\$12,192**

**\$2,971**

**\$4,206**

\$1,203  
\$4,169  
\$37  
\$809

**\$6,218**

(\$125)  
(\$2,401)

(\$288)  
(\$175)

**(\$2,989)**

\$3,229  
\$664  
\$3,892

\$0  
\$0  
\$0  
\$0

**\$0**

\$943  
\$3,266  
\$114  
\$2,491

**\$6,814**

\$8  
\$0  
\$0  
\$0  
\$0  
\$92  
\$164  
\$411  
\$164  
\$9  
\$30

**\$878**

\$418  
\$0  
\$259  
\$0

**\$677**

\$6,218

\$20,823

**Unmetered  
Scattered Load**

\$	164
\$	411
\$	9
\$	30
\$	265
\$	-
<b>\$</b>	<b>878</b>



## 2012 COS COST ALLOCATION

**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

### Sheet O3.4 Secondary Cost Pool Worksheet

#### ALLOCATION BY RATE CLASSIFICATION

#### Description

Total

Depreciation on Acct 1830-5 Secondary Poles, Towers & Fixtures	\$4,520
Depreciation on Acct 1835-5 Secondary Overhead Conductors	\$50,303
Depreciation on Acct 1840-5 Secondary Underground Conduit	\$25,943
Depreciation on Acct 1845-5 Secondary Underground Conductors	\$14,778
Depreciation on General Plant Assigned to Secondary C&P	\$8,642
Secondary C&P Operations and Maintenance	\$110,316
Allocation of General Expenses	\$53,483
Admin and General Assigned to Primary C&P	\$79,618
PILs on Secondary C&P	\$7,663
Debt Return on Secondary C&P	\$32,984
Equity Return on Secondary C&P	\$53,291
<b>Total</b>	<b>\$441,542</b>
General Plant - Gross Assets	\$1,142,390
General Plant - Accumulated Depreciation	(\$255,570)
General Plant - Net Fixed Assets	\$886,820
General Plant - Depreciation	\$44,011
<b>Total Net Fixed Assets Excluding General Plant</b>	<b>\$4,472,718</b>
<b>Total Administration and General Expense</b>	<b>\$802,692</b>
<b>Total O&amp;M</b>	<b>\$1,112,336</b>
<b><u>Secondary Conductors and Poles Gross Plant</u></b>	
Acct 1830-5 Secondary Poles, Towers & Fixtures	\$226,064
Acct 1835-5 Secondary Overhead Conductors	\$783,061
Acct 1840-5 Secondary Underground Conduit	\$27,278
Acct 1845-5 Secondary Underground Conductors	\$597,364
<b>Subtotal</b>	<b>\$1,633,766</b>
<b><u>Secondary Conductors and Poles Accumulated Depreciation</u></b>	
Acct 1830-5 Secondary Poles, Towers & Fixtures	(\$16,901)
Acct 1835-5 Secondary Overhead Conductors	(\$428,200)

Acct 1840-5 Secondary Underground Conduit	(\$212,662)
Acct 1845-5 Secondary Underground Conductors	(\$100,059)
<b>Subtotal</b>	<b>(\$757,821)</b>
Secondary Conductor & Pools - Net Fixed Assets	\$875,945
General Plant Assigned to Secondary C&P - NFA	\$174,143
Secondary C&P Net Fixed Assets Including General Plant	\$1,050,088
Acct 1830-3 Bulk Poles, Towers & Fixtures	\$0
Acct 1835-3 Bulk Overhead Conductors	\$0
Acct 1840-3 Bulk Underground Conduit	\$0
Acct 1845-3 Bulk Underground Conductors	\$0
<b>Subtotal</b>	<b>\$0</b>
Acct 1830-4 Primary Poles, Towers & Fixtures	\$312,183
Acct 1835-4 Primary Overhead Conductors	\$1,081,369
Acct 1840-4 Primary Underground Conduit	\$9,584
Acct 1845-4 Primary Underground Conductors	\$209,885
<b>Subtotal</b>	<b>\$1,613,021</b>
<b><u>Operations and Maintenance</u></b>	
Acct 5020 Overhead Distribution Lines & Feeders - Labour	\$2,000
Acct 5025 Overhead Distribution Lines & Feeders - Other	\$0
Acct 5040 Underground Distribution Lines & Feeders - Labour	\$0
Acct 5045 Underground Distribution Lines & Feeders - Other	\$0
Acct 5090 Underground Distribution Lines & Feeders - Rental Paid	\$0
Acct 5095 Overhead Distribution Lines & Feeders - Rental Paid	\$23,189
Acct 5120 Maintenance of Poles, Towers & Fixtures	\$41,200
Acct 5125 Maintenance of Overhead Conductors & Devices	\$103,000
Acct 5135 Overhead Distribution Lines & Feeders - Right of Way	\$41,200
Acct 5145 Maintenance of Underground Conduit	\$2,100
Acct 5150 Maintenance of Underground Conductors & Devices	\$7,374
<b>Total</b>	<b>\$220,063</b>
<b><u>General Expenses</u></b>	
Acct 5005 - Operation Supervision and Engineering	\$108,000
Acct 5010 - Load Dispatching	\$0
Acct 5085 - Miscellaneous Distribution Expense	\$67,000
Acct 5105 - Maintenance Supervision and Engineering	\$0
<b>Total</b>	<b>\$175,000</b>
Secondary Conductors and Poles Gross Assets	\$1,633,766
Acct 1815 - 1855	\$5,342,031

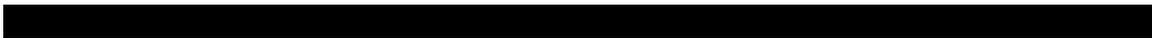
**Grouping of Operation and Maintenance**

		<b>Total</b>
1830	\$	41,200
1835	\$	103,000
1840	\$	2,100
1845	\$	7,374
1830 & 1835	\$	66,389
1840 & 1845	\$	-
<b>Total</b>	<b>\$</b>	<b>220,063</b>

## - IR Round 2

1	2	3	7	8
Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting
\$2,786	\$757	\$538	\$403	\$18
\$31,001	\$8,428	\$5,984	\$4,484	\$197
\$15,989	\$4,347	\$3,086	\$2,312	\$101
\$9,108	\$2,476	\$1,758	\$1,317	\$58
\$5,319	\$1,436	\$1,013	\$803	\$35
\$67,474	\$18,275	\$13,807	\$9,868	\$433
\$32,944	\$8,988	\$6,410	\$4,712	\$207
\$48,315	\$13,324	\$10,179	\$7,166	\$308
\$4,723	\$1,284	\$912	\$683	\$30
\$20,328	\$5,526	\$3,923	\$2,940	\$129
\$32,843	\$8,929	\$6,339	\$4,750	\$208
<b>\$270,828</b>	<b>\$73,769</b>	<b>\$53,949</b>	<b>\$39,438</b>	<b>\$1,725</b>
\$667,555	\$191,852	\$215,378	\$61,527	\$2,851
(\$149,342)	(\$42,920)	(\$48,183)	(\$13,764)	(\$638)
\$518,213	\$148,932	\$167,195	\$47,762	\$2,213
\$25,718	\$7,391	\$8,298	\$2,370	\$110
<b>\$2,610,409</b>	<b>\$755,645</b>	<b>\$853,207</b>	<b>\$230,600</b>	<b>\$10,665</b>
<b>\$514,111</b>	<b>\$121,003</b>	<b>\$122,513</b>	<b>\$39,779</b>	<b>\$2,315</b>
<b>\$717,970</b>	<b>\$165,958</b>	<b>\$166,170</b>	<b>\$54,782</b>	<b>\$3,250</b>
\$139,320	\$37,876	\$26,890	\$20,150	\$884
\$482,591	\$131,197	\$93,145	\$69,799	\$3,063
\$16,811	\$4,570	\$3,245	\$2,431	\$107
\$368,148	\$100,084	\$71,056	\$53,246	\$2,337
<b>\$1,006,871</b>	<b>\$273,727</b>	<b>\$194,336</b>	<b>\$145,627</b>	<b>\$6,391</b>
(\$10,416)	(\$2,832)	(\$2,010)	(\$1,506)	(\$66)
(\$263,894)	(\$71,742)	(\$50,934)	(\$38,168)	(\$1,675)

(\$131,061)	(\$35,630)	(\$25,296)	(\$18,956)	(\$832)
(\$61,665)	(\$16,764)	(\$11,902)	(\$8,919)	(\$391)
<b>(\$467,036)</b>	<b>(\$126,968)</b>	<b>(\$90,143)</b>	<b>(\$67,549)</b>	<b>(\$2,964)</b>
\$539,835	\$146,759	\$104,194	\$78,078	\$3,426
\$107,167	\$28,925	\$20,418	\$16,172	\$711
\$647,001	\$175,684	\$124,611	\$94,250	\$4,137
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
\$163,437	\$42,100	\$76,488	\$27,738	\$1,217
\$566,129	\$145,829	\$264,946	\$96,080	\$4,217
\$5,018	\$1,292	\$2,348	\$852	\$37
\$109,881	\$28,304	\$51,424	\$18,648	\$818
<b>\$844,464</b>	<b>\$217,526</b>	<b>\$395,205</b>	<b>\$143,318</b>	<b>\$6,290</b>
\$1,125	\$297	\$384	\$178	\$8
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$13,044	\$3,446	\$4,454	\$2,063	\$91
\$23,175	\$6,122	\$7,913	\$3,666	\$161
\$57,936	\$15,304	\$19,783	\$9,164	\$402
\$23,175	\$6,122	\$7,913	\$3,666	\$161
\$1,244	\$334	\$319	\$187	\$8
\$4,367	\$1,173	\$1,119	\$657	\$29
<b>\$124,064</b>	<b>\$32,797</b>	<b>\$41,884</b>	<b>\$19,580</b>	<b>\$859</b>
\$60,782	\$16,689	\$21,403	\$8,329	\$378
\$0	\$0	\$0	\$0	\$0
\$37,708	\$10,354	\$13,278	\$5,167	\$234
\$0	\$0	\$0	\$0	\$0
<b>\$98,490</b>	<b>\$27,043</b>	<b>\$34,681</b>	<b>\$13,497</b>	<b>\$612</b>
\$1,006,871	\$273,727	\$194,336	\$145,627	\$6,391
\$3,010,143	\$823,626	\$1,051,418	\$417,110	\$18,911



	<b>Residential</b>	<b>General Service Less than 50 kW</b>	<b>General Service 50 to 4,999 kW</b>	<b>Street Lighting</b>	<b>Sentinel Lighting</b>
\$	23,175	\$ 6,122	\$ 7,913	\$ 3,666	\$ 161
\$	57,936	\$ 15,304	\$ 19,783	\$ 9,164	\$ 402
\$	1,244	\$ 334	\$ 319	\$ 187	\$ 8
\$	4,367	\$ 1,173	\$ 1,119	\$ 657	\$ 29
\$	37,343	\$ 9,864	\$ 12,751	\$ 5,907	\$ 259
\$	-	\$ -	\$ -	\$ -	\$ -
<b>\$</b>	<b>124,064</b>	<b>\$ 32,797</b>	<b>\$ 41,884</b>	<b>\$ 19,580</b>	<b>\$ 859</b>

---

9

**Unmetered  
Scattered Load**

\$19  
\$210  
\$108  
\$62  
\$37  
\$459  
\$222  
\$324  
\$32  
\$138  
\$222

**\$1,833**

\$3,228  
(\$722)  
\$2,505

\$124

**\$12,192**

**\$2,971**

**\$4,206**

\$943  
\$3,266  
\$114  
\$2,491

**\$6,814**

(\$70)  
(\$1,786)

(\$887)

(\$417)

**(\$3,161)**

\$3,653

\$751

\$4,404

\$0

\$0

\$0

\$0

**\$0**

\$1,203

\$4,169

\$37

\$809

**\$6,218**

\$8

\$0

\$0

\$0

\$0

\$92

\$164

\$411

\$164

\$9

\$30

**\$878**

\$418

\$0

\$259

\$0

**\$677**

\$6,814

\$20,823



**Unmetered  
Scattered Load**

\$	164
\$	411
\$	9
\$	30
\$	265
\$	-
<b>\$</b>	<b>878</b>



## 2012 COS COST ALLOCATION

**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

**Sheet 03.5 USL Metering Credit Worksheet - II**

### ALLOCATION BY RATE CLASSIFICATION

<u>Description</u>	General Service Less than 50 kW
Depreciation on Acct 1860 Metering	\$6,951
Depreciation on General Plant Assigned to Metering	\$2,577
Acct 5065 - Meter expense	\$20,109
Acct 5070 & 5075 - Customer Premises	\$0
Acct 5175 - Meter Maintenance	\$4,126
Acct 5310 - Meter Reading	\$2,723
Admin and General Assigned to Metering	\$19,656
PILs on Metering	\$2,305
Debt Return on Metering	\$9,922
Equity Return on Metering	\$16,030
<b>Total</b>	<b>\$84,399</b>
Number of Customers	770
Metering Unit Cost (\$/Customer/Month)	<b>\$9.13</b>
General Plant - Gross Assets	\$191,852
General Plant - Accumulated Depreciation	(\$42,920)
General Plant - Net Fixed Assets	\$148,932
General Plant - Depreciation	\$7,391
<b>Total Net Fixed Assets Excluding General Plant</b>	<b>\$755,645</b>
<b>Total Administration and General Expense</b>	<b>\$121,003</b>
<b>Total O&amp;M</b>	<b>\$165,958</b>
Metering Rate Base	
Acct 1860 - Metering - Gross Assets	\$307,443
Metering - Accumulated Depreciation	(\$43,959)
Metering - Net Fixed Assets	\$263,484
General Plant Assigned to Metering - NFA	\$51,931
<b>Metering Net Fixed Assets Including General Plant</b>	<b>\$315,415</b>



## Round 2

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## 2012 COS COST ALLOCATION

**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

## Sheet O3.6 MicroFIT Charge Worksheet - IR Round

**Instructions:**

More Instructions provided on the first tab in this workbook.

### ALLOCATION BY RATE CLASSIFICATION

<b>Description</b>	<b>Residential</b>	<b>Monthly Unit Cost</b>
Customer Premises - Operations Labour (5070)	\$ -	\$ -
Customer Premises - Materials and Expenses (5075)	\$ -	\$ -
Meter Expenses (5065)	\$ 63,413.19	\$ 1.05
Maintenance of Meters (5175)	\$ 13,011.41	\$ 0.22
Meter Reading Expenses (5310)	\$ 17,737.63	\$ 0.29
Customer Billing (5315)	\$ 224,469.12	\$ 3.73
Amortization Expense - General Plant Assigned to Meters	\$ 8,185.99	\$ 0.14
Admin and General Expenses allocated to O&M expenses for meters	\$ 159,311.46	\$ 2.65
Allocated PILS (general plant assigned to meters)	\$ 1,203.98	\$ 0.02
Interest Expense	\$ 5,182.36	\$ 0.09
Income Expenses	\$ 8,372.84	\$ 0.14
<b>Total Cost</b>	<b>\$ 500,887.98</b>	<b>\$ 8.32</b>
<b>Number of Residential Customers</b>	<b>5016.312565</b>	

**d 2**



## 2012 COS COST ALLOCATION

**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

## **Sheet 04 Summary of Allocators by Class & A**

### ALLOCATION BY RATE CLASSIFICATION

USoA Account #	Accounts	O1 Grouping
1565	Conservation and Demand Management Expenditures and Recoveries	dp
1608	Franchises and Consents	gp
1805	Land	dp
1805-1	Land Station >50 kV	dp
1805-2	Land Station <50 kV	dp
1806	Land Rights	dp
1806-1	Land Rights Station >50 kV	dp
1806-2	Land Rights Station <50 kV	dp
1808	Buildings and Fixtures	dp
1808-1	Buildings and Fixtures > 50 kV	dp
1808-2	Buildings and Fixtures < 50 KV	dp
1810	Leasehold Improvements	dp
1810-1	Leasehold Improvements >50 kV	dp
1810-2	Leasehold Improvements <50 kV	dp
1815	Transformer Station Equipment - Normally Primary above 50 kV	dp
1820	Distribution Station Equipment - Normally Primary below 50 kV	dp
1820-1	Distribution Station Equipment - Normally Primary below 50 kV (Bulk)	dp
1820-2	Distribution Station Equipment - Normally Primary below 50 kV (Primary)	dp
1820-3	Distribution Station Equipment - Normally Primary below 50 kV (Wholesale Meters)	dp
1825	Storage Battery Equipment	dp
1825-1	Storage Battery Equipment > 50 kV	dp
1825-2	Storage Battery Equipment <50 kV	dp
1830	Poles, Towers and Fixtures	dp
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery	dp
1830-4	Poles, Towers and Fixtures - Primary	dp
1830-5	Poles, Towers and Fixtures - Secondary	dp
1835	Overhead Conductors and Devices	dp
1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery	dp
1835-4	Overhead Conductors and Devices - Primary	dp
1835-5	Overhead Conductors and Devices - Secondary	dp
1840	Underground Conduit	dp

1840-3	Underground Conduit - Bulk Delivery	dp
1840-4	Underground Conduit - Primary	dp
1840-5	Underground Conduit - Secondary	dp
1845	Underground Conductors and Devices	dp
1845-3	Underground Conductors and Devices - Bulk Delivery	dp
1845-4	Underground Conductors and Devices - Primary	dp
1845-5	Underground Conductors and Devices - Secondary	dp
1850	Line Transformers	dp
1855	Services	dp
1860	Meters	dp
1880	IFRS Placeholder Asset Account	dp
1905	Land	gp
1906	Land Rights	gp
1908	Buildings and Fixtures	gp
1910	Leasehold Improvements	gp
1915	Office Furniture and Equipment	gp
1920	Computer Equipment - Hardware	gp
1925	Computer Software	gp
1930	Transportation Equipment	gp
1935	Stores Equipment	gp
1940	Tools, Shop and Garage Equipment	gp
1945	Measurement and Testing Equipment	gp
1950	Power Operated Equipment	gp
1955	Communication Equipment	gp
1960	Miscellaneous Equipment	gp
1970	Load Management Controls - Customer Premises	gp
1975	Load Management Controls - Utility Premises	gp
1980	System Supervisory Equipment	gp
1990	Other Tangible Property	gp
1995	Contributions and Grants - Credit	co
2005	Property Under Capital Leases	gp
2010	Electric Plant Purchased or Sold	gp
2105	Accum. Amortization of Electric Utility Plant - Property, Plant, & Equipment	accum dep
2120	Accumulated Amortization of Electric Utility Plant - Intangibles	accum dep
3046	Balance Transferred From Income	NI
4080	Distribution Services Revenue	CREV
4080-1	Revenue from Rates	CREV
4080-2	SSS Admin Charge	mi
4082	Retail Services Revenues	mi
4084	Service Transaction Requests (STR) Revenues	mi
4090	Electric Services Incidental to Energy Sales	mi
4205	Interdepartmental Rents	mi
4210	Rent from Electric Property	mi
4215	Other Utility Operating Income	mi
4220	Other Electric Revenues	mi
4225	Late Payment Charges	mi
4235	Miscellaneous Service Revenues	mi

4235-1	Account Set Up Charges	mi
4235-90	Miscellaneous Service Revenues - Residual	mi
4240	Provision for Rate Refunds	mi
4245	Government Assistance Directly Credited to Income	mi
4305	Regulatory Debits	mi
4310	Regulatory Credits	mi
4315	Revenues from Electric Plant Leased to Others	mi
4320	Expenses of Electric Plant Leased to Others	mi
4325	Revenues from Merchandise, Jobbing, Etc.	mi
4330	Costs and Expenses of Merchandising, Jobbing, Etc.	mi
4335	Profits and Losses from Financial Instrument Hedges	mi
4340	Profits and Losses from Financial Instrument Investments	mi
4345	Gains from Disposition of Future Use Utility Plant	mi
4350	Losses from Disposition of Future Use Utility Plant	mi
4355	Gain on Disposition of Utility and Other Property	mi
4360	Loss on Disposition of Utility and Other Property	mi
4365	Gains from Disposition of Allowances for Emission	mi
4370	Losses from Disposition of Allowances for Emission	mi
4375	Revenues from Non-Utility Operations	mi
4380	Expenses of Non-Utility Operations	mi
4390	Miscellaneous Non-Operating Income	mi
4395	Rate-Payer Benefit Including Interest	mi
4398	Foreign Exchange Gains and Losses, Including Amortization	mi
4405	Interest and Dividend Income	mi
4415	Equity in Earnings of Subsidiary Companies	mi
4705	Power Purchased	cop
4708	Charges-WMS	cop
4710	Cost of Power Adjustments	cop
4712	Charges-One-Time	cop
4714	Charges-NW	cop
4715	System Control and Load Dispatching	cop
4716	Charges-CN	cop
4730	Rural Rate Assistance Expense	cop
4750	Charges-LV	cop
5005	Operation Supervision and Engineering	di
5010	Load Dispatching	di
5012	Station Buildings and Fixtures Expense	di
5014	Transformer Station Equipment - Operation Labour	di
5015	Transformer Station Equipment - Operation Supplies and Expenses	di
5016	Distribution Station Equipment - Operation Labour	di
5017	Distribution Station Equipment - Operation Supplies and Expenses	di
5020	Overhead Distribution Lines and Feeders - Operation Labour	di

5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	di
5030	Overhead Subtransmission Feeders - Operation	di
5035	Overhead Distribution Transformers- Operation	di
5040	Underground Distribution Lines and Feeders - Operation Labour	di
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	di
5050	Underground Subtransmission Feeders - Operation	di
5055	Underground Distribution Transformers - Operation	di
5065	Meter Expense	cu
5070	Customer Premises - Operation Labour	cu
5075	Customer Premises - Materials and Expenses	cu
5085	Miscellaneous Distribution Expense	di
5090	Underground Distribution Lines and Feeders - Rental Paid	di
5095	Overhead Distribution Lines and Feeders - Rental Paid	di
5096	Other Rent	di
5105	Maintenance Supervision and Engineering	di
5110	Maintenance of Buildings and Fixtures - Distribution Stations	di
5112	Maintenance of Transformer Station Equipment	di
5114	Maintenance of Distribution Station Equipment	di
5120	Maintenance of Poles, Towers and Fixtures	di
5125	Maintenance of Overhead Conductors and Devices	di
5130	Maintenance of Overhead Services	di
5135	Overhead Distribution Lines and Feeders - Right of Way	di
5145	Maintenance of Underground Conduit	di
5150	Maintenance of Underground Conductors and Devices	di
5155	Maintenance of Underground Services	di
5160	Maintenance of Line Transformers	di
5175	Maintenance of Meters	cu
5305	Supervision	cu
5310	Meter Reading Expense	cu
5315	Customer Billing	cu
5320	Collecting	cu
5325	Collecting- Cash Over and Short	cu
5330	Collection Charges	cu
5335	Bad Debt Expense	cu
5340	Miscellaneous Customer Accounts Expenses	cu
5405	Supervision	ad
5410	Community Relations - Sundry	ad
5415	Energy Conservation	ad
5420	Community Safety Program	ad
5425	Miscellaneous Customer Service and Informational Expenses	ad
5505	Supervision	ad

5510	Demonstrating and Selling Expense	ad
5515	Advertising Expense	ad
5520	Miscellaneous Sales Expense	ad
5605	Executive Salaries and Expenses	ad
5610	Management Salaries and Expenses	ad
5615	General Administrative Salaries and Expenses	ad
5620	Office Supplies and Expenses	ad
5625	Administrative Expense Transferred Credit	ad
5630	Outside Services Employed	ad
5635	Property Insurance	ad
5640	Injuries and Damages	ad
5645	Employee Pensions and Benefits	ad
5650	Franchise Requirements	ad
5655	Regulatory Expenses	ad
5660	General Advertising Expenses	ad
5665	Miscellaneous General Expenses	ad
5670	Rent	ad
5675	Maintenance of General Plant	ad
5680	Electrical Safety Authority Fees	ad
5681	IFRS Placeholder Expense Account	ad
5682	IFRS Placeholder Expense Account	ad
5683	IFRS Placeholder Expense Account	ad
5684	IFRS Placeholder Expense Account	ad
5685	Independent Market Operator Fees and Penalties	cop
5705	Amortization Expense - Property, Plant, and Equipment	dep
5710	Amortization of Limited Term Electric Plant	dep
5715	Amortization of Intangibles and Other Electric Plant	dep
5720	Amortization of Electric Plant Acquisition Adjustments	dep
5730	Amortization of Unrecovered Plant and Regulatory Study Costs	dep
5735	Amortization of Deferred Development Costs	dep
5740	Amortization of Deferred Charges	dep
6005	Interest on Long Term Debt	INT
6105	Taxes Other Than Income Taxes	ad
6110	Income Taxes	Input
6205	Donations	ad
6210	Life Insurance	ad
6215	Penalties	ad
6225	Other Deductions	ad

**Grouping by  
Allocator**

---

**1808**

**1815**

**1820**

**1830**

**1835**

**1840**

**1845**

**1850**

**1855**

**1860**

**1815-1855**

**1830 & 1835**

**1840 & 1845**

**BCP**

**BDHA**

**Break Out**

**CCA**

**CDMPP**

**CEN**

**CEN EWMP**

**CREV**

**CWCS**

**CWMC**

**CWMR**

**CWNB**

**DCP**

**LPHA**

**LTNCP**

**NFA**

**NFA ECC**

**O&M**

**PNCP**

**SNCP**

**TCP**

**Total**

















































## ccounts - IR Round 2

	1	2	3	7
<b>Total</b>	<b>Residential</b>	<b>General Service Less than 50 kW</b>	<b>General Service 50 to 4,999 kW</b>	<b>Street Lighting</b>
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$84,205	\$39,565	\$12,243	\$30,904	\$1,187
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$86,132	\$40,470	\$12,523	\$31,611	\$1,215
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$593,907	\$260,050	\$93,859	\$239,145	\$0
\$148,477	\$63,324	\$28,132	\$54,209	\$2,048
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$312,183	\$163,437	\$42,100	\$76,488	\$27,738
\$226,064	\$139,320	\$37,876	\$26,890	\$20,150
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$1,081,369	\$566,129	\$145,829	\$264,946	\$96,080
\$783,061	\$482,591	\$131,197	\$93,145	\$69,799
\$0	\$0	\$0	\$0	\$0





\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$10,000	\$5,916	\$1,593	\$1,521	\$890
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$97,473	\$63,413	\$20,109	\$13,951	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$67,000	\$37,708	\$10,354	\$13,278	\$5,167
\$0	\$0	\$0	\$0	\$0
\$23,189	\$13,044	\$3,446	\$4,454	\$2,063
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$71,000	\$31,088	\$11,221	\$28,589	\$0
\$41,200	\$23,175	\$6,122	\$7,913	\$3,666
\$103,000	\$57,936	\$15,304	\$19,783	\$9,164
\$51,500	\$36,671	\$7,295	\$1,248	\$5,593
\$41,200	\$23,175	\$6,122	\$7,913	\$3,666
\$2,100	\$1,244	\$334	\$319	\$187
\$7,374	\$4,367	\$1,173	\$1,119	\$657
\$22,500	\$16,021	\$3,187	\$545	\$2,444
\$51,500	\$30,465	\$8,205	\$7,835	\$4,583
\$20,000	\$13,011	\$4,126	\$2,863	\$0
\$0	\$0	\$0	\$0	\$0
\$32,800	\$17,738	\$2,723	\$11,554	\$786
\$280,200	\$224,469	\$35,921	\$10,776	\$6,531
\$37,100	\$29,721	\$4,756	\$1,427	\$865
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$41,200	\$25,995	\$6,679	\$8,527	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$3,500	\$2,259	\$522	\$523	\$172
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0

\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$371,800	\$239,982	\$55,472	\$55,543	\$18,311
\$10,300	\$6,648	\$1,537	\$1,539	\$507
\$27,754	\$17,914	\$4,141	\$4,146	\$1,367
\$61,800	\$39,889	\$9,220	\$9,232	\$3,044
\$41,807	\$24,430	\$7,021	\$7,882	\$2,252
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$122,907	\$79,331	\$18,337	\$18,361	\$6,053
\$0	\$0	\$0	\$0	\$0
\$99,150	\$63,997	\$14,793	\$14,812	\$4,883
\$8,200	\$5,293	\$1,223	\$1,225	\$404
\$28,800	\$18,589	\$4,297	\$4,302	\$1,418
\$3,374	\$2,178	\$503	\$504	\$166
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$340,980	\$196,256	\$54,878	\$63,913	\$23,725
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$168,423	\$98,297	\$28,454	\$32,128	\$8,683
\$23,300	\$13,599	\$3,936	\$4,445	\$1,201
\$39,129	\$22,837	\$6,611	\$7,464	\$2,017
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0

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**\$15,884,737**

**\$7,725,459**

**\$2,821,209**

**\$4,822,814**

**\$444,088**

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**\$15,884,737**

	Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting
\$	1,000	\$ 470	\$ 145	\$ 367	\$ 14
\$	-	\$ -	\$ -	\$ -	\$ -
\$	72,000	\$ 31,526	\$ 11,379	\$ 28,992	\$ -
\$	41,200	\$ 23,175	\$ 6,122	\$ 7,913	\$ 3,666
\$	103,000	\$ 57,936	\$ 15,304	\$ 19,783	\$ 9,164
\$	2,100	\$ 1,244	\$ 334	\$ 319	\$ 187
\$	7,374	\$ 4,367	\$ 1,173	\$ 1,119	\$ 657
\$	61,500	\$ 36,381	\$ 9,798	\$ 9,357	\$ 5,473
\$	74,000	\$ 52,692	\$ 10,482	\$ 1,793	\$ 8,037
\$	20,000	\$ 13,011	\$ 4,126	\$ 2,863	\$ -
\$	175,000	\$ 98,490	\$ 27,043	\$ 34,681	\$ 13,497
\$	66,389	\$ 37,343	\$ 9,864	\$ 12,751	\$ 5,907
\$	-	\$ -	\$ -	\$ -	\$ -
\$	-	\$ -	\$ -	\$ -	\$ -
\$	41,200	\$ 25,995	\$ 6,679	\$ 8,527	\$ -
-\$	2,444,485	-\$ 1,402,363	-\$ 388,232	-\$ 458,289	-\$ 178,951
\$	-	\$ -	\$ -	\$ -	\$ -
\$	-	\$ -	\$ -	\$ -	\$ -
\$	1,385,089	\$ 590,731	\$ 262,430	\$ 505,694	\$ 19,102
\$	9,262,483	\$ 3,950,386	\$ 1,754,946	\$ 3,381,718	\$ 127,743
-\$	1,979,328	-\$ 1,154,487	-\$ 373,624	-\$ 341,936	-\$ 85,326
\$	291,637	\$ 207,663	\$ 41,309	\$ 7,066	\$ 31,672
\$	1,587,718	\$ 1,032,922	\$ 327,552	\$ 227,243	\$ -
\$	32,800	\$ 17,738	\$ 2,723	\$ 11,554	\$ 786
\$	308,614	\$ 248,602	\$ 39,375	\$ 10,893	\$ 6,967
\$	170,338	\$ 80,035	\$ 24,766	\$ 62,515	\$ 2,402
-\$	32,400	-\$ 18,069	-\$ 7,477	-\$ 6,854	\$ -
\$	1,061,223	\$ 627,771	\$ 169,073	\$ 161,457	\$ 94,445
-\$	97,289	-\$ 56,567	-\$ 15,311	-\$ 18,136	-\$ 6,637
\$	1,184,197	\$ 691,985	\$ 198,873	\$ 223,260	\$ 63,778
\$	737,585	\$ 476,082	\$ 110,046	\$ 110,187	\$ 36,326
\$	2,206,929	\$ 1,104,514	\$ 311,385	\$ 634,350	\$ 143,318
\$	1,633,766	\$ 1,006,871	\$ 273,727	\$ 194,336	\$ 145,627
\$	-	\$ -	\$ -	\$ -	\$ -

\$	15,973,637	\$	7,786,441	\$	2,834,011	\$	4,833,521	\$	447,852
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8	9
<b>Sentinel Lighting</b>	<b>Unmetered Scattered Load</b>

\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$89	\$217
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$91	\$222
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$853
\$154	\$611
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$1,217	\$1,203
\$884	\$943
\$0	\$0
\$0	\$0
\$4,217	\$4,169
\$3,063	\$3,266
\$0	\$0

\$0	\$0
\$37	\$37
\$107	\$114
\$0	\$0
\$0	\$0
\$818	\$809
\$2,337	\$2,491
\$4,145	\$4,332
\$1,932	\$1,995
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$22	\$25
\$0	\$0
\$433	\$491
\$474	\$536
\$1,565	\$1,772
\$0	\$0
\$357	\$404
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
(\$1,567)	(\$1,616)
\$0	\$0
\$0	\$0
(\$7,497)	(\$8,175)
\$0	\$0
(\$649)	(\$742)
\$0	\$0
(\$3,846)	(\$19,737)
(\$210)	(\$161)
(\$25)	(\$32)
(\$0)	(\$1)
\$0	\$0
\$0	\$0
(\$172)	(\$176)
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0

(\$79)	(\$135)
(\$189)	(\$243)
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
(\$35)	(\$45)
\$0	\$0
\$8,670	\$34,427
\$608	\$2,414
\$0	\$0
\$0	\$0
\$706	\$2,805
\$0	\$0
\$575	\$2,281
\$129	\$511
\$187	\$744
\$378	\$418
\$0	\$0
\$1	\$3
\$0	\$0
\$0	\$0
\$0	\$1
\$0	\$0
\$8	\$8

\$0	\$0
\$0	\$0
\$39	\$41
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$234	\$259
\$0	\$0
\$91	\$92
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$102
\$161	\$164
\$402	\$411
\$341	\$352
\$161	\$164
\$8	\$9
\$29	\$30
\$149	\$154
\$201	\$210
\$0	\$0
\$0	\$0
\$0	\$0
\$925	\$1,578
\$123	\$209
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$10	\$13
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0

\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$1,086	\$1,406
\$30	\$39
\$81	\$105
\$181	\$234
\$104	\$118
\$0	\$0
\$0	\$0
\$0	\$0
\$359	\$465
\$0	\$0
\$290	\$375
\$24	\$31
\$84	\$109
\$10	\$13
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$1,059	\$1,148
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0
\$402	\$459
\$56	\$64
\$93	\$107
\$0	\$0
\$0	\$0
\$0	\$0
\$0	\$0

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**\$25,667**

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**\$45,500**

Sentinel Lighting	Unmetered Scattered Load
\$ 1	\$ 3
\$ -	\$ -
\$ -	\$ 103
\$ 161	\$ 164
\$ 402	\$ 411
\$ 8	\$ 9
\$ 29	\$ 30
\$ 240	\$ 251
\$ 490	\$ 506
\$ -	\$ -
\$ 612	\$ 677
\$ 259	\$ 265
\$ -	\$ -
\$ -	\$ -
\$ -	\$ -
-\$ 8,006	-\$ 8,644
\$ -	\$ -
\$ -	\$ -
\$ 1,435	\$ 5,697
\$ 9,594	\$ 38,096
-\$ 4,056	-\$ 19,898
\$ 1,932	\$ 1,995
\$ -	\$ -
\$ -	\$ -
\$ 1,022	\$ 1,755
\$ 180	\$ 439
\$ -	\$ -
\$ 4,145	\$ 4,332
-\$ 305	-\$ 333
\$ 2,955	\$ 3,346
\$ 2,155	\$ 2,789
\$ 6,290	\$ 7,072
\$ 6,391	\$ 6,814
\$ -	\$ -

<b>\$</b>	<b>25,934</b>	<b>\$</b>	<b>45,878</b>
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## 2012 COS COST ALLOCATION

### Rideau St. Lawrence Distribution Inc.

**EB-2011-0274**

**December-29-11**

## Sheet 05 Details of Allocators by Class and Acco

### Uniform System of Accounts - Detail Accounts

USoA Account #	Accounts	Reclassified Balance	Financial Statement - Asset Break Out includes Acc Dep and Contributed Capital
1565	Conservation and Demand Management Expenditures and Recoveries	\$0	\$0
1608	Franchises and Consents	\$0	
1805	Land	\$84,205	(\$84,205)
1805-1	Land Station >50 kV	\$0	\$0
1805-2	Land Station <50 kV	\$0	\$84,205
1806	Land Rights	\$0	\$0
1806-1	Land Rights Station >50 kV	\$0	\$0
1806-2	Land Rights Station <50 kV	\$0	\$0
1808	Buildings and Fixtures	\$86,132	(\$86,132)
1808-1	Buildings and Fixtures > 50 kV	\$0	\$0
1808-2	Buildings and Fixtures < 50 kV	\$0	\$86,132
1810	Leasehold Improvements	\$0	\$0
1810-1	Leasehold Improvements >50 kV	\$0	\$0
1810-2	Leasehold Improvements <50 kV	\$0	\$0
1815	Transformer Station Equipment - Normally Primary above 50 kV	\$0	\$0
1820	Distribution Station Equipment - Normally Primary below 50 kV	\$742,384	(\$742,384)
1820-1	Distribution Station Equipment - Normally Primary below 50 kV (Bulk)	\$0	\$0
1820-2	Distribution Station Equipment - Normally Primary below 50 kV (Primary)	\$0	\$593,907
1820-3	Distribution Station Equipment - Normally Primary below 50 kV (Wholesale Meters)	\$0	\$148,477
1825	Storage Battery Equipment	\$0	\$0
1825-1	Storage Battery Equipment > 50 kV	\$0	\$0
1825-2	Storage Battery Equipment <50 kV	\$0	\$0
1830	Poles, Towers and Fixtures	\$538,247	(\$538,247)
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery	\$0	\$0

1830-4	Poles, Towers and Fixtures - Primary	\$0	\$312,183
1830-5	Poles, Towers and Fixtures - Secondary	\$0	\$226,064
1835	Overhead Conductors and Devices	\$1,864,430	(\$1,864,430)
	Overhead Conductors and Devices -		
1835-3	Subtransmission Bulk Delivery	\$0	\$0
1835-4	Overhead Conductors and Devices - Primary	\$0	\$1,081,369
1835-5	Overhead Conductors and Devices - Secondary	\$0	\$783,061
1840	Underground Conduit	\$36,862	(\$36,862)
1840-3	Underground Conduit - Bulk Delivery	\$0	\$0
1840-4	Underground Conduit - Primary	\$0	\$9,584
1840-5	Underground Conduit - Secondary	\$0	\$27,278
1845	Underground Conductors and Devices	\$807,248	(\$807,248)
	Underground Conductors and Devices - Bulk		
1845-3	Delivery	\$0	\$0
	Underground Conductors and Devices -		
1845-4	Primary	\$0	\$209,885
	Underground Conductors and Devices -		
1845-5	Secondary	\$0	\$597,364
1850	Line Transformers	\$1,061,223	\$0
1855	Services	\$291,637	\$0
1860	Meters	\$1,490,244	\$0
1880	IFRS Placeholder Asset Account	\$0	\$0
1905	Land	\$0	\$0
1906	Land Rights	\$0	\$0
1908	Buildings and Fixtures	\$0	\$0
1910	Leasehold Improvements	\$8,796	\$0
1915	Office Furniture and Equipment	\$0	\$0
1920	Computer Equipment - Hardware	\$173,688	\$0
1925	Computer Software	\$189,827	\$0
1930	Transportation Equipment	\$627,095	\$0
1935	Stores Equipment	\$0	\$0
1940	Tools, Shop and Garage Equipment	\$142,984	\$0
1945	Measurement and Testing Equipment	\$0	\$0
1950	Power Operated Equipment	\$0	\$0
1955	Communication Equipment	\$0	\$0
1960	Miscellaneous Equipment	\$0	\$0
1970	Load Management Controls - Customer	\$0	\$0
	Premises		
1975		\$0	\$0
	Load Management Controls - Utility Premises		
1980	System Supervisory Equipment	\$0	\$0
1990	Other Tangible Property	\$0	\$0
1995	Contributions and Grants - Credit	(\$360,988)	
2005	Property Under Capital Leases	\$0	\$0
2010	Electric Plant Purchased or Sold	\$0	\$0
2105	Accum. Amortization of Electric Utility Plant -		
	Property, Plant, & Equipment	(\$2,424,477)	
2120	Accumulated Amortization of Electric Utility		
	Plant - Intangibles	\$0	
3046	Balance Transferred From Income	(\$272,112)	
4080	Distribution Services Revenue	\$0	

4080-1	Revenue from Rates	(\$1,957,800)
4080-2	SSS Admin Charge	(\$21,528)
4082	Retail Services Revenues	(\$8,550)
4084		
	Service Transaction Requests (STR) Revenues	(\$136)
4090	Electric Services Incidental to Energy Sales	\$0
4205	Interdepartmental Rents	\$0
4210	Rent from Electric Property	(\$44,029)
4215	Other Utility Operating Income	\$0
4220	Other Electric Revenues	\$0
4225	Late Payment Charges	(\$32,400)
4235	Miscellaneous Service Revenues	\$0
4235-1	Account Set Up Charges	(\$24,000)
4235-90	Miscellaneous Service Revenues - Residual	(\$64,900)
4240	Provision for Rate Refunds	\$0
4245	Government Assistance Directly Credited to Income	\$0
4305	Regulatory Debits	\$0
4310	Regulatory Credits	\$0
4315		\$0
	Revenues from Electric Plant Leased to Others	\$0
4320	Expenses of Electric Plant Leased to Others	\$0
4325	Revenues from Merchandise, Jobbing, Etc.	\$0
4330	Costs and Expenses of Merchandising, Jobbing, Etc.	\$0
4335	Profits and Losses from Financial Instrument Hedges	\$0
4340	Profits and Losses from Financial Instrument Investments	\$0
4345	Gains from Disposition of Future Use Utility Plant	\$0
4350	Losses from Disposition of Future Use Utility Plant	\$0
4355		\$0
	Gain on Disposition of Utility and Other Property	\$0
4360		\$0
	Loss on Disposition of Utility and Other Property	\$0
4365	Gains from Disposition of Allowances for Emission	\$0
4370	Losses from Disposition of Allowances for Emission	\$0
4375	Revenues from Non-Utility Operations	\$0
4380	Expenses of Non-Utility Operations	\$0
4390	Miscellaneous Non-Operating Income	\$0
4395	Rate-Payer Benefit Including Interest	\$0
4398	Foreign Exchange Gains and Losses, Including Amortization	\$0
4405	Interest and Dividend Income	(\$12,000)
4415	Equity in Earnings of Subsidiary Companies	\$0
4705	Power Purchased	\$8,370,389
4708	Charges-WMS	\$586,928
4710	Cost of Power Adjustments	\$0

4712	Charges-One-Time	\$0
4714	Charges-NW	\$681,913
4715	System Control and Load Dispatching	\$0
4716	Charges-CN	\$554,698
4730	Rural Rate Assistance Expense	\$124,158
4750	Charges-LV	\$181,008
5005	Operation Supervision and Engineering	\$108,000
5010	Load Dispatching	\$0
5012	Station Buildings and Fixtures Expense	\$1,000
5014	Transformer Station Equipment - Operation Labour	\$0
5015	Transformer Station Equipment - Operation Supplies and Expenses	\$0
5016	Distribution Station Equipment - Operation Labour	\$1,000
5017	Distribution Station Equipment - Operation Supplies and Expenses	\$0
5020	Overhead Distribution Lines and Feeders - Operation Labour	\$2,000
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	\$0
5030	Overhead Subtransmission Feeders - Operation	\$0
5035	Overhead Distribution Transformers- Operation	\$10,000
5040	Underground Distribution Lines and Feeders - Operation Labour	\$0
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	\$0
5050	Underground Subtransmission Feeders - Operation	\$0
5055	Underground Distribution Transformers - Operation	\$0
5065	Meter Expense	\$97,473
5070	Customer Premises - Operation Labour	\$0
5075	Customer Premises - Materials and Expenses	\$0
5085	Miscellaneous Distribution Expense	\$67,000
5090	Underground Distribution Lines and Feeders - Rental Paid	\$0
5095	Overhead Distribution Lines and Feeders - Rental Paid	\$23,189
5096	Other Rent	\$0
5105	Maintenance Supervision and Engineering	\$0
5110	Maintenance of Buildings and Fixtures - Distribution Stations	\$0
5112	Maintenance of Transformer Station Equipment	\$0
5114	Maintenance of Distribution Station Equipment	\$71,000
5120	Maintenance of Poles, Towers and Fixtures	\$41,200

5125	Maintenance of Overhead Conductors and Devices	\$103,000
5130	Maintenance of Overhead Services	\$51,500
5135	Overhead Distribution Lines and Feeders - Right of Way	\$41,200
5145	Maintenance of Underground Conduit	\$2,100
5150	Maintenance of Underground Conductors and Devices	\$7,374
5155	Maintenance of Underground Services	\$22,500
5160	Maintenance of Line Transformers	\$51,500
5175	Maintenance of Meters	\$20,000
5305	Supervision	\$0
5310	Meter Reading Expense	\$32,800
5315	Customer Billing	\$280,200
5320	Collecting	\$37,100
5325	Collecting- Cash Over and Short	\$0
5330	Collection Charges	\$0
5335	Bad Debt Expense	\$41,200
5340	Miscellaneous Customer Accounts Expenses	\$0
5405	Supervision	\$0
5410	Community Relations - Sundry	\$3,500
5415	Energy Conservation	\$0
5420	Community Safety Program	\$0
5425	Miscellaneous Customer Service and Informational Expenses	\$0
5505	Supervision	\$0
5510	Demonstrating and Selling Expense	\$0
5515	Advertising Expense	\$0
5520	Miscellaneous Sales Expense	\$0
5605	Executive Salaries and Expenses	\$0
5610	Management Salaries and Expenses	\$0
5615	General Administrative Salaries and Expenses	\$371,800
5620	Office Supplies and Expenses	\$10,300
5625	Administrative Expense Transferred Credit	\$27,754
5630	Outside Services Employed	\$61,800
5635	Property Insurance	\$41,807
5640	Injuries and Damages	\$0
5645	Employee Pensions and Benefits	\$0
5650	Franchise Requirements	\$0
5655	Regulatory Expenses	\$122,907
5660	General Advertising Expenses	\$0
5665	Miscellaneous General Expenses	\$99,150
5670	Rent	\$8,200
5675	Maintenance of General Plant	\$28,800
5680	Electrical Safety Authority Fees	\$3,374
5681	IFRS Placeholder Expense Account	\$0
5682	IFRS Placeholder Expense Account	\$0
5683	IFRS Placeholder Expense Account	\$0
5684	IFRS Placeholder Expense Account	\$0

5685	Independent Market Operator Fees and Penalties	\$0	
5705	Amortization Expense - Property, Plant, and Equipment	\$340,980	\$0
5710	Amortization of Limited Term Electric Plant	\$0	\$0
5715	Amortization of Intangibles and Other Electric Plant	\$0	\$0
5720	Amortization of Electric Plant Acquisition Adjustments	\$0	\$0
5730	Amortization of Unrecovered Plant and Regulatory Study Costs	\$0	
5735	Amortization of Deferred Development Costs	\$0	
5740	Amortization of Deferred Charges	\$0	
6005	Interest on Long Term Debt	\$168,423	
6105	Taxes Other Than Income Taxes	\$23,300	
6110	Income Taxes	\$39,129	
6205	Donations	\$0	
6210	Life Insurance	\$0	
6215	Penalties	\$0	
6225	Other Deductions	\$0	
		<b>\$15,884,738</b>	<b>\$0</b>

Grouping by Allocator	Adjusted TB		Demand
1808	\$	1,000.00	\$ 1,000.00
1815	\$	-	\$ -
1820	\$	72,000.00	\$ 72,000.00
1830	\$	41,200.00	\$ 24,720.00
1835	\$	103,000.00	\$ 61,800.00
1840	\$	2,100.00	\$ 1,260.00
1845	\$	7,374.00	\$ 4,424.40
1850	\$	61,500.00	\$ 36,900.00
1855	\$	74,000.00	\$ -
1860	\$	20,000.00	\$ -
1815-1855	\$	175,000.00	\$ 105,000.00
1830 & 1835	\$	66,389.00	\$ 39,833.40
1840 & 1845	\$	-	\$ -
BCP	\$	-	\$ -
BDHA	\$	41,200.00	\$ -
Break Out	\$	(2,444,484.68)	\$ -
CCA	\$	-	\$ -
CDMPP	\$	-	\$ -
CEN	\$	1,385,088.57	\$ -
CEN EWMP	\$	9,081,475.20	\$ -
CREV	\$	-	\$ -

CWCS	\$	291,636.54	\$	-
CWMC	\$	1,587,717.50	\$	-
CWMR	\$	32,800.00	\$	-
CWNB	\$	308,614.00	\$	-
DCP	\$	170,337.66	\$	170,337.66
LPHA	\$	(32,400.00)	\$	-
LTNCP	\$	1,061,223.28	\$	636,733.97
NFA	\$	(97,288.94)	\$	-
NFA ECC	\$	1,184,197.11	\$	-
O&M	\$	737,584.60	\$	-
PNCP	\$	2,206,928.55	\$	1,561,719.97
SNCP	\$	1,633,766.24	\$	980,259.74
TCP	\$	-	\$	-
<b>Total</b>	<b>\$</b>	<b>17,771,959</b>	<b>\$</b>	<b>3,695,989</b>































## unt Worksheet - IR Round 2

Allocation - Demand  
Related

Categorization

1

Adjusted TB	Demand	Customer	Total	Residential
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$84,205	\$84,205	\$0	\$84,205	\$39,565
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$86,132	\$86,132	\$0	\$86,132	\$40,470
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$593,907	\$593,907	\$0	\$593,907	\$260,050
\$148,477	\$0	\$148,477	\$148,477	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0





\$0	\$0	\$0	\$0	\$0
\$681,913	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$554,698	\$0	\$0	\$0	\$0
\$124,158	\$0	\$0	\$0	\$0
\$181,008	\$0	\$0	\$0	\$0
\$108,000	\$64,800	\$43,200	\$108,000	\$32,897
\$0	\$0	\$0	\$0	\$0
\$1,000	\$1,000	\$0	\$1,000	\$470
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$1,000	\$1,000	\$0	\$1,000	\$438
\$0	\$0	\$0	\$0	\$0
\$2,000	\$1,200	\$800	\$2,000	\$603
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$10,000	\$6,000	\$4,000	\$10,000	\$3,303
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$97,473	\$0	\$97,473	\$97,473	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$67,000	\$40,200	\$26,800	\$67,000	\$20,409
\$0	\$0	\$0	\$0	\$0
\$23,189	\$13,913	\$9,276	\$23,189	\$6,987
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$71,000	\$71,000	\$0	\$71,000	\$31,088
\$41,200	\$24,720	\$16,480	\$41,200	\$12,415

\$103,000	\$61,800	\$41,200	\$103,000	\$31,036
\$51,500	\$0	\$51,500	\$51,500	\$0
\$41,200	\$24,720	\$16,480	\$41,200	\$12,415
\$2,100	\$1,260	\$840	\$2,100	\$695
\$7,374	\$4,424	\$2,950	\$7,374	\$2,439
\$22,500	\$0	\$22,500	\$22,500	\$0
\$51,500	\$30,900	\$20,600	\$51,500	\$17,011
\$20,000	\$0	\$20,000	\$20,000	\$0
\$0	\$0	\$0	\$0	\$0
\$32,800	\$0	\$32,800	\$32,800	\$0
\$280,200	\$0	\$280,200	\$280,200	\$0
\$37,100	\$0	\$37,100	\$37,100	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$41,200	\$0	\$41,200	\$41,200	\$0
\$0	\$0	\$0	\$0	\$0
\$0			\$0	\$0
\$3,500			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$371,800			\$0	\$0
\$10,300			\$0	\$0
\$27,754			\$0	\$0
\$61,800			\$0	\$0
\$41,807			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$122,907			\$0	\$0
\$0			\$0	\$0
\$99,150			\$0	\$0
\$8,200			\$0	\$0
\$28,800			\$0	\$0
\$3,374			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0

\$0			\$0	\$0
\$340,980			\$0	\$82,072
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$0			\$0	\$0
\$168,423			\$0	\$0
\$23,300	\$0	\$0	\$0	\$0
\$39,129			\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
<b>\$15,884,738</b>	<b>\$3,695,989</b>	<b>\$4,418,960</b>	<b>\$8,114,950</b>	<b>\$1,232,186</b>
			O5 Summary	O4 Summary
			\$15,884,737	\$15,884,737
			\$1	
<b>\$0</b>			<b>\$15,884,738</b>	



Customer	Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW
\$ -	\$ 1,000.00	\$ 469.86	\$ 145.40	\$ 367.01
\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ 72,000.00	\$ 31,526.12	\$ 11,378.61	\$ 28,991.81
\$ 16,480.00	\$ 41,200.00	\$ 12,414.59	\$ 4,471.86	\$ 7,792.74
\$ 41,200.00	\$ 103,000.00	\$ 31,036.47	\$ 11,179.66	\$ 19,481.84
\$ 840.00	\$ 2,100.00	\$ 694.55	\$ 249.88	\$ 313.28
\$ 2,949.60	\$ 7,374.00	\$ 2,438.88	\$ 877.45	\$ 1,100.05
\$ 24,600.00	\$ 61,500.00	\$ 20,314.33	\$ 7,331.98	\$ 9,187.02
\$ 74,000.00	\$ 74,000.00	\$ -	\$ -	\$ -
\$ 20,000.00	\$ 20,000.00	\$ -	\$ -	\$ -
\$ 70,000.00	\$ 175,000.00	\$ 53,305.92	\$ 19,211.79	\$ 32,307.14
\$ 26,555.60	\$ 66,389.00	\$ 20,004.66	\$ 7,205.89	\$ 12,557.09
\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -
\$ 41,200.00	\$ 41,200.00	\$ -	\$ -	\$ -
\$ -	\$ -	\$ (633,809.38)	\$ (228,274.82)	\$ (372,823.84)
\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -
\$ 148,476.78	\$ 148,476.78	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -
\$ -	\$ -	\$ -	\$ -	\$ -

\$	291,636.54	\$	291,636.54	\$	-	\$	-	\$	-
\$	1,587,717.50	\$	1,587,717.50	\$	-	\$	-	\$	-
\$	32,800.00	\$	32,800.00	\$	-	\$	-	\$	-
\$	317,300.00	\$	317,300.00	\$	-	\$	-	\$	-
\$	-	\$	170,337.66	\$	80,034.97	\$	24,766.30	\$	62,515.49
\$	-	\$	-	\$	-	\$	-	\$	-
\$	424,489.31	\$	1,061,223.28	\$	350,537.28	\$	126,518.16	\$	158,528.19
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	645,208.57	\$	2,206,928.55	\$	683,819.06	\$	246,808.36	\$	628,848.51
\$	653,506.49	\$	1,633,766.24	\$	579,398.41	\$	208,280.84	\$	190,672.19
\$	-	\$	-	\$	-	\$	-	\$	-
<b>\$</b>	<b>4,418,960</b>	<b>\$</b>	<b>8,114,950</b>	<b>\$</b>	<b>1,232,186</b>	<b>\$</b>	<b>440,151</b>	<b>\$</b>	<b>779,838</b>





































\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$11,856	\$19,938	\$0	\$0	\$108
\$0	\$0	\$0	\$0	\$0
\$145	\$367	\$14	\$1	\$3
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$158	\$403	\$0	\$0	\$1
\$0	\$0	\$0	\$0	\$0
\$217	\$378	\$0	\$0	\$2
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$1,192	\$1,494	\$0	\$0	\$11
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$7,355	\$12,369	\$0	\$0	\$67
\$0	\$0	\$0	\$0	\$0
\$2,517	\$4,386	\$0	\$0	\$23
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$11,221	\$28,589	\$0	\$0	\$102
\$4,472	\$7,793	\$0	\$0	\$41





































Allocation - Customer  
Related

	1	2	3	7
Total - Demand	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$84,205	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$86,132	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$593,907	\$0	\$0	\$0	\$0
\$0	\$63,324	\$28,132	\$54,209	\$2,048
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0





\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$64,800	\$27,885	\$4,833	\$1,465	\$8,329
\$0	\$0	\$0	\$0	\$0
\$1,000	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$1,000	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$1,200	\$522	\$80	\$6	\$178
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$6,000	\$2,612	\$401	\$28	\$890
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$63,413	\$20,109	\$13,951	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$40,200	\$17,299	\$2,998	\$909	\$5,167
\$0	\$0	\$0	\$0	\$0
\$13,913	\$6,056	\$929	\$68	\$2,063
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$71,000	\$0	\$0	\$0	\$0
\$24,720	\$10,760	\$1,650	\$120	\$3,666



\$0	\$0	\$0	\$0	\$0
\$160,128	\$88,467	\$17,930	\$7,396	\$21,345
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$2,458,902	\$2,266,731	\$528,939	\$295,154	\$304,404

	General Service Less than 50 kW	General Service 50 to 4,999 kW	GS> 50-TOU	GS >50- Intermediate	Unmetered Scattered Load
\$	-	\$ -	\$ -	\$ -	\$ -
\$	-	\$ -	\$ -	\$ -	\$ -
\$	-	\$ -	\$ -	\$ -	\$ -
\$	1,649.84	\$ 120.32	\$ -	\$ -	\$ 123.48
\$	4,124.59	\$ 300.80	\$ -	\$ -	\$ 308.69
\$	84.11	\$ 5.35	\$ -	\$ -	\$ 6.30
\$	295.35	\$ 18.78	\$ -	\$ -	\$ 22.12
\$	2,466.16	\$ 169.75	\$ -	\$ -	\$ 184.37
\$	10,481.75	\$ 1,792.81	\$ -	\$ -	\$ 506.29
\$	4,126.08	\$ 2,862.51	\$ -	\$ -	\$ -
\$	7,831.16	\$ 2,374.07	\$ -	\$ -	\$ 502.21
\$	2,658.52	\$ 193.88	\$ -	\$ -	\$ 198.97
\$	-	\$ -	\$ -	\$ -	\$ -
\$	-	\$ -	\$ -	\$ -	\$ -
\$	6,678.69	\$ 8,526.73	\$ -	\$ -	\$ -
\$	(124,428.26)	\$ (45,579.78)	\$ -	\$ -	\$ (5,957.12)
\$	-	\$ -	\$ -	\$ -	\$ -
\$	-	\$ -	\$ -	\$ -	\$ -
\$	28,131.63	\$ 54,208.63	\$ -	\$ -	\$ 610.68
\$	-	\$ -	\$ -	\$ -	\$ -
\$	-	\$ -	\$ -	\$ -	\$ -

\$	41,308.95	\$	7,065.53	\$	-	\$	-	\$	1,995.31
\$	327,552.47	\$	227,243.10	\$	-	\$	-	\$	-
\$	2,722.88	\$	11,553.66	\$	-	\$	-	\$	-
\$	40,676.88	\$	12,202.60	\$	-	\$	-	\$	1,787.25
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	42,555.17	\$	2,929.12	\$	-	\$	-	\$	3,181.39
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-	\$	-
\$	64,576.36	\$	5,501.92	\$	-	\$	-	\$	4,827.68
\$	65,446.28	\$	3,664.31	\$	-	\$	-	\$	4,905.45
\$	-	\$	-	\$	-	\$	-	\$	-
<b>\$</b>	<b>528,939</b>	<b>\$</b>	<b>295,154</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>13,203</b>





































\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$378	\$310	\$43,200	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$8	\$6	\$800	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$39	\$30	\$4,000	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$97,473	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$234	\$192	\$26,800	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$91	\$69	\$9,276	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0
\$161	\$123	\$16,480	\$0	\$0







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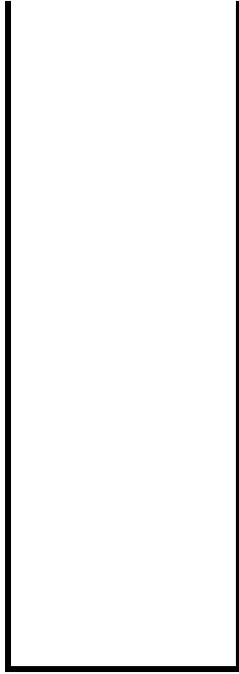
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Vertical line on the left side of the page.

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9

Unmetered Scattered Load	Total - A&G
--------------------------	-------------

\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	(\$0)
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	(\$0)
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0
\$0	\$0	\$0











































**Details:**  
Output Sheet Details How Various Composite Allocators are Derived

*Demand Allocators can be found in columns C to AG*  
*Customer Allocators can be found in columns AJ to BN*

Demand Allocators				
	1	2	3	7
Demand Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting

**Composite allocators**

**Rate Base**

27	1565	Conservation and Demand Management	\$0	\$0	\$0	\$0	\$0
29	1805-1	Land Station >50 kV		\$0	\$0	\$0	\$0
30	1805-2	Land Station <50 kV		\$39,565	\$12,243	\$30,904	\$1,187
31	1805	Total	\$84,205	\$39,565	\$12,243	\$30,904	\$1,187
33	1806-1	Land Rights Station >50 kV		\$0	\$0	\$0	\$0
34	1806-2	Land Rights Station <50 kV		\$0	\$0	\$0	\$0
35	1806	Total	\$0	\$0	\$0	\$0	\$0
37	1808-1	Buildings and Fixtures > 50 kV		\$0	\$0	\$0	\$0
38	1808-2	Buildings and Fixtures < 50 kV		\$40,470	\$12,523	\$31,611	\$1,215
39	1808	Total	\$86,132	\$40,470	\$12,523	\$31,611	\$1,215
41	1810-1	Leasehold Improvements >50 kV		\$0	\$0	\$0	\$0
42	1810-2	Leasehold Improvements <50 kV		\$0	\$0	\$0	\$0
43	1810	Total	\$0	\$0	\$0	\$0	\$0
45	1815	Transformer Station Equipment - Normally Primary above 50 kV	\$0	\$0	\$0	\$0	\$0
47	1820-1	Distribution Station Equipment - Normally Primary below 50 kV (Bulk)	\$0	\$0	\$0	\$0	\$0
48	1820-2	Distribution Station Equipment - Normally Primary below 50 kV (Primary)	\$593,907	\$260,050	\$93,859	\$239,145	\$0
49	1820-3	Distribution Station Equipment - Normally Primary below 50 kV (Wholesale Meters)	\$0	\$0	\$0	\$0	\$0
50	1820	Total	\$593,907	\$260,050	\$93,859	\$239,145	\$0
52	1815 & 1820	Total	\$593,907	\$260,050	\$93,859	\$239,145	\$0
54	1825-1	Storage Battery Equipment > 50 kV		\$0	\$0	\$0	\$0
55	1825-2	Storage Battery Equipment <50 kV		\$0	\$0	\$0	\$0
56	1825	Total	\$0	\$0	\$0	\$0	\$0
58	1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery		\$0	\$0	\$0	\$0
59	1830-4	Poles, Towers and Fixtures - Primary		\$82,016	\$29,602	\$75,423	\$0
60	1830-5	Poles, Towers and Fixtures - Secondary		\$80,171	\$28,820	\$26,383	\$0
61	1830	Total	\$322,948	\$162,187	\$58,422	\$101,806	\$0
63	1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery		\$0	\$0	\$0	\$0
64	1835-4	Overhead Conductors and Devices - Primary		\$284,095	\$102,537	\$261,257	\$0
65	1835-5	Overhead Conductors and Devices - Secondary		\$277,704	\$99,829	\$91,389	\$0
66	1835	Total	\$1,118,658	\$561,799	\$202,366	\$352,646	\$0
68	1830 & 1835	Total	\$1,441,606	\$723,986	\$260,787	\$454,452	\$0
70	1840-3	Underground Conduit - Bulk Delivery		\$0	\$0	\$0	\$0
71	1840-4	Underground Conduit - Primary		\$2,518	\$909	\$2,316	\$0
72	1840-5	Underground Conduit - Secondary		\$9,674	\$3,478	\$3,184	\$0
73	1840	Total	\$22,117	\$12,192	\$4,386	\$5,499	\$0
75	1845-3	Underground Conductors and Devices - Bulk Delivery		\$0	\$0	\$0	\$0
76	1845-4	Underground Conductors and Devices - Primary		\$55,140	\$19,902	\$50,708	\$0

	A	B	C	D	E	F	J
77	1845-5	Underground Conductors and Devices - Secondary		\$211,849	\$76,155	\$69,717	\$0
78	1845	Total	\$484,349	\$266,989	\$96,057	\$120,424	\$0
79							
80	1840 & 1845	Total	\$506,466	\$279,181	\$100,443	\$125,923	\$0
81							
82	1850	Line Transformers	\$636,734	\$350,537	\$126,518	\$158,528	\$0
83							
84	1815- 1850	Total	\$3,178,714	\$1,613,755	\$581,607	\$978,049	\$0
85							
86	1855	Services	\$0	\$0	\$0	\$0	\$0
87							
88	1815- 1855	Total	\$3,178,714	\$1,613,755	\$581,607	\$978,049	\$0
89							
90	1860	Meters	\$0	\$0	\$0	\$0	\$0
91							
92	1815-1860	Total	\$3,178,714	\$1,613,755	\$581,607	\$978,049	\$0
93							
94	1880	IFRS Placeholder Asset Account	\$0	\$0	\$0	\$0	\$0
95							
96	1815-1880	Total	\$3,178,714	\$1,613,755	\$581,607	\$978,049	\$0
97							
98	1565-1880	Total	\$3,349,051	\$1,693,790	\$606,374	\$1,040,564	\$2,402
99	Distribution Plant	GFA - Distribution plant (credit to contributed capital)	\$6,641,625	\$3,844,419	\$1,101,250	\$1,272,529	\$386,258
100		GFA - Distribution plant (exclude credit for contributed capital)	\$7,002,613	\$4,059,687	\$1,155,835	\$1,327,226	\$419,512
101							
102		Accum Depreciation - NFA	(\$2,168,908)	(\$1,234,010)	(\$345,604)	(\$419,322)	(\$155,658)
103		Accum Depreciation - NFA ECC	(\$2,260,932)	(\$1,288,887)	(\$359,521)	(\$433,264)	(\$164,135)
104	NFA	Net Fixed Assets	\$4,472,718	\$2,610,409	\$755,645	\$853,207	\$230,600
105	NFA ECC	Net Fixed Assets Excluding credit for Capital Contribution	\$4,741,682	\$2,770,800	\$796,315	\$893,962	\$255,377
106							
107	1830-4	Primary Poles Demand and Customer	\$312,183	\$163,437	\$42,100	\$76,488	\$27,738
108	1830-5	Secondary Poles Demand and Customer	\$226,064	\$139,320	\$37,876	\$26,890	\$20,150
109	POLE						
110							
111							
112							
113							
114							
115							
116	<b>Operating and Maintenance</b>		Allocate all the costs to the O and M expenses before using it as a composite				
117							
118	<b>Accounts</b>						
119	5005	Operation Supervision and Engineering	\$64,800	\$32,897	\$11,856	\$19,938	\$0
120	5010	Load Dispatching	\$0	\$0	\$0	\$0	\$0
121	5012	Station Buildings and Fixtures Expense	\$1,000	\$470	\$145	\$367	\$14
122	5014	Transformer Station Equipment - Operation Labour	\$0	\$0	\$0	\$0	\$0
123	5015	Transformer Station Equipment - Operation Supplies and Expenses	\$0	\$0	\$0	\$0	\$0
124	5016	Distribution Station Equipment - Operation Labour	\$1,000	\$438	\$158	\$403	\$0
125	5017	Distribution Station Equipment - Operation Supplies and Expenses	\$0	\$0	\$0	\$0	\$0
126	5020	Overhead Distribution Lines and Feeders - Operation Labour	\$1,200	\$603	\$217	\$378	\$0
127	5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	\$0	\$0	\$0	\$0	\$0
128	5030	Overhead Subtransmission Feeders - Operation	\$0	\$0	\$0	\$0	\$0
129	5035	Overhead Distribution Transformers- Operation	\$6,000	\$3,303	\$1,192	\$1,494	\$0
130	5040	Underground Distribution Lines and Feeders - Operation Labour	\$0	\$0	\$0	\$0	\$0
131	5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	\$0	\$0	\$0	\$0	\$0
132	5050	Underground Subtransmission Feeders - Operation	\$0	\$0	\$0	\$0	\$0
133	5055	Underground Distribution Transformers - Operation	\$0	\$0	\$0	\$0	\$0
134	5065	Meter Expense	\$0	\$0	\$0	\$0	\$0
135	5070	Customer Premises - Operation Labour	\$0	\$0	\$0	\$0	\$0
136	5075	Customer Premises - Materials and Expenses	\$0	\$0	\$0	\$0	\$0
137	5085	Miscellaneous Distribution Expense	\$40,200	\$20,409	\$7,355	\$12,369	\$0
138	5090	Underground Distribution Lines and Feeders - Rental Paid	\$0	\$0	\$0	\$0	\$0
139	5095	Overhead Distribution Lines and Feeders - Rental Paid	\$13,913	\$6,987	\$2,517	\$4,386	\$0
140	5096	Other Rent	\$0	\$0	\$0	\$0	\$0
141	5105	Maintenance Supervision and Engineering	\$0	\$0	\$0	\$0	\$0

	A	B	C	D	E	F	J
142	5110	Maintenance of Buildings and Fixtures - Distribution Stations	\$0	\$0	\$0	\$0	\$0
143	5112	Maintenance of Transformer Station Equipment	\$0	\$0	\$0	\$0	\$0
144	5114	Maintenance of Distribution Station Equipment	\$71,000	\$31,088	\$11,221	\$28,589	\$0
145	5120	Maintenance of Poles, Towers and Fixtures	\$24,720	\$12,415	\$4,472	\$7,793	\$0
146	5125	Maintenance of Overhead Conductors and Devices	\$61,800	\$31,036	\$11,180	\$19,482	\$0
147	5130	Maintenance of Overhead Services	\$0	\$0	\$0	\$0	\$0
148	5135	Overhead Distribution Lines and Feeders - Right of Way	\$24,720	\$12,415	\$4,472	\$7,793	\$0
149	5145	Maintenance of Underground Conduit	\$1,260	\$695	\$250	\$313	\$0
150	5150	Maintenance of Underground Conductors and Devices	\$4,424	\$2,439	\$877	\$1,100	\$0
151	5155	Maintenance of Underground Services	\$0	\$0	\$0	\$0	\$0
152	5160	Maintenance of Line Transformers	\$30,900	\$17,011	\$6,140	\$7,693	\$0
153	5175	Maintenance of Meters	\$0	\$0	\$0	\$0	\$0
154	5305	Supervision	\$0	\$0	\$0	\$0	\$0
155	5310	Meter Reading Expense	\$0	\$0	\$0	\$0	\$0
156	5315	Customer Billing	\$0	\$0	\$0	\$0	\$0
157	5320	Collecting	\$0	\$0	\$0	\$0	\$0
158	5325	Collecting- Cash Over and Short	\$0	\$0	\$0	\$0	\$0
159	5330	Collection Charges	\$0	\$0	\$0	\$0	\$0
160	5335	Bad Debt Expense	\$0	\$0	\$0	\$0	\$0
161	5340	Miscellaneous Customer Accounts Expenses	\$0	\$0	\$0	\$0	\$0
162							
163	O&M DC	Total	\$346,938	\$172,205	\$62,053	\$112,098	\$14
164							
165	O&M	Total Demand and Customer	\$1,112,336	\$717,970	\$165,958	\$166,170	\$54,782
166							
167							
168	<b>Accounts</b>						
169	4705	Power Purchased	\$8,370,389	\$3,569,914	\$1,585,923	\$3,056,016	\$115,440
170	4708	Charges-WMS	\$586,928	\$250,321	\$111,204	\$214,287	\$8,095
171	4710	Cost of Power Adjustments	\$0	\$0	\$0	\$0	\$0
172	4712	Charges-One-Time	\$0	\$0	\$0	\$0	\$0
173	4714	Charges-NW	\$681,913	\$290,831	\$129,201	\$248,965	\$9,405
174	4716	Charges-CN	\$554,698	\$236,575	\$105,098	\$202,520	\$7,650
175	4730	Rural Rate Assistance Expense	\$124,158	\$52,952	\$23,524	\$45,330	\$1,712
176	4750	Charges-LV	\$181,008	\$77,199	\$34,295	\$66,086	\$2,496
177	5685	Independent Market Operator Fees and Penalties	\$0	\$0	\$0	\$0	\$0
178							
179	COP	Cost of Power	\$10,499,095	\$4,477,792	\$1,989,245	\$3,833,203	\$144,798
180							
181	<b>Accounts</b>						
182	5005	Operation Supervision and Engineering	\$108,000	\$60,782	\$16,689	\$21,403	\$8,329
183	5010	Load Dispatching	\$0	\$0	\$0	\$0	\$0
184	5012	Station Buildings and Fixtures Expense	\$1,000	\$470	\$145	\$367	\$14
185	5014	Transformer Station Equipment - Operation Labour	\$0	\$0	\$0	\$0	\$0
186	5015	Transformer Station Equipment - Operation Supplies and Expenses	\$0	\$0	\$0	\$0	\$0
187	5016	Distribution Station Equipment - Operation Labour	\$1,000	\$438	\$158	\$403	\$0
188	5017	Distribution Station Equipment - Operation Supplies and Expenses	\$0	\$0	\$0	\$0	\$0
189	5020	Overhead Distribution Lines and Feeders - Operation Labour	\$2,000	\$1,125	\$297	\$384	\$178
190	5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	\$0	\$0	\$0	\$0	\$0
191	5030	Overhead Subtransmission Feeders - Operation	\$0	\$0	\$0	\$0	\$0
192	5035	Overhead Distribution Transformers- Operation	\$10,000	\$5,916	\$1,593	\$1,521	\$890
193	5040	Underground Distribution Lines and Feeders - Operation Labour	\$0	\$0	\$0	\$0	\$0
194	5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	\$0	\$0	\$0	\$0	\$0
195	5050	Underground Subtransmission Feeders - Operation	\$0	\$0	\$0	\$0	\$0
196	5055	Underground Distribution Transformers - Operation	\$0	\$0	\$0	\$0	\$0
197	5065	Meter Expense	\$97,473	\$63,413	\$20,109	\$13,951	\$0
198	5070	Customer Premises - Operation Labour	\$0	\$0	\$0	\$0	\$0
199	5075	Customer Premises - Materials and Expenses	\$0	\$0	\$0	\$0	\$0
200	5085	Miscellaneous Distribution Expense	\$67,000	\$37,708	\$10,354	\$13,278	\$5,167
201	5090	Underground Distribution Lines and Feeders - Rental Paid	\$0	\$0	\$0	\$0	\$0
202	5095	Overhead Distribution Lines and Feeders - Rental Paid	\$23,189	\$13,044	\$3,446	\$4,454	\$2,063
203	5096	Other Rent	\$0	\$0	\$0	\$0	\$0

	A	B	C	D	E	F	J	
204	5105	Maintenance Supervision and Engineering	\$0	\$0	\$0	\$0	\$0	
205	5110	Maintenance of Buildings and Fixtures - Distribution Stations	\$0	\$0	\$0	\$0	\$0	
206	5112	Maintenance of Transformer Station Equipment	\$0	\$0	\$0	\$0	\$0	
207	5114	Maintenance of Distribution Station Equipment	\$71,000	\$31,088	\$11,221	\$28,589	\$0	
208	5120	Maintenance of Poles, Towers and Fixtures	\$41,200	\$23,175	\$6,122	\$7,913	\$3,666	
209	5125	Maintenance of Overhead Conductors and Devices	\$103,000	\$57,936	\$15,304	\$19,783	\$9,164	
210	5130	Maintenance of Overhead Services	\$51,500	\$36,671	\$7,295	\$1,248	\$5,593	
211	5135	Overhead Distribution Lines and Feeders - Right of Way	\$41,200	\$23,175	\$6,122	\$7,913	\$3,666	
212	5145	Maintenance of Underground Conduit	\$2,100	\$1,244	\$334	\$319	\$187	
213	5150	Maintenance of Underground Conductors and Devices	\$7,374	\$4,367	\$1,173	\$1,119	\$657	
214	5155	Maintenance of Underground Services	\$22,500	\$16,021	\$3,187	\$545	\$2,444	
215	5160	Maintenance of Line Transformers	\$51,500	\$30,465	\$8,205	\$7,835	\$4,583	
216	5175	Maintenance of Meters	\$20,000	\$13,011	\$4,126	\$2,863	\$0	
217	5305	Supervision	\$0	\$0	\$0	\$0	\$0	
218	5310	Meter Reading Expense	\$32,800	\$17,738	\$2,723	\$11,554	\$786	
219	5315	Customer Billing	\$280,200	\$224,469	\$35,921	\$10,776	\$6,531	
220	5320	Collecting	\$37,100	\$29,721	\$4,756	\$1,427	\$865	
221	5325	Collecting- Cash Over and Short	\$0	\$0	\$0	\$0	\$0	
222	5330	Collection Charges	\$0	\$0	\$0	\$0	\$0	
223	5335	Bad Debt Expense	\$41,200	\$25,995	\$6,679	\$8,527	\$0	
224	5340	Miscellaneous Customer Accounts Expenses	\$0	\$0	\$0	\$0	\$0	
225	5405	Supervision	\$0	\$0	\$0	\$0	\$0	
226	5410	Community Relations - Sundry	\$3,500	\$2,259	\$522	\$523	\$172	
227	5415	Energy Conservation	\$0	\$0	\$0	\$0	\$0	
228	5420	Community Safety Program	\$0	\$0	\$0	\$0	\$0	
229	5425	Miscellaneous Customer Service and Informational Expenses	\$0	\$0	\$0	\$0	\$0	
230	5505	Supervision	\$0	\$0	\$0	\$0	\$0	
231	5510	Demonstrating and Selling Expense	\$0	\$0	\$0	\$0	\$0	
232	5515	Advertising Expense	\$0	\$0	\$0	\$0	\$0	
233	5520	Miscellaneous Sales Expense	\$0	\$0	\$0	\$0	\$0	
234	5605	Executive Salaries and Expenses	\$0	\$0	\$0	\$0	\$0	
235	5610	Management Salaries and Expenses	\$0	\$0	\$0	\$0	\$0	
236	5615	General Administrative Salaries and Expenses	\$371,800	\$239,982	\$55,472	\$55,543	\$18,311	
237	5620	Office Supplies and Expenses	\$10,300	\$6,648	\$1,537	\$1,539	\$507	
238	5625	Administrative Expense Transferred Credit	\$27,754	\$17,914	\$4,141	\$4,146	\$1,367	
239	5630	Outside Services Employed	\$61,800	\$39,889	\$9,220	\$9,232	\$3,044	
240	5635	Property Insurance	\$41,807	\$24,430	\$7,021	\$7,882	\$2,252	
241	5640	Injuries and Damages	\$0	\$0	\$0	\$0	\$0	
242	5645	Employee Pensions and Benefits	\$0	\$0	\$0	\$0	\$0	
243	5650	Franchise Requirements	\$0	\$0	\$0	\$0	\$0	
244	5655	Regulatory Expenses	\$122,907	\$79,331	\$18,337	\$18,361	\$6,053	
245	5660	General Advertising Expenses	\$0	\$0	\$0	\$0	\$0	
246	5665	Miscellaneous General Expenses	\$99,150	\$63,997	\$14,793	\$14,812	\$4,883	
247	5670	Rent	\$8,200	\$5,293	\$1,223	\$1,225	\$404	
248	5675	Maintenance of General Plant	\$28,800	\$18,589	\$4,297	\$4,302	\$1,418	
249	5680	Electrical Safety Authority Fees	\$3,374	\$2,178	\$503	\$504	\$166	
250	5681	IFRS Placeholder Expense Account	\$0	\$0	\$0	\$0	\$0	
251	5682	IFRS Placeholder Expense Account	\$0	\$0	\$0	\$0	\$0	
252	5683	IFRS Placeholder Expense Account	\$0	\$0	\$0	\$0	\$0	
253	5684	IFRS Placeholder Expense Account	\$0	\$0	\$0	\$0	\$0	
254	6105	Taxes Other Than Income Taxes	\$23,300	\$13,599	\$3,936	\$4,445	\$1,201	
255	6205	Donations	\$0	\$0	\$0	\$0	\$0	
256	6210	Life Insurance	\$0	\$0	\$0	\$0	\$0	
257	6215	Penalties	\$0	\$0	\$0	\$0	\$0	
258	6225	Other Deductions	\$0	\$0	\$0	\$0	\$0	
259								
260		<b>OM&amp;A Expenses</b>	<b>\$1,915,028</b>	<b>\$1,232,080</b>	<b>\$286,961</b>	<b>\$288,683</b>	<b>\$94,560</b>	
261								
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265								
266		<b>Grouping of Operating and Maintenance Distribution Costs (lines 106 - 148)</b>		<b>Demand Allocators</b>				
267				<b>Demand Total</b>	<b>Residential</b>	<b>General Service Less than 50 kW</b>	<b>General Service 50 to 4,999 kW</b>	<b>Street Lighting</b>
268		<b>1808</b>	\$ 1,000	\$ 470	\$ 145	\$ 367	\$ 14	
269		<b>1815</b>	\$ -	\$ -	\$ -	\$ -	\$ -	
270		<b>1820</b>	\$ 72,000	\$ 31,526	\$ 11,379	\$ 28,992	\$ -	
271		<b>1830</b>	\$ 24,720	\$ 12,415	\$ 4,472	\$ 7,793	\$ -	
272		<b>1835</b>	\$ 61,800	\$ 31,036	\$ 11,180	\$ 19,482	\$ -	
273		<b>1840</b>	\$ 1,260	\$ 695	\$ 250	\$ 313	\$ -	
274		<b>1845</b>	\$ 4,424	\$ 2,439	\$ 877	\$ 1,100	\$ -	
275		<b>1850</b>	\$ 36,900	\$ 20,314	\$ 7,332	\$ 9,187	\$ -	
276		<b>1855</b>	\$ -	\$ -	\$ -	\$ -	\$ -	
277		<b>1860</b>	\$ -	\$ -	\$ -	\$ -	\$ -	
278		<b>1815-1855</b>	\$ 105,000	\$ 53,306	\$ 19,212	\$ 32,307	\$ -	
279		<b>1830 &amp; 1835</b>	\$ 39,833	\$ 20,005	\$ 7,206	\$ 12,557	\$ -	

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280		1840 & 1845	\$ -	\$ -	\$ -	\$ -	\$ -
281		BCP	\$ -	\$ -	\$ -	\$ -	\$ -
282		BDHA	\$ -	\$ -	\$ -	\$ -	\$ -
283		Break Out	\$ -	\$ -	\$ -	\$ -	\$ -
284		CCA	\$ -	\$ -	\$ -	\$ -	\$ -
285		CDMPP	\$ -	\$ -	\$ -	\$ -	\$ -
286		CEN	\$ -	\$ -	\$ -	\$ -	\$ -
287		CEN EWMP	\$ -	\$ -	\$ -	\$ -	\$ -
288		CREV	\$ -	\$ -	\$ -	\$ -	\$ -
289		CWCS	\$ -	\$ -	\$ -	\$ -	\$ -
290		CWMC	\$ -	\$ -	\$ -	\$ -	\$ -
291		CWMR	\$ -	\$ -	\$ -	\$ -	\$ -
292		CWNB	\$ -	\$ -	\$ -	\$ -	\$ -
293		DCP	\$ -	\$ -	\$ -	\$ -	\$ -
294		LPHA	\$ -	\$ -	\$ -	\$ -	\$ -
295		LTNCP	\$ -	\$ -	\$ -	\$ -	\$ -
296		NFA	\$ -	\$ -	\$ -	\$ -	\$ -
297		NFA ECC	\$ -	\$ -	\$ -	\$ -	\$ -
298		O&M	\$ -	\$ -	\$ -	\$ -	\$ -
299		PNCP	\$ -	\$ -	\$ -	\$ -	\$ -
300		SNCP	\$ -	\$ -	\$ -	\$ -	\$ -
301		TCP	\$ -	\$ -	\$ -	\$ -	\$ -
302							
303		Total	\$ 346,938	\$ 172,205	\$ 62,053	\$ 112,098	\$ 14
304							
305							
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**Demand Allocators**

	A	B	Demand Allocators				
			Demand Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting
307		Grouping of OM&A (lines 168 - 240)					
308							
309		1808	\$ 1,000	\$ 470	\$ 145	\$ 367	\$ 14
310		1815	\$ -	\$ -	\$ -	\$ -	\$ -
311		1820	\$ 72,000	\$ 31,526	\$ 11,379	\$ 28,992	\$ -
312		1830	\$ 41,200	\$ 23,175	\$ 6,122	\$ 7,913	\$ 3,666
313		1835	\$ 103,000	\$ 57,936	\$ 15,304	\$ 19,783	\$ 9,164
314		1840	\$ 2,100	\$ 1,244	\$ 334	\$ 319	\$ 187
315		1845	\$ 7,374	\$ 4,367	\$ 1,173	\$ 1,119	\$ 657
316		1850	\$ 61,500	\$ 36,381	\$ 9,798	\$ 9,357	\$ 5,473
317		1855	\$ 74,000	\$ 52,692	\$ 10,482	\$ 1,793	\$ 8,037
318		1860	\$ 20,000	\$ 13,011	\$ 4,126	\$ 2,863	\$ -
319		1815-1855	\$ 175,000	\$ 98,490	\$ 27,043	\$ 34,681	\$ 13,497
320		1830 & 1835	\$ 66,389	\$ 37,343	\$ 9,864	\$ 12,751	\$ 5,907
321		1840 & 1845	\$ -	\$ -	\$ -	\$ -	\$ -
322		BCP	\$ -	\$ -	\$ -	\$ -	\$ -
323		BDHA	\$ 41,200	\$ 25,995	\$ 6,679	\$ 8,527	\$ -
324		Break Out	\$ -	\$ -	\$ -	\$ -	\$ -
325		CCA	\$ -	\$ -	\$ -	\$ -	\$ -
326		CDMPP	\$ -	\$ -	\$ -	\$ -	\$ -
327		CEN	\$ -	\$ -	\$ -	\$ -	\$ -
328		CEN EWMP	\$ -	\$ -	\$ -	\$ -	\$ -
329		CREV	\$ -	\$ -	\$ -	\$ -	\$ -
330		CWCS	\$ -	\$ -	\$ -	\$ -	\$ -
331		CWMC	\$ 97,473	\$ 63,413	\$ 20,109	\$ 13,951	\$ -
332		CWMR	\$ 32,800	\$ 17,738	\$ 2,723	\$ 11,554	\$ 786
333		CWNB	\$ 317,300	\$ 254,190	\$ 40,677	\$ 12,203	\$ 7,396
334		DCP	\$ -	\$ -	\$ -	\$ -	\$ -
335		LPHA	\$ -	\$ -	\$ -	\$ -	\$ -
336		LTNCP	\$ -	\$ -	\$ -	\$ -	\$ -
337		NFA	\$ 23,300	\$ 13,599	\$ 3,936	\$ 4,445	\$ 1,201
338		NFA ECC	\$ 41,807	\$ 24,430	\$ 7,021	\$ 7,882	\$ 2,252
339		O&M	\$ 737,585	\$ 476,082	\$ 110,046	\$ 110,187	\$ 36,326
340		PNCP	\$ -	\$ -	\$ -	\$ -	\$ -
341		SNCP	\$ -	\$ -	\$ -	\$ -	\$ -
342		TCP	\$ -	\$ -	\$ -	\$ -	\$ -
343							
344		Total	\$ 1,915,028	\$ 1,232,080	\$ 286,961	\$ 288,683	\$ 94,560
345							
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23	Sentinel Lighting	Unmetered Scattered Load	Customer Total	Residential	General Service Less than 50 kW	General Service 50 to 4,999 kW	Street Lighting	Sentinel Lighting
24								
25								
26								
27	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
28								
29	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
30	\$89	\$217	\$0	\$0	\$0	\$0	\$0	\$0
31	\$89	\$217	\$0	\$0	\$0	\$0	\$0	\$0
32								
33	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
34	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
35	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
36								
37	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
38	\$91	\$222	\$0	\$0	\$0	\$0	\$0	\$0
39	\$91	\$222	\$0	\$0	\$0	\$0	\$0	\$0
40								
41	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
42	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
43	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
44								
45	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
46								
47	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
48	\$0	\$853	\$0	\$0	\$0	\$0	\$0	\$0
49	\$0	\$0	\$148,477	\$63,324	\$28,132	\$54,209	\$2,048	\$154
50	\$0	\$853	\$148,477	\$63,324	\$28,132	\$54,209	\$2,048	\$154
51								
52	\$0	\$853	\$148,477	\$63,324	\$28,132	\$54,209	\$2,048	\$154
53								
54	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
55	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
56	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
57								
58	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
59	\$0	\$269	\$124,873	\$81,421	\$12,498	\$1,065	\$27,738	\$1,217
60	\$0	\$264	\$90,425	\$59,149	\$9,056	\$507	\$20,150	\$884
61	\$0	\$533	\$215,299	\$140,570	\$21,554	\$1,572	\$47,888	\$2,102
62								
63	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
64	\$0	\$932	\$432,548	\$282,034	\$43,292	\$3,688	\$96,080	\$4,217
65	\$0	\$915	\$313,224	\$204,887	\$31,368	\$1,756	\$69,799	\$3,063
66	\$0	\$1,847	\$745,772	\$486,921	\$74,660	\$5,445	\$165,879	\$7,280
67								
68	\$0	\$2,380	\$961,071	\$627,491	\$96,214	\$7,017	\$213,767	\$9,381
69								
70	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
71	\$0	\$8	\$3,834	\$2,500	\$384	\$33	\$852	\$37
72	\$0	\$32	\$10,911	\$7,137	\$1,093	\$61	\$2,431	\$107
73	\$0	\$40	\$14,745	\$9,637	\$1,476	\$94	\$3,283	\$144
74								
75	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
76	\$0	\$181	\$83,954	\$54,740	\$8,403	\$716	\$18,648	\$818



	K	L	X	Y	Z	AA	AE	AF
142	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
143	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
144	\$0	\$102	\$0	\$0	\$0	\$0	\$0	\$0
145	\$0	\$41	\$12,530	\$10,760	\$1,650	\$120	\$3,666	\$161
146	\$0	\$102	\$31,325	\$26,900	\$4,125	\$301	\$9,164	\$402
147	\$0	\$0	\$45,213	\$36,671	\$7,295	\$1,248	\$5,593	\$341
148	\$0	\$41	\$12,530	\$10,760	\$1,650	\$120	\$3,666	\$161
149	\$0	\$2	\$638	\$549	\$84	\$5	\$187	\$8
150	\$0	\$8	\$2,242	\$1,928	\$295	\$19	\$657	\$29
151	\$0	\$0	\$19,753	\$16,021	\$3,187	\$545	\$2,444	\$149
152	\$0	\$56	\$15,661	\$13,454	\$2,065	\$142	\$4,583	\$201
153	\$0	\$0	\$20,000	\$13,011	\$4,126	\$2,863	\$0	\$0
154	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
155	\$0	\$0	\$32,014	\$17,738	\$2,723	\$11,554	\$786	\$0
156	\$0	\$0	\$271,166	\$224,469	\$35,921	\$10,776	\$6,531	\$925
157	\$0	\$0	\$35,904	\$29,721	\$4,756	\$1,427	\$865	\$123
158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
159	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
160	\$0	\$0	\$41,200	\$25,995	\$6,679	\$8,527	\$0	\$0
161	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
162								
163	\$1	\$567	\$703,742	\$545,764	\$103,905	\$54,072	\$54,768	\$3,249
164								
165	\$3,250	\$4,206						
166								
167								
168								
169	\$8,670	\$34,427	\$8,370,389					
170	\$608	\$2,414	\$586,928					
171	\$0	\$0	\$0					
172	\$0	\$0	\$0					
173	\$706	\$2,805	\$681,913					
174	\$575	\$2,281	\$554,698					
175	\$129	\$511	\$124,158					
176	\$187	\$744	\$181,008					
177	\$0	\$0	\$0					
178								
179	\$10,875	\$43,183	\$10,499,095					
180								
181								
182	\$378	\$418	\$108,000					
183	\$0	\$0	\$0					
184	\$1	\$3	\$1,000					
185	\$0	\$0	\$0					
186	\$0	\$0	\$0					
187	\$0	\$1	\$1,000					
188	\$0	\$0	\$0					
189	\$8	\$8	\$2,000					
190	\$0	\$0	\$0					
191	\$0	\$0	\$0					
192	\$39	\$41	\$10,000					
193	\$0	\$0	\$0					
194	\$0	\$0	\$0					
195	\$0	\$0	\$0					
196	\$0	\$0	\$0					
197	\$0	\$0	\$97,473					
198	\$0	\$0	\$0					
199	\$0	\$0	\$0					
200	\$234	\$259	\$67,000					
201	\$0	\$0	\$0					
202	\$91	\$92	\$23,189					
203	\$0	\$0	\$0					

	K	L	X	Y	Z	AA	AE	AF	
204	\$0	\$0	\$0						
205	\$0	\$0	\$0						
206	\$0	\$0	\$0						
207	\$0	\$102	\$71,000						
208	\$161	\$164	\$41,200						
209	\$402	\$411	\$103,000						
210	\$341	\$352	\$51,500						
211	\$161	\$164	\$41,200						
212	\$8	\$9	\$2,100						
213	\$29	\$30	\$7,374						
214	\$149	\$154	\$22,500						
215	\$201	\$210	\$51,500						
216	\$0	\$0	\$20,000						
217	\$0	\$0	\$0						
218	\$0	\$0	\$32,800						
219	\$925	\$1,578	\$280,200						
220	\$123	\$209	\$37,100						
221	\$0	\$0	\$0						
222	\$0	\$0	\$0						
223	\$0	\$0	\$41,200						
224	\$0	\$0	\$0						
225	\$0	\$0	\$0						
226	\$10	\$13	\$3,500						
227	\$0	\$0	\$0						
228	\$0	\$0	\$0						
229	\$0	\$0	\$0						
230	\$0	\$0	\$0						
231	\$0	\$0	\$0						
232	\$0	\$0	\$0						
233	\$0	\$0	\$0						
234	\$0	\$0	\$0						
235	\$0	\$0	\$0						
236	\$1,086	\$1,406	\$371,800						
237	\$30	\$39	\$10,300						
238	\$81	\$105	\$27,754						
239	\$181	\$234	\$61,800						
240	\$104	\$118	\$41,807						
241	\$0	\$0	\$0						
242	\$0	\$0	\$0						
243	\$0	\$0	\$0						
244	\$359	\$465	\$122,907						
245	\$0	\$0	\$0						
246	\$290	\$375	\$99,150						
247	\$24	\$31	\$8,200						
248	\$84	\$109	\$28,800						
249	\$10	\$13	\$3,374						
250	\$0	\$0	\$0						
251	\$0	\$0	\$0						
252	\$0	\$0	\$0						
253	\$0	\$0	\$0						
254	\$56	\$64	\$23,300						
255	\$0	\$0	\$0						
256	\$0	\$0	\$0						
257	\$0	\$0	\$0						
258	\$0	\$0	\$0						
259									
260	\$5,566	\$7,177	\$1,915,028						
261									
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263									
264									
265				<b>Customer Allocators</b>					
266	<b>Sentinel Lighting</b>	<b>Unmetered Scattered Load</b>	<b>Customer Total</b>	<b>Residential</b>	<b>General Service Less than 50 kW</b>	<b>General Service 50 to 4,999 kW</b>	<b>Street Lighting</b>	<b>Sentinel Lighting</b>	
267									
268	\$ 1	\$ 3	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
269	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
270	\$ -	\$ 103	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
271	\$ -	\$ 41	\$ 12,530	\$ 10,760	\$ 1,650	\$ 120	\$ 3,666	\$ 161	
272	\$ -	\$ 102	\$ 31,325	\$ 26,900	\$ 4,125	\$ 301	\$ 9,164	\$ 402	
273	\$ -	\$ 2	\$ 638	\$ 549	\$ 84	\$ 5	\$ 187	\$ 8	
274	\$ -	\$ 8	\$ 2,242	\$ 1,928	\$ 295	\$ 19	\$ 657	\$ 29	
275	\$ -	\$ 67	\$ 18,702	\$ 16,066	\$ 2,466	\$ 170	\$ 5,473	\$ 240	
276	\$ -	\$ -	\$ 64,967	\$ 52,692	\$ 10,482	\$ 1,793	\$ 8,037	\$ 490	
277	\$ -	\$ -	\$ 20,000	\$ 13,011	\$ 4,126	\$ 2,863	\$ -	\$ -	
278	\$ -	\$ 175	\$ 55,389	\$ 45,184	\$ 7,831	\$ 2,374	\$ 13,497	\$ 612	
279	\$ -	\$ 66	\$ 20,191	\$ 17,338	\$ 2,659	\$ 194	\$ 5,907	\$ 259	









	AG	AS	AT	AU	AW	AX	AY	AZ	BA	BB	BC	BD	BE
1													
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21													
22		9											
23		<b>Unmetered Scattered Load</b>										<b>Total</b>	
24													
25													
26													
27		\$0										\$0	
28													
29		\$0										\$0	
30		\$0										\$0	
31		\$0										\$84,205	
32													
33		\$0										\$0	
34		\$0										\$0	
35		\$0										\$0	
36													
37		\$0										\$0	
38		\$0										\$0	
39		\$0										\$86,132	
40													
41		\$0										\$0	
42		\$0										\$0	
43		\$0										\$0	
44													
45		\$0										\$0	
46													
47		\$0										\$0	
48		\$0										\$593,907	
49		\$611										\$148,477	
50		\$611										\$742,384	
51													
52		\$611										\$742,384	
53													
54		\$0										\$0	
55		\$0										\$0	
56		\$0										\$0	
57													
58		\$0										\$0	
59		\$934										\$124,873	
60		\$679										\$90,425	
61		\$1,613										\$538,247	
62													
63		\$0										\$0	
64		\$3,236										\$432,548	
65		\$2,351										\$313,224	
66		\$5,588										\$1,864,430	
67													
68		\$7,201										\$2,402,677	
69													
70		\$0										\$0	
71		\$29										\$3,834	
72		\$82										\$10,911	
73		\$111										\$36,862	
74													
75		\$0										\$0	
76		\$628										\$83,954	





























USoA A/C #	Accounts	Categorization		
		Demand	Customer	Customer Component
	<b>Distribution Plant</b>			
1805	Land	DCP		0%
1805-1	Land Station >50 kV	TCP		0%
1805-2	Land Station <50 kV	DCP		0%
1806	Land Rights	DCP		0%
1806-1	Land Rights Station >50 kV	TCP		0%
1806-2	Land Rights Station <50 kV	DCP		0%
1808	Buildings and Fixtures	DCP		0%
1808-1	Buildings and Fixtures > 50 kV	TCP		0%
1808-2	Buildings and Fixtures < 50 KV	DCP		0%
1810	Leasehold Improvements	DCP		0%
1810-1	Leasehold Improvements >50 kV	TCP		0%
1810-2	Leasehold Improvements <50 kV	DCP		0%
1815	Transformer Station Equipment - Normally Primary above 50 kV	TCP		0%
1820	Distribution Station Equipment - Normally Primary below 50 kV	DCP		0%
1820-1	Distribution Station Equipment - Normally Primary below 50 kV (Bulk)	DCP		0%
1820-2	Distribution Station Equipment - Normally Primary below 50 kV (Primary)	PNCP		0%
1820-3	Distribution Station Equipment - Normally Primary below 50 kV (Wholesale Meters)		CEN	100%
1825	Storage Battery Equipment	DCP		0%
1825-1	Storage Battery Equipment > 50 kV	TCP		0%
1825-2	Storage Battery Equipment <50 kV	DCP		0%
1830	Poles, Towers and Fixtures	DNCP	CCA	40%
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery	BCP		0%
1830-4	Poles, Towers and Fixtures - Primary	PNCP	CCP	40%
1830-5	Poles, Towers and Fixtures - Secondary	SNCP	CCS	40%
1835	Overhead Conductors and Devices	DNCP	CCA	40%
1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery	BCP		0%
1835-4	Overhead Conductors and Devices - Primary	PNCP	CCP	40%
1835-5	Overhead Conductors and Devices - Secondary	SNCP	CCS	40%
1840	Underground Conduit	DNCP	CCA	40%
1840-3	Underground Conduit - Bulk Delivery	BCP		0%
1840-4	Underground Conduit - Primary	PNCP	CCP	40%
1840-5	Underground Conduit - Secondary	SNCP	CCS	40%
1845	Underground Conductors and Devices	DNCP	CCA	40%
1845-3	Underground Conductors and Devices - Bulk Delivery	BCP		0%
1845-4	Underground Conductors and Devices - Primary	PNCP	CCP	40%
1845-5	Underground Conductors and Devices - Secondary	SNCP	CCS	40%
1850	Line Transformers	LTNCP	CCLT	40%
1855	Services		CWCS	100%
1860	Meters		CWMC	100%
1880	IFRS Placeholder Asset Account		0	100%
1565	Conservation and Demand Management Expenditures and Recoveries		CDMPP	100%
	<b>Accumulated Amortization</b>			

2105	Accum. Amortization of Electric Utility Plant - Property, Plant, & Equipment	See I4 BO Assets		
	<b>Operation</b>			
5005	Operation Supervision and Engineering	1815-1855 D	1815-1855 C	40%
5010	Load Dispatching	1815-1855 D	1815-1855 C	40%
5012	Station Buildings and Fixtures Expense	1808 D		0%
5014	Transformer Station Equipment - Operation Labour	1815 D		0%
5015	Transformer Station Equipment - Operation Supplies and Expenses	1815 D		0%
5016	Distribution Station Equipment - Operation Labour	1820 D		0%
5017	Distribution Station Equipment - Operation Supplies and Expenses	1820 D		0%
5020	Overhead Distribution Lines and Feeders - Operation Labour	1830 & 1835 D	1830 & 1835 C	40%
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	1830 & 1835 D	1830 & 1835 C	40%
5030	Overhead Subtransmission Feeders - Operation	1830 & 1835 D		0%
5035	Overhead Distribution Transformers-Operation	1850 D	1850 C	40%
5040	Underground Distribution Lines and Feeders - Operation Labour	1840 & 1845 D	1840 & 1845 C	40%
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	1840 & 1845 D	1840 & 1845 C	40%
5050	Underground Subtransmission Feeders - Operation	1840 & 1845 D		0%
5055	Underground Distribution Transformers - Operation	1850 D	1850 C	40%
5065	Meter Expense		CWMC	100%
5070	Customer Premises - Operation Labour		CCA	100%
5075	Customer Premises - Materials and Expenses		CCA	100%
5085	Miscellaneous Distribution Expense	1815-1855 D	1815-1855 C	40%
5090	Underground Distribution Lines and Feeders - Rental Paid	1840 & 1845 D	1840 & 1845 C	40%
5095	Overhead Distribution Lines and Feeders - Rental Paid	1830 & 1835 D	1830 & 1835 C	40%
	<b>Maintenance</b>			
5105	Maintenance Supervision and Engineering	1815-1855 D	1815-1855 C	40%
5110	Maintenance of Buildings and Fixtures - Distribution Stations	1808 D		0%
5112	Maintenance of Transformer Station Equipment	1815 D		0%
5114	Maintenance of Distribution Station Equipment	1820 D		0%
5120	Maintenance of Poles, Towers and Fixtures	1830 D	1830 C	40%
5125	Maintenance of Overhead Conductors and Devices	1835 D	1835 C	40%
5130	Maintenance of Overhead Services		1855 C	100%
5135	Overhead Distribution Lines and Feeders - Right of Way	1830 & 1835 D	1830 & 1835 C	40%
5145	Maintenance of Underground Conduit	1840 D	1840 C	40%
5150	Maintenance of Underground Conductors and Devices	1845 D	1845 C	40%

5155	Maintenance of Underground Services		1855 C	100%
5160	Maintenance of Line Transformers	1850 D	1850 C	40%
5175	Maintenance of Meters		1860 C	100%







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**Sheet 2a Demand Allocation Worksheet - 2018 Demand**

REVISIONS:  
 Input sheet for Demand Allocation.

**PLCC WATTS**

Customer Class	Total	1 Residential	2 General Service Low Voltage Service	3 General Service 25 to 49.9 kVA	4 Street Lighting	5 Semire Lighting	6 Unmetered Customer Load
CCA	7,883	4,014	776	46	1,106	76	48
CCB	1,841	0	0	0	1,799	76	66
CCP	7,883	5,016	776	46	1,208	75	58
CCCL	7,883	5,016	776	32	1,209	75	58
CCS	7,889	5,016	768	43	1,209	75	58
PLCC-CCA	3,877	2,387	368	36	884	38	25
PLCC-CCB	1,237	0	0	0	884	38	23
PLCC-CCP	3,877	2,387	368	36	884	38	23
PLCC-CCCL	3,879	2,387	369	21	884	38	23
PLCC-CCS	3,888	2,387	367	17	884	38	23
INCP	24,959	11,598	3,862	9,078	332	25	55
INCP1	24,959	11,598	3,862	9,078	332	25	55
INCP2	24,959	11,598	3,862	9,078	332	25	55
INCP3	24,959	11,598	3,862	9,078	332	25	55
INCP4	24,959	11,598	3,862	9,078	332	25	55
PLCC-INCP	24,959	11,598	3,862	9,078	0	0	32
INCP1A	22,298	9,281	3,024	8,851	0	0	32
INCP1B	17,438	9,281	3,554	4,482	0	0	32
INCP1C	16,243	9,288	3,527	3,888	0	0	32
INCP2A	95,459	45,659	14,588	34,161	1,237	100	214
INCP2B	95,459	45,659	14,588	34,161	1,237	100	214
INCP2C	79,139	45,659	14,588	18,833	1,237	100	214
INCP2D	79,139	45,659	14,588	12,252	1,237	100	214
PLCC-INCP2	95,459	45,659	14,588	34,161	0	0	102
INCP2A1	84,217	37,233	13,366	24,586	0	0	102
INCP2A2	82,289	37,233	13,366	15,746	0	0	102
INCP2A3	82,227	38,289	12,244	12,143	0	0	102
INCP3A	229,784	107,214	40,893	66,708	3,862	299	587
INCP3B	229,784	107,214	40,893	66,708	3,862	299	587
INCP3C	165,461	107,214	40,893	42,226	3,862	299	587
INCP3D	158,425	108,263	40,288	23,966	3,862	299	587
PLCC-INCP3	229,784	107,214	40,893	66,708	0	0	211
INCP3A1	207,138	85,235	27,127	48,264	0	0	211
INCP3A2	163,425	82,255	27,127	42,471	0	0	211
INCP3A3	159,937	82,215	26,912	30,798	0	0	211

Uniform System of Accounts - Detail Accounts:					Classification and Allocation		
USoA Account #	Accounts	Explanations	Grouping for Sheet O1 Revenue to Cost	Demand Grouping Indicator	Demand	Customer	Joint
1565	Conservation and Demand Management Expenditures and Recoveries	CDM Expenditures and Recoveries	dp			O&M	
1608	Franchises and Consents	Other Distribution Assets	gp				
1805	Land		dp	DDCP			
1805-1	Land Station >50 kV		dp	TCP	TCP4		
1805-2	Land Station <50 kV		dp	DCP	DCP4		
1806	Land Rights		dp	DDCP			
1806-1	Land Rights Station >50 kV		dp	TCP	TCP4		
1806-2	Land Rights Station <50 kV		dp	DCP	DCP4		
1808	Buildings and Fixtures		dp	DDCP			
1808-1	Buildings and Fixtures > 50 kV		dp	TCP	TCP4		
1808-2	Buildings and Fixtures < 50 KV		dp	DCP	DCP4		
1810	Leasehold Improvements		dp	DDCP			
1810-1	Leasehold Improvements >50 kV		dp	TCP	TCP4		
1810-2	Leasehold Improvements <50 kV		dp	DCP	DCP4		
1815	Transformer Station Equipment - Normally Primary above 50 kV		dp	TCP	TCP4		
1820	Distribution Station Equipment - Normally Primary below 50 kV		dp	DCP	DCP4		
1820-1	Distribution Station Equipment - Normally Primary below 50 kV (Bulk)		dp	DCP	DCP4		
1820-2	Distribution Station Equipment - Normally Primary below 50 kV (Primary)		dp	PNCP	PNCP4		
1820-3	Distribution Station Equipment - Normally Primary below 50 kV (Wholesale Meters)		dp			CEN	
1825	Storage Battery Equipment		dp	DDCP			
1825-1	Storage Battery Equipment > 50 kV		dp	TCP	TCP4		
1825-2	Storage Battery Equipment <50 kV		dp	DCP	DCP4		
1830	Poles, Towers and Fixtures		dp	DDNCP			
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery		dp	BCP	BCP4		
1830-4	Poles, Towers and Fixtures - Primary		dp	PNCP	PNCP4	CCP	x
1830-5	Poles, Towers and Fixtures - Secondary		dp	SNCP	SNCP4	CCS	x
1835	Overhead Conductors and Devices		dp	DDNCP			
1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery		dp	BCP	BCP4		

Uniform System of Accounts - Detail Accounts:					Classification and Allocation		
					USoA Account #	Accounts	Explanations
1835-4	Overhead Conductors and Devices - Primary		dp	PNCP	PNCP4	CCP	x
1835-5	Overhead Conductors and Devices - Secondary		dp	SNCP	SNCP4	CCS	x
1840	Underground Conduit		dp	DDNCP			
1840-3	Underground Conduit - Bulk Delivery	Land and Buildings	dp	BCP	BCP4		
1840-4	Underground Conduit - Primary	Land and Buildings	dp	PNCP	PNCP4	CCP	x
1840-5	Underground Conduit - Secondary	Land and Buildings	dp	SNCP	SNCP4	CCS	x
1845	Underground Conductors and Devices	Land and Buildings	dp	DDNCP			
1845-3	Underground Conductors and Devices - Bulk Delivery	TS Primary Above 50	dp	BCP	BCP4		
1845-4	Underground Conductors and Devices - Primary	DS	dp	PNCP	PNCP4	CCP	x
1845-5	Underground Conductors and Devices - Secondary	Other Distribution Assets	dp	SNCP	SNCP4	CCS	x
1850	Line Transformers	Poles, Wires	dp	LTNCP	LTNCP4	CCLT	x
1855	Services	Services and Meters	dp			CWCS	
1860	Meters	Services and Meters	dp			CWMC	
1880	IFRS Placeholder Asset Account	IFRS Placeholder Asset Account	dp			0	
1905	Land	Land and Buildings	gp				
1906	Land Rights	Land and Buildings	gp				
1908	Buildings and Fixtures	General Plant	gp				
1910	Leasehold Improvements	General Plant	gp				
1915	Office Furniture and Equipment	Equipment	gp				
1920	Computer Equipment - Hardware	IT Assets	gp				
1925	Computer Software	IT Assets	gp				
1930	Transportation Equipment	Equipment	gp				
1935	Stores Equipment	Equipment	gp				
1940	Tools, Shop and Garage Equipment	Equipment	gp				
1945	Measurement and Testing Equipment	Equipment	gp				
1950	Power Operated Equipment	Equipment	gp				
1955	Communication Equipment	Equipment	gp				
1960	Miscellaneous Equipment	Equipment	gp				
1970	Load Management Controls - Customer Premises	Other Distribution Assets	gp				
1975	Load Management Controls - Utility Premises	Other Distribution Assets	gp				
1980	System Supervisory Equipment	Other Distribution Assets	gp				
1990	Other Tangible Property	Other Distribution Assets	gp				
1995	Contributions and Grants - Credit	Contributions and Grants	co		Break out	Breakout	

Uniform System of Accounts - Detail Accounts:					Classification and Allocation		
USoA Account #	Accounts	Explanations	Grouping for Sheet O1 Revenue to Cost	Demand Grouping Indicator	Demand	Customer	Joint
2005	Property Under Capital Leases	Other Distribution Assets	gp				
2010	Electric Plant Purchased or Sold	Other Distribution Assets	gp				
2105	Accum. Amortization of Electric Utility Plant - Property, Plant, & Equipment	Accumulated Amortization	accum dep		Break out	Breakout	
2120	Accumulated Amortization of Electric Utility Plant - Intangibles	Accumulated Amortization	accum dep		Break out	Breakout	
3046	Balance Transferred From Income	Equity	NI				
4080	Distribution Services Revenue	Distribution Services Revenue	CREV				
4080-1	Revenue from Rates	Distribution Services Revenue	CREV				
4080-2	SSS Admin Charge	Other Distribution Revenue	mi				
4082	Retail Services Revenues	Other Distribution Revenue	mi				
4084	Service Transaction Requests (STR) Revenues	Other Distribution Revenue	mi				
4090	Electric Services Incidental to Energy Sales	Other Distribution Revenue	mi				
4205	Interdepartmental Rents	Other Distribution Revenue	mi				
4210	Rent from Electric Property	Other Distribution Revenue	mi				
4215	Other Utility Operating Income	Other Distribution Revenue	mi				
4220	Other Electric Revenues	Other Distribution Revenue	mi				
4225	Late Payment Charges	Late Payment Charges	mi				
4235	Miscellaneous Service Revenues	Specific Service Charges	mi				
4235-1	Account Set Up Charges	Specific Service Charges	mi				
4235-90	Miscellaneous Service Revenues - Residual	Specific Service Charges	mi				
4240	Provision for Rate Refunds	Other Distribution Revenue	mi				
4245	Government Assistance Directly Credited to Income	Other Distribution Revenue	mi				
4305	Regulatory Debits	Other Income & Deductions	mi				
4310	Regulatory Credits	Other Income & Deductions	mi				
4315	Revenues from Electric Plant Leased to Others	Other Income & Deductions	mi				
4320	Expenses of Electric Plant Leased to Others	Other Income & Deductions	mi				
4325	Revenues from Merchandise, Jobbing, Etc.	Other Income & Deductions	mi				
4330	Costs and Expenses of Merchandising, Jobbing, Etc.	Other Income & Deductions	mi				

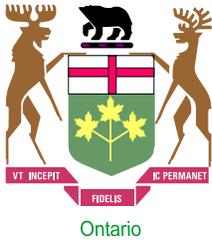
Uniform System of Accounts - Detail Accounts:					Classification and Allocation		
					USoA Account #	Accounts	Explanations
4335	Profits and Losses from Financial Instrument Hedges	Other Income & Deductions	mi				
4340	Profits and Losses from Financial Instrument Investments	Other Income & Deductions	mi				
4345	Gains from Disposition of Future Use Utility Plant	Other Income & Deductions	mi				
4350	Losses from Disposition of Future Use Utility Plant	Other Income & Deductions	mi				
4355	Gain on Disposition of Utility and Other Property	Other Income & Deductions	mi				
4360	Loss on Disposition of Utility and Other Property	Other Income & Deductions	mi				
4365	Gains from Disposition of Allowances for Emission	Other Income & Deductions	mi				
4370	Losses from Disposition of Allowances for Emission	Other Income & Deductions	mi				
4375	Revenues from Non-Utility Operations	Other Income & Deductions	mi				
4380	Expenses of Non-Utility Operations	Other Income & Deductions	mi				
4390	Miscellaneous Non-Operating Income	Other Income & Deductions	mi				
4395	Rate-Payer Benefit Including Interest	Other Income & Deductions	mi				
4398	Foreign Exchange Gains and Losses, Including Amortization	Other Income & Deductions	mi				
4405	Interest and Dividend Income	Other Income & Deductions	mi				
4415	Equity in Earnings of Subsidiary Companies	Other Income & Deductions	mi				
4705	Power Purchased	Power Supply Expenses (Working Capital)	cop				
4708	Charges-WMS	Power Supply Expenses (Working Capital)	cop				
4710	Cost of Power Adjustments	Power Supply Expenses (Working Capital)	cop				
4712	Charges-One-Time	Power Supply Expenses (Working Capital)	cop				
4714	Charges-NW	Power Supply Expenses (Working Capital)	cop				
4715	System Control and Load Dispatching	Other Power Supply Expenses	cop				
4716	Charges-CN	Power Supply Expenses (Working Capital)	cop				
4730	Rural Rate Assistance Expense	Power Supply Expenses (Working Capital)	cop				
4750	Charges-LV	Power Supply Expenses (Working Capital)	cop				

Uniform System of Accounts - Detail Accounts:					Classification and Allocation		
					USoA Account #	Accounts	Explanations
5005	Operation Supervision and Engineering	Operation (Working Capital)	di	1815-1855 D	1815-1855 D	1815-1855 C	x
5010	Load Dispatching	Operation (Working Capital)	di	1815-1855 D	1815-1855 D	1815-1855 C	x
5012	Station Buildings and Fixtures Expense	Operation (Working Capital)	di	1808 D	1808 D	1808 C	
5014	Transformer Station Equipment - Operation Labour	Operation (Working Capital)	di	1815 D	1815 D	1815 C	
5015	Transformer Station Equipment - Operation Supplies and Expenses	Operation (Working Capital)	di	1815 D	1815 D	1815 C	
5016	Distribution Station Equipment - Operation Labour	Operation (Working Capital)	di	1820 D	1820 D	1820 C	
5017	Distribution Station Equipment - Operation Supplies and Expenses	Operation (Working Capital)	di	1820 D	1820 D	1820 C	
5020	Overhead Distribution Lines and Feeders - Operation Labour	Operation (Working Capital)	di	1830 & 1835 D	1830 & 1835 D	1830 & 1835 C	x
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	Operation (Working Capital)	di	1830 & 1835 D	1830 & 1835 D	1830 & 1835 C	x
5030	Overhead Subtransmission Feeders - Operation	Operation (Working Capital)	di	1830 & 1835 D	1830 & 1835 D	1830 & 1835 C	
5035	Overhead Distribution Transformers- Operation	Operation (Working Capital)	di	1850 D	1850 D	1850 C	x
5040	Underground Distribution Lines and Feeders - Operation Labour	Operation (Working Capital)	di	1840 & 1845 D	1840 & 1845 D	1840 & 1845 C	x
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	Operation (Working Capital)	di	1840 & 1845 D	1840 & 1845 D	1840 & 1845 C	x
5050	Underground Subtransmission Feeders - Operation	Operation (Working Capital)	di	1840 & 1845 D	1840 & 1845 D	1840 & 1845 C	
5055	Underground Distribution Transformers - Operation	Operation (Working Capital)	di	1850 D	1850 D	1850 C	x
5065	Meter Expense	Operation (Working Capital)	cu			CWMC	
5070	Customer Premises - Operation Labour	Operation (Working Capital)	cu			CCA	
5075	Customer Premises - Materials and Expenses	Operation (Working Capital)	cu			CCA	
5085	Miscellaneous Distribution Expense	Operation (Working Capital)	di	1815-1855 D	1815-1855 D	1815-1855 C	x
5090	Underground Distribution Lines and Feeders - Rental Paid	Operation (Working Capital)	di	1840 & 1845 D	1840 & 1845 D	1840 & 1845 C	x
5095	Overhead Distribution Lines and Feeders - Rental Paid	Operation (Working Capital)	di	1830 & 1835 D	1830 & 1835 D	1830 & 1835 C	x
5096	Other Rent	Operation (Working Capital)	di				
5105	Maintenance Supervision and Engineering	Maintenance (Working Capital)	di	1815-1855 D	1815-1855 D	1815-1855 C	x

Uniform System of Accounts - Detail Accounts:					Classification and Allocation		
USoA Account #	Accounts	Explanations	Grouping for Sheet O1 Revenue to Cost	Demand Grouping Indicator	Demand	Customer	Joint
5110	Maintenance of Buildings and Fixtures - Distribution Stations	Maintenance (Working Capital)	di	1808 D	1808 D	1808 C	
5112	Maintenance of Transformer Station Equipment	Maintenance (Working Capital)	di	1815 D	1815 D	1815 C	
5114	Maintenance of Distribution Station Equipment	Maintenance (Working Capital)	di	1820 D	1820 D	1820 C	
5120	Maintenance of Poles, Towers and Fixtures	Maintenance (Working Capital)	di	1830 D	1830 D	1830 C	x
5125	Maintenance of Overhead Conductors and Devices	Maintenance (Working Capital)	di	1835 D	1835 D	1835 C	x
5130	Maintenance of Overhead Services	Maintenance (Working Capital)	di	1855 D	1855 D	1855 C	
5135	Overhead Distribution Lines and Feeders - Right of Way	Maintenance (Working Capital)	di	1830 & 1835 D	1830 & 1835 D	1830 & 1835 C	x
5145	Maintenance of Underground Conduit	Maintenance (Working Capital)	di	1840 D	1840 D	1840 C	x
5150	Maintenance of Underground Conductors and Devices	Maintenance (Working Capital)	di	1845 D	1845 D	1845 C	x
5155	Maintenance of Underground Services	Maintenance (Working Capital)	di	1855 D	1855 D	1855 C	
5160	Maintenance of Line Transformers	Maintenance (Working Capital)	di	1850 D	1850 D	1850 C	x
5175	Maintenance of Meters	Maintenance (Working Capital)	cu	1860 D	1860 D	1860 C	
5305	Supervision	Billing and Collection (Working Capital)	cu			CWNB	
5310	Meter Reading Expense	Billing and Collection (Working Capital)	cu			CWNR	
5315	Customer Billing	Billing and Collection (Working Capital)	cu			CWNB	
5320	Collecting	Billing and Collection (Working Capital)	cu			CWNB	
5325	Collecting- Cash Over and Short	Billing and Collection (Working Capital)	cu			CWNB	
5330	Collection Charges	Billing and Collection (Working Capital)	cu			CWNB	
5335	Bad Debt Expense	Bad Debt Expense (Working Capital)	cu			BDHA	
5340	Miscellaneous Customer Accounts Expenses	Billing and Collection (Working Capital)	cu			CWNB	
5405	Supervision	Community Relations (Working Capital)	ad				
5410	Community Relations - Sundry	Community Relations (Working Capital)	ad				

Uniform System of Accounts - Detail Accounts:					Classification and Allocation		
USoA Account #	Accounts	Explanations	Grouping for Sheet O1 Revenue to Cost	Demand Grouping Indicator	Demand	Customer	Joint
5415	Energy Conservation	Community Relations - CDM (Working Capital)	ad				
5420	Community Safety Program	Community Relations (Working Capital)	ad				
5425	Miscellaneous Customer Service and Informational Expenses	Community Relations (Working Capital)	ad				
5505	Supervision	Other Distribution Expenses	ad				
5510	Demonstrating and Selling Expense	Other Distribution Expenses	ad				
5515	Advertising Expense	Advertising Expenses	ad				
5520	Miscellaneous Sales Expense	Other Distribution Expenses	ad				
5605	Executive Salaries and Expenses	Administrative and General Expenses (Working Capital)	ad				
5610	Management Salaries and Expenses	Administrative and General Expenses (Working Capital)	ad				
5615	General Administrative Salaries and Expenses	Administrative and General Expenses (Working Capital)	ad				
5620	Office Supplies and Expenses	Administrative and General Expenses (Working Capital)	ad				
5625	Administrative Expense Transferred Credit	Administrative and General Expenses (Working Capital)	ad				
5630	Outside Services Employed	Administrative and General Expenses (Working Capital)	ad				
5635	Property Insurance	Insurance Expense (Working Capital)	ad				
5640	Injuries and Damages	Administrative and General Expenses (Working Capital)	ad				
5645	Employee Pensions and Benefits	Administrative and General Expenses (Working Capital)	ad				
5650	Franchise Requirements	Administrative and General Expenses (Working Capital)	ad				
5655	Regulatory Expenses	Administrative and General Expenses (Working Capital)	ad				
5660	General Advertising Expenses	Advertising Expenses	ad				
5665	Miscellaneous General Expenses	Administrative and General Expenses (Working Capital)	ad				
5670	Rent	Administrative and General Expenses (Working Capital)	ad				
5675	Maintenance of General Plant	Administrative and General Expenses (Working Capital)	ad				

Uniform System of Accounts - Detail Accounts:					Classification and Allocation			
					USoA Account #	Accounts	Explanations	Grouping for Sheet O1 Revenue to Cost
5680	Electrical Safety Authority Fees	Administrative and General Expenses (Working Capital)	ad					
5681	IFRS Placeholder Expense Account	Administrative and General Expenses (Working Capital)	ad					
5682	IFRS Placeholder Expense Account	Administrative and General Expenses (Working Capital)	ad					
5683	IFRS Placeholder Expense Account	Administrative and General Expenses (Working Capital)	ad					
5684	IFRS Placeholder Expense Account	Administrative and General Expenses (Working Capital)	ad					
5685	Independent Market Operator Fees and Penalties	Power Supply Expenses (Working Capital)	cop					
5705	Amortization Expense - Property, Plant, and Equipment	Amortization of Assets	dep	PRORATED	Break out	Breakout		
5710	Amortization of Limited Term Electric Plant	Amortization of Assets	dep	PRORATED	Break out	Breakout		
5715	Amortization of Intangibles and Other Electric Plant	Amortization of Assets	dep	PRORATED	Break out	Breakout		
5720	Amortization of Electric Plant Acquisition Adjustments	Other Amortization - Unclassified	dep	PRORATED	Break out	Breakout		
5730	Amortization of Unrecovered Plant and Regulatory Study Costs	Amortization of Assets	dep					
5735	Amortization of Deferred Development Costs	Amortization of Assets	dep					
5740	Amortization of Deferred Charges	Amortization of Assets	dep					
6005	Interest on Long Term Debt	Interest Expense - Unclassified	INT					
6105	Taxes Other Than Income Taxes	Other Distribution Expenses	ad					
6110	Income Taxes	Income Tax Expense - Unclassified	Input					
6205	Donations	Charitable Contributions	ad					
6210	Life Insurance	Insurance Expense (Working Capital)	ad					
6215	Penalties	Other Distribution Expenses	ad					
6225	Other Deductions	Other Distribution Expenses	ad					



**2012 COS COST ALLOCATION**

**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

**Sheet E5 Reconciliation Worksheet - IR Round 2**

**Details:**

The worksheet below shows reconciliation of costs included and excluded in the Trial Balance.

USoA Account #	Accounts	Financial Statement	Financial Statement - Asset Break Out includes Acc Dep and Contributed Capital	Adjusted TB	Excluded from COSS
1565	Conservation and Demand Management Expenditures and Recoveries	\$0		\$0	
1608	Franchises and Consents	\$0		\$0	
1805	Land		\$0	\$0	
1805-1	Land Station >50 kV		\$0	\$0	
1805-2	Land Station <50 kV		\$84,205	\$84,205	
1806	Land Rights		\$0	\$0	
1806-1	Land Rights Station >50 kV		\$0	\$0	
1806-2	Land Rights Station <50 kV		\$0	\$0	
1808	Buildings and Fixtures		\$0	\$0	
1808-1	Buildings and Fixtures > 50 kV		\$0	\$0	
1808-2	Buildings and Fixtures < 50 KV		\$86,132	\$86,132	
1810	Leasehold Improvements		\$0	\$0	
1810-1	Leasehold Improvements >50 kV		\$0	\$0	
1810-2	Leasehold Improvements <50 kV		\$0	\$0	
1815	Transformer Station Equipment - Normally Primary above 50 kV		\$0	\$0	
1820	Distribution Station Equipment - Normally Primary below 50 kV		\$0	\$0	

1820-1	Distribution Station Equipment - Normally Primary below 50 kV (Bulk)	\$0	\$0
1820-2	Distribution Station Equipment - Normally Primary below 50 kV (Primary)	\$593,907	\$593,907
1820-3	Distribution Station Equipment - Normally Primary below 50 kV (Wholesale Meters)	\$148,477	\$148,477
1825	Storage Battery Equipment	\$0	\$0
1825-1	Storage Battery Equipment > 50 kV	\$0	\$0
1825-2	Storage Battery Equipment <50 kV	\$0	\$0
1830	Poles, Towers and Fixtures	\$0	\$0
1830-3	Poles, Towers and Fixtures - Subtransmission Bulk Delivery	\$0	\$0
1830-4	Poles, Towers and Fixtures - Primary	\$312,183	\$312,183
1830-5	Poles, Towers and Fixtures - Secondary	\$226,064	\$226,064
1835	Overhead Conductors and Devices	\$0	\$0
1835-3	Overhead Conductors and Devices - Subtransmission Bulk Delivery	\$0	\$0
1835-4	Overhead Conductors and Devices - Primary	\$1,081,369	\$1,081,369
1835-5	Overhead Conductors and Devices - Secondary	\$783,061	\$783,061
1840	Underground Conduit	\$0	\$0
1840-3	Underground Conduit - Bulk Delivery	\$0	\$0
1840-4	Underground Conduit - Primary	\$9,584	\$9,584
1840-5	Underground Conduit - Secondary	\$27,278	\$27,278
1845	Underground Conductors and Devices	\$0	\$0
1845-3	Underground Conductors and Devices - Bulk Delivery	\$0	\$0
1845-4	Underground Conductors and Devices - Primary	\$209,885	\$209,885
1845-5	Underground Conductors and Devices - Secondary	\$597,364	\$597,364
1850	Line Transformers	\$1,061,223	\$1,061,223
1855	Services	\$291,637	\$291,637
1860	Meters	\$1,490,244	\$1,490,244
1880	IFRS Placeholder Asset Account	\$0	\$0
1905	Land	\$0	\$0

\$0

1906	Land Rights	\$0	\$0	\$0
1908	Buildings and Fixtures	\$0	\$0	\$0
1910	Leasehold Improvements	\$0	\$8,796	\$8,796
1915	Office Furniture and Equipment	\$0	\$0	\$0
1920	Computer Equipment - Hardware	\$0	\$173,688	\$173,688
1925	Computer Software	\$0	\$189,827	\$189,827
1930	Transportation Equipment	\$0	\$627,095	\$627,095
1935	Stores Equipment	\$0	\$0	\$0
1940	Tools, Shop and Garage Equipment	\$0	\$142,984	\$142,984
1945	Measurement and Testing Equipment	\$0	\$0	\$0
1950	Power Operated Equipment	\$0	\$0	\$0
1955	Communication Equipment	\$0	\$0	\$0
1960	Miscellaneous Equipment	\$0	\$0	\$0
1970	Load Management Controls - Customer Premises	\$0	\$0	\$0
1975	Load Management Controls - Utility Premises	\$0	\$0	\$0
1980	System Supervisory Equipment	\$0	\$0	\$0
1990	Other Tangible Property	\$0	\$0	\$0
1995	Contributions and Grants - Credit	(\$360,988)	\$0	(\$360,988)
2005	Property Under Capital Leases	\$0	\$0	\$0
2010	Electric Plant Purchased or Sold	\$0	\$0	\$0
2105	Accum. Amortization of Electric Utility Plant - Property, Plant, & Equipment	(\$2,424,477)		(\$2,424,477)
2120	Accumulated Amortization of Electric Utility Plant - Intangibles	\$0		\$0
3046	Balance Transferred From Income	(\$272,112)		(\$272,112)
4080	Distribution Services Revenue	\$0		\$0
4080-1	Revenue from Rates	(\$1,957,800)		(\$1,957,800)
4080-2	SSS Admin Charge	(\$21,528)		(\$21,528)
4082	Retail Services Revenues	(\$8,550)		(\$8,550)
4084	Service Transaction Requests (STR) Revenues	(\$136)		(\$136)
4090	Electric Services Incidental to Energy Sales	\$0		\$0
4205	Interdepartmental Rents	\$0		\$0
4210	Rent from Electric Property	(\$44,029)		(\$44,029)

4215	Other Utility Operating Income	\$0	\$0
4220	Other Electric Revenues	\$0	\$0
4225	Late Payment Charges	(\$32,400)	(\$32,400)
4235	Miscellaneous Service Revenues	\$0	\$0
4240	Provision for Rate Refunds	\$0	\$0
4245	Government Assistance Directly Credited to Income	\$0	\$0
4305	Regulatory Debits	\$0	\$0
4310	Regulatory Credits	\$0	\$0
4315	Revenues from Electric Plant Leased to Others	\$0	\$0
4320	Expenses of Electric Plant Leased to Others	\$0	\$0
4325	Revenues from Merchandise, Jobbing, Etc.	\$0	\$0
4330	Costs and Expenses of Merchandising, Jobbing, Etc.	\$0	\$0
4335	Profits and Losses from Financial Instrument Hedges	\$0	\$0
4340	Profits and Losses from Financial Instrument Investments	\$0	\$0
4345	Gains from Disposition of Future Use Utility Plant	\$0	\$0
4350	Losses from Disposition of Future Use Utility Plant	\$0	\$0
4355	Gain on Disposition of Utility and Other Property	\$0	\$0
4360	Loss on Disposition of Utility and Other Property	\$0	\$0
4365	Gains from Disposition of Allowances for Emission	\$0	\$0
4370	Losses from Disposition of Allowances for Emission	\$0	\$0
4375	Revenues from Non-Utility Operations	\$0	\$0
4380	Expenses of Non-Utility Operations	\$0	\$0
4390	Miscellaneous Non-Operating Income	\$0	\$0
4395	Rate-Payer Benefit Including Interest	\$0	\$0

4398	Foreign Exchange Gains and Losses, Including Amortization	\$0	\$0
4405	Interest and Dividend Income	(\$12,000)	(\$12,000)
4415	Equity in Earnings of Subsidiary Companies	\$0	\$0
4705	Power Purchased	\$8,370,389	\$8,370,389
4708	Charges-WMS	\$586,928	\$586,928
4710	Cost of Power Adjustments	\$0	\$0
4712	Charges-One-Time	\$0	\$0
4714	Charges-NW	\$681,913	\$681,913
4715	System Control and Load Dispatching	\$0	\$0
4716	Charges-CN	\$554,698	\$554,698
4730	Rural Rate Assistance Expense	\$124,158	\$124,158
4750	Charges-LV	\$181,008	\$181,008
5005	Operation Supervision and Engineering	\$108,000	\$108,000
5010	Load Dispatching	\$0	\$0
5012	Station Buildings and Fixtures Expense	\$1,000	\$1,000
5014	Transformer Station Equipment - Operation Labour	\$0	\$0
5015	Transformer Station Equipment - Operation Supplies and Expenses	\$0	\$0
5016	Distribution Station Equipment - Operation Labour	\$1,000	\$1,000
5017	Distribution Station Equipment - Operation Supplies and Expenses	\$0	\$0
5020	Overhead Distribution Lines and Feeders - Operation Labour	\$2,000	\$2,000
5025	Overhead Distribution Lines & Feeders - Operation Supplies and Expenses	\$0	\$0
5030	Overhead Subtransmission Feeders - Operation	\$0	\$0
5035	Overhead Distribution Transformers- Operation	\$10,000	\$10,000
5040	Underground Distribution Lines and Feeders - Operation Labour	\$0	\$0
5045	Underground Distribution Lines & Feeders - Operation Supplies & Expenses	\$0	\$0

5050	Underground Subtransmission Feeders - Operation	\$0	\$0
5055	Underground Distribution Transformers - Operation	\$0	\$0
5065	Meter Expense	\$97,473	\$97,473
5070	Customer Premises - Operation Labour	\$0	\$0
5075	Customer Premises - Materials and Expenses	\$0	\$0
5085	Miscellaneous Distribution Expense	\$67,000	\$67,000
5090	Underground Distribution Lines and Feeders - Rental Paid	\$0	\$0
5095	Overhead Distribution Lines and Feeders - Rental Paid	\$23,189	\$23,189
5096	Other Rent	\$0	\$0
5105	Maintenance Supervision and Engineering	\$0	\$0
5110	Maintenance of Buildings and Fixtures - Distribution Stations	\$0	\$0
5112	Maintenance of Transformer Station Equipment	\$0	\$0
5114	Maintenance of Distribution Station Equipment	\$71,000	\$71,000
5120	Maintenance of Poles, Towers and Fixtures	\$41,200	\$41,200
5125	Maintenance of Overhead Conductors and Devices	\$103,000	\$103,000
5130	Maintenance of Overhead Services	\$51,500	\$51,500
5135	Overhead Distribution Lines and Feeders - Right of Way	\$41,200	\$41,200
5145	Maintenance of Underground Conduit	\$2,100	\$2,100
5150	Maintenance of Underground Conductors and Devices	\$7,374	\$7,374
5155	Maintenance of Underground Services	\$22,500	\$22,500
5160	Maintenance of Line Transformers	\$51,500	\$51,500
5175	Maintenance of Meters	\$20,000	\$20,000
5305	Supervision	\$0	\$0
5310	Meter Reading Expense	\$32,800	\$32,800
5315	Customer Billing	\$280,200	\$280,200

5320	Collecting	\$37,100	\$37,100
5325	Collecting- Cash Over and Short	\$0	\$0
5330	Collection Charges	\$0	\$0
5335	Bad Debt Expense	\$41,200	\$41,200
5340	Miscellaneous Customer Accounts Expenses	\$0	\$0
5405	Supervision	\$0	\$0
5410	Community Relations - Sundry	\$3,500	\$3,500
5415	Energy Conservation	\$0	\$0
5420	Community Safety Program	\$0	\$0
5425	Miscellaneous Customer Service and Informational Expenses	\$0	\$0
5505	Supervision	\$0	\$0
5510	Demonstrating and Selling Expense	\$0	\$0
5515	Advertising Expense	\$0	\$0
5520	Miscellaneous Sales Expense	\$0	\$0
5605	Executive Salaries and Expenses	\$0	\$0
5610	Management Salaries and Expenses	\$0	\$0
5615	General Administrative Salaries and Expenses	\$371,800	\$371,800
5620	Office Supplies and Expenses	\$10,300	\$10,300
5625	Administrative Expense Transferred Credit	\$27,754	\$27,754
5630	Outside Services Employed	\$61,800	\$61,800
5635	Property Insurance	\$41,807	\$41,807
5640	Injuries and Damages	\$0	\$0
5645	Employee Pensions and Benefits	\$0	\$0
5650	Franchise Requirements	\$0	\$0
5655	Regulatory Expenses	\$122,907	\$122,907
5660	General Advertising Expenses	\$0	\$0
5665	Miscellaneous General Expenses	\$99,150	\$99,150
5670	Rent	\$8,200	\$8,200
5675	Maintenance of General Plant	\$28,800	\$28,800
5680	Electrical Safety Authority Fees	\$3,374	\$3,374
5681	IFRS Placeholder Expense Account	\$0	\$0
5682	IFRS Placeholder Expense Account	\$0	\$0
5683	IFRS Placeholder Expense Account	\$0	\$0
5684	IFRS Placeholder Expense Account	\$0	\$0

5685	Independent Market Operator Fees and Penalties	\$0		\$0
5705	Amortization Expense - Property, Plant, and Equipment	\$340,980		\$340,980
5710	Amortization of Limited Term Electric Plant	\$0		\$0
5715	Amortization of Intangibles and Other Electric Plant	\$0		\$0
5720	Amortization of Electric Plant Acquisition Adjustments	\$0		\$0
5730	Amortization of Unrecovered Plant and Regulatory Study Costs	\$0		\$0
5735	Amortization of Deferred Development Costs	\$0		\$0
5740	Amortization of Deferred Charges	\$0		\$0
6005	Interest on Long Term Debt	\$168,423		\$168,423
6105	Taxes Other Than Income Taxes	\$23,300		\$23,300
6110	Income Taxes	\$39,129		\$39,129
6205	Donations	\$0		\$0
6210	Life Insurance	\$0		\$0
6215	Penalties	\$0		\$0
6225	Other Deductions	\$0		\$0
<b>Total</b>		<b>\$7,828,635</b>	<b>\$8,145,003</b>	<b>\$15,973,638</b>
				<b>Control</b>

### Grouping by Allocator

	Adjusted TB	Excluded from COSS	Excluded	Included
1808	\$ 1,000	\$ -	\$ -	\$ 1,000
1815	\$ -	\$ -	\$ -	\$ -
1820	\$ 72,000	\$ -	\$ -	\$ 72,000
1830	\$ 41,200	\$ -	\$ -	\$ 41,200
1835	\$ 103,000	\$ -	\$ -	\$ 103,000
1840	\$ 2,100	\$ -	\$ -	\$ 2,100

1845	\$	7,374	\$	-	\$	-	\$	7,374
1850	\$	61,500	\$	-	\$	-	\$	61,500
1855	\$	74,000	\$	-	\$	-	\$	74,000
1860	\$	20,000	\$	-	\$	-	\$	20,000
1815-1855	\$	175,000	\$	-	\$	-	\$	175,000
1830 & 1835	\$	66,389	\$	-	\$	-	\$	66,389
1840 & 1845	\$	-	\$	-	\$	-	\$	-
BCP	\$	-	\$	-	\$	-	\$	-
BDHA	\$	41,200	\$	-	\$	-	\$	41,200
Break Out	\$	(2,444,485)	\$	-	\$	-	\$	(2,444,485)
CCA	\$	-	\$	-	\$	-	\$	-
CDMPP	\$	-	\$	-	\$	-	\$	-
CEN	\$	1,385,089	\$	-	\$	-	\$	1,385,089
CEN EWMP	\$	9,081,475	\$	-	\$	-	\$	9,081,475
CREV	\$	-	\$	-	\$	-	\$	-
CWCS	\$	291,637	\$	-	\$	-	\$	291,637
CWMC	\$	1,587,718	\$	-	\$	-	\$	1,587,718
CWMR	\$	32,800	\$	-	\$	-	\$	32,800
CWNB	\$	308,614	\$	-	\$	-	\$	308,614
DCP	\$	170,338	\$	-	\$	-	\$	170,338
LPHA	\$	(32,400)	\$	-	\$	-	\$	(32,400)
LTNCP	\$	1,061,223	\$	-	\$	-	\$	1,061,223
NFA	\$	(97,289)	\$	-	\$	-	\$	(97,289)
NFA ECC	\$	1,184,197	\$	-	\$	-	\$	1,184,197
O&M	\$	737,585	\$	-	\$	-	\$	737,585
PNCP	\$	2,206,929	\$	-	\$	-	\$	2,206,929
SNCP	\$	1,633,766	\$	-	\$	-	\$	1,633,766
TCP	\$	-	\$	-	\$	-	\$	-
<b>Total</b>	<b>\$</b>	<b>17,771,959</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>17,771,959</b>



\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$593,907	\$593,907	\$0	\$593,907	\$0
\$0	\$148,477	\$148,477	\$0	\$148,477	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$312,183	\$312,183	\$0	\$312,183	\$0
\$0	\$226,064	\$226,064	\$0	\$226,064	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$1,081,369	\$1,081,369	\$0	\$1,081,369	\$0
\$0	\$783,061	\$783,061	\$0	\$783,061	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$9,584	\$9,584	\$0	\$9,584	\$0
\$0	\$27,278	\$27,278	\$0	\$27,278	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$209,885	\$209,885	\$0	\$209,885	\$0
\$0	\$597,364	\$597,364	\$0	\$597,364	\$0
\$0	\$1,061,223	\$1,061,223	\$0	\$1,061,223	\$0
\$0	\$291,637	\$291,637	\$0	\$291,637	\$0
\$0	\$1,490,244	\$1,490,244	\$0	\$1,490,244	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0

\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$8,796	\$8,796	\$0	\$8,796	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$173,688	\$173,688	\$0	\$173,688	\$0
\$0	\$189,827	\$189,827	\$0	\$189,827	\$0
\$0	\$627,095	\$627,095	\$0	\$627,095	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$142,984	\$142,984	\$0	\$142,984	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
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\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	(\$360,988)	(\$360,988)	\$0	(\$360,988)	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	(\$2,424,477)	(\$2,424,477)	\$0	(\$2,424,477)	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	(\$272,112)	(\$272,112)	\$0	(\$272,112)	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	(\$1,957,800)	(\$1,957,800)	\$0	(\$1,957,800)	\$0
\$0	(\$21,528)	(\$21,528)	\$0	(\$21,528)	\$0
\$0	(\$8,550)	(\$8,550)	\$0	(\$8,550)	\$0
\$0	(\$136)	(\$136)	\$0	(\$136)	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	(\$44,029)	(\$44,029)	\$0	(\$44,029)	\$0



\$0	\$0	\$0	\$0	\$0	\$0
\$0	(\$12,000)	(\$12,000)	\$0	(\$12,000)	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$8,370,389	\$8,370,389	\$0	\$8,370,389	\$0
\$0	\$586,928	\$586,928	\$0	\$586,928	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$681,913	\$681,913	\$0	\$681,913	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$554,698	\$554,698	\$0	\$554,698	\$0
\$0	\$124,158	\$124,158	\$0	\$124,158	\$0
\$0	\$181,008	\$181,008	\$0	\$181,008	\$0
\$0	\$108,000	\$108,000	\$0	\$108,000	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$1,000	\$1,000	\$0	\$1,000	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$1,000	\$1,000	\$0	\$1,000	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$2,000	\$2,000	\$0	\$2,000	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$10,000	\$10,000	\$0	\$10,000	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0

\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$97,473	\$97,473	\$0	\$97,473	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$67,000	\$67,000	\$0	\$67,000	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$23,189	\$23,189	\$0	\$23,189	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$71,000	\$71,000	\$0	\$71,000	\$0
\$0	\$41,200	\$41,200	\$0	\$41,200	\$0
\$0	\$103,000	\$103,000	\$0	\$103,000	\$0
\$0	\$51,500	\$51,500	\$0	\$51,500	\$0
\$0	\$41,200	\$41,200	\$0	\$41,200	\$0
\$0	\$2,100	\$2,100	\$0	\$2,100	\$0
\$0	\$7,374	\$7,374	\$0	\$7,374	\$0
\$0	\$22,500	\$22,500	\$0	\$22,500	\$0
\$0	\$51,500	\$51,500	\$0	\$51,500	\$0
\$0	\$20,000	\$20,000	\$0	\$20,000	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$32,800	\$32,800	\$0	\$32,800	\$0
\$0	\$280,200	\$280,200	\$0	\$280,200	\$0

\$0	\$37,100	\$37,100	\$0	\$37,100	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$41,200	\$41,200	\$0	\$41,200	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$3,500	\$3,500	\$0	\$3,500	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$371,800	\$371,800	\$0	\$371,800	\$0
\$0	\$10,300	\$10,300	\$0	\$10,300	\$0
\$0	\$27,754	\$27,754	\$0	\$27,754	\$0
\$0	\$61,800	\$61,800	\$0	\$61,800	\$0
\$0	\$41,807	\$41,807	\$0	\$41,807	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$122,907	\$122,907	\$0	\$122,907	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$99,150	\$99,150	\$0	\$99,150	\$0
\$0	\$8,200	\$8,200	\$0	\$8,200	\$0
\$0	\$28,800	\$28,800	\$0	\$28,800	\$0
\$0	\$3,374	\$3,374	\$0	\$3,374	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0

\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$340,980	\$340,980	\$0	\$340,980	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$168,423	\$168,423	\$0	\$168,423	\$0
\$0	\$23,300	\$23,300	\$0	\$23,300	\$0
\$0	\$39,129	\$39,129	\$0	\$39,129	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
\$0	\$0	\$0	\$0	\$0	\$0
<b>\$0</b>	<b>\$15,973,638</b>	<b>\$15,973,638</b>	<b>\$0</b>	<b>\$15,973,637</b>	<b>\$1</b>
<b>\$15,973,638</b>					



	Balance in O5	Difference	Balance in O4 Summary	Difference
\$	1,000	\$ -	\$ 1,000	\$ -
\$	-	\$ -	\$ -	\$ -
\$	72,000	\$ -	\$ 72,000	\$ -
\$	41,200	\$ -	\$ 41,200	\$ -
\$	103,000	\$ -	\$ 103,000	\$ -
\$	2,100	\$ -	\$ 2,100	\$ -

\$	7,374	\$	-	\$	7,374	\$	-
\$	61,500	\$	-	\$	61,500	\$	-
\$	74,000	\$	-	\$	74,000	\$	-
\$	20,000	\$	-	\$	20,000	\$	-
\$	175,000	\$	-	\$	175,000	\$	-
\$	66,389	\$	-	\$	66,389	\$	-
\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-
\$	41,200	\$	-	\$	41,200	\$	-
\$	(2,444,485)	\$	-	\$	(2,444,485)	\$	1
\$	-	\$	-	\$	-	\$	-
\$	-	\$	-	\$	-	\$	-
\$	1,385,089	\$	-	\$	1,385,089	\$	-
\$	9,081,475	\$	-	\$	9,081,475	\$	-
\$	-	\$	-	\$	-	\$	-
\$	291,637	\$	-	\$	291,637	\$	-
\$	1,587,718	\$	-	\$	1,587,718	\$	-
\$	32,800	\$	-	\$	32,800	\$	-
\$	308,614	\$	-	\$	308,614	\$	-
\$	170,338	\$	-	\$	170,338	\$	-
\$	(32,400)	\$	-	\$	(32,400)	\$	-
\$	1,061,223	\$	-	\$	1,061,223	\$	-
\$	(97,289)	\$	-	\$	(97,289)	\$	-
\$	1,184,197	\$	-	\$	1,184,197	\$	-
\$	737,585	\$	-	\$	737,585	\$	-
\$	2,206,929	\$	-	\$	2,206,929	\$	-
\$	1,633,766	\$	-	\$	1,633,766	\$	-
\$	-	\$	-	\$	-	\$	-
<b>\$</b>	<b>17,771,959</b>	<b>\$</b>	<b>-</b>	<b>\$</b>	<b>17,771,958</b>	<b>\$</b>	<b>1</b>



## 2012 COS COST ALLOCATION

**Rideau St. Lawrence Distribution Inc.**

**EB-2011-0274**

**December-29-11**

### **Sheet E5 Reconciliation Worksheet - IR Round**

If you have completed the Cost Allocation filing model and prepare your findings to the Ontario Energy Board, please note that you have options.

**OPTION #1 - Detailed**

- Step 1: Save this file as "LDCname\_Detailed\_CA\_model\_RUN#.xls"
- Step 2: Printout sheets I2, I4, and O1

**OPTION #2 - Rolled Up**

- Step 1: Save this file as "LDCname\_Detailed\_CA\_model\_RUN#.xls"
- Step 2: **Click on the Option 2 Button**
- Step 3: **Save this file as "LDCname\_RolledUp\_CA\_model\_RUN#.xls"**
- Step 4: Printout sheets I2, I4, and O1

**OPTION 2**

**PRINT for Filing**

**12**

---

ed to submit  
ive 2 saving



**Supplementary Interrogatories**  
**from the**  
**School Energy Coalition**

**11. [SEC IR #3]**

Please provide the number of poles the Applicant plans to replace in 2012. How many has it replaced year-to-date?

*RSL plans to replace 31 poles in 2012. For 2012 to date, RSL has replaced 15 poles.*

**12. [SEC IR #9]**

Please explain why the Applicant believes it is appropriate for the GS<50 and GS>50 classes to be above the MSC?

*Although the MSC for the GS<50kW class exceeds the proposed ceiling in the Cost Allocation model by \$0.51 the proposed rate of \$31.75 allows RSL to maintain the existing Fixed / Variable ratios. The Board's report on Cost Allocation dated November 28, 2007 indicated:*

“The Board considers it to be inappropriate to make significant changes to the ceiling for the MSC at this time, given the number of issues that remain to be examined. The appropriateness of the methodologies cited above, used to set the MSC is an issue that will be examined within the scope of the Rate Review. The Rate Review will also examine the role of rate design in achieving various objectives, including conservation of energy. Both of these undertakings will have determinative impacts on the fixed/variable ratio policy”.

*To date the Rate Review has not taken place therefore RSL is proposing to maintain its fixed variable ratios which result in the proposed Monthly Services Charges for all rate classes.*

**13. [Board Staff IR #15]**

Please provide a breakdown of the overhead rate for each cost category listed in the interrogatory response.

Interrogatory response to Board Staff IR # 15:

***The overhead rate includes the cost of MEARIE benefits, the employer portion of employment Insurance, Canada Pension Plan, OMERS, Worker Compensation Insurance, and the cost of Statutory Holidays, vacation and sick pay.***

**Response to SEC #13**

***The overhead rate for each cost category is listed below:***

<b><i>MEARIE Health Benefits</i></b>	<b><i>17%</i></b>
<b><i>Employer portion of EI</i></b>	<b><i>2%</i></b>
<b><i>Employer portion of CPP</i></b>	<b><i>4%</i></b>
<b><i>Employer portion of OMERS</i></b>	<b><i>9%</i></b>
<b><i>WSIB</i></b>	<b><i>1%</i></b>
<b><i>Statutory Holidays, vacation, and sick pay</i></b>	<b><i>18%</i></b>
<b><i>Other – EHT</i></b>	<b><i><u>3%</u></i></b>
<b><i>Total Overhead Percentage</i></b>	<b><i>54%</i></b>