

October 18, 2013

Kirsten Walli, Board Secretary Ontario Energy Board P.O. Box 2319, 27th Floor 2300 Yonge Street Toronto, ON, M4P 1E4

Attention: Ms. Walli

Re: Espanola Regional Hydro Distribution Corporation ("ERHDC") 2014 4th Generation IR Distribution Rate Application Board File No. EB-2013-0127

ERHDC is pleased to submit to the Ontario Energy Board its 2014 electricity distribution rate application, in accordance with the Boards Directive and Guidelines. The filing guidelines indicate that each application should include:

- > A Managers summary documenting and explaining all rate adjustments applied for;
- > The primary contact information for the IRM application;
- A completed Rate Generator model with Supplemental filing modules or workforms, provided by the Board, in both electronic (i.e. Excel) and PDF form;
- ➢ A PDF copy of the current Tariff Sheet;
- > Supporting documentation cited within the application; and
- Statement as to which publication the applicant's notice will be appearing.

The primary contact for this application is Jennifer Uchmanowicz, Rates and Regulatory Affairs Officer. Phone number 705-759-3009 or email at Jennifer.Uchmanowicz@ssmpuc.com.

ERHDC proposes the notice should appear in the Mid-North Monitor in both English and French. The Mid-North Monitor is a weekly paid circulation issuing 2,000 copies and covers ERHDC's entire service territory. The Mid-North monitor has the highest readership and circulation numbers in the area.

ERHDC's 2014 electricity distribution application will be sent to the OEB in the following form:

- (a) Electronic filing through the Board's web portal, consisting of one (1) electronic copy of the application in a searchable/unrestricted PDF format and one (1) electronic copy in Microsoft Excel format of the completed Rate Generator model along with supplemental filing work forms.
- (b) Two (2) paper copies of the application.

Sincerely,

Gennifer Ucimomercy

Jennifer Uchmanowicz on behalf of Espanola Regional Hydro Distribution Corporation Rates and Regulatory Affairs Officer PUC Distribution Inc. Sault Ste. Marie Ont. Email: Jennifer.Uchmanowicz@ssmpuc.com Phone: 705-759-3009

Espanola Regional Hydro Distribution Corporation ("ERHDC")

MANAGER'S SUMMARY

2014 Distribution Rate Application under 4th Generation IRM

IN THE MATTER OF the Ontario Energy Board Act, 1998, S.O. 1998, c.15, (Schedule B);

AND IN THE MATTER of an application by Espanola Regional Hydro Distribution Corporation to the Ontario Energy Board for an Order or Orders approving or fixing just and reasonable rates and other charges for electricity distribution to be effective May 1, 2014.

ERHDC has prepared the 2014 4th generation incentive rate-setting application consistent with Chapter 3 of the filing requirements for electricity distribution rate applications revised by the Ontario Energy Board (the "OEB") on July 17, 2013.

The Managers Summary will address the following items:

- 1. Annual Adjustment Mechanism
- 2. Z-factor Claims
- 3. Off-Ramps
- 4. Tax Changes
- 5. Review and Disposition of Group 1 Deferral and Variance Account Balances
- 6. LRAM and LRAMVA Variance Account
- 7. Revenue-to-cost Ratio Adjustment
- 8. Electricity Distribution Retail Transmission Service Rates
- 9. Regulatory Accounting Policy Changes to the Depreciation Expense and Capitalization Policies
- 10. Incremental Capital Module

The Exhibits are as follows:

- Exhibit 1 2014 Proposed Tariff of Rates and Charges
- Exhibit 2 Bill Impacts
- Exhibit 3 Current Tariff of Rates and Charges
- Exhibit 4 2014 Rate Generator Workform Model
- Exhibit 5 2014 RTSR Workform Model
- Exhibit 6 2014 Shared Tax Savings Workform
- Exhibit 7 2014 Incremental Capital Projects
- Exhibit 8 2014 Incremental Capital Workform
- Exhibit 9 IndEco Strategic Consulting Report LRAM
- Exhibit 10 Substation Condition Assessment Costello Associates
- Exhibit 11 Station Contingency Review Costello Associates
- Exhibit 12 New Municipal Substation Report Costello Associates

1. Annual Adjustment Mechanism

The annual adjustment mechanism is defined as the annual percentage change in the inflation factor less an X-Factor (i.e. productivity factor and stretch factor). As part of the supplemental report on the RRFE (renewed regulatory framework for electricity distributors) the Board will establish the final inflation factor, productivity factor and stretch factor to apply to distributors for 2014 rate setting. Board staff will update each distributor's Rate Generator Model once the final parameters are established. The rate Generator Model initially includes rate-setting parameters from the preceding year as a placeholder: inflation factor of 1.6%, productivity factor of 0.72% and a stretch factor of 0.4% (representing the middle cohort) for a total price index adjustment of 0.48%.

The price index adjustment is not applied to the following components of delivery rates:

- Rate Adders;
- Rate Riders;
- Low Voltage Service Charges;
- Retail Transmission Service Rates;
- Wholesale Market Service Rates;
- Rural Rate Protection Charge;
- Standard Supply Service Administration Charge;
- Micro-FIT Service Charge;
- Specific Service Charges;
- Transformation and Primary Metering Allowances; and
- Smart Meter Entity Charge.

2. Z-Factor Claims

Z-factor claims are intended to provide for unforeseen events outside of a distributor's management control, regardless of a distributors' rate-setting mechanism at the time of the event. The cost to a distributor must be material and its causation clear. In this application, ERHDC is not applying for a Z-factor claim.

3. Off-Ramps

An off ramp is based on a pre-defined set of conditions under which a plan, based on any of the three rate-setting methods, would be terminated or modified before its normal end-of-term date due to excessive over or under earnings. In this application, ERHDC is not applying for an off-ramp.

4. Tax Changes

Under a 4th Generation IR there is a 50/50 sharing of the impact of currently known legislation tax changes as applied to the tax level reflected in the Board-approved base rates for distributors. ERHDC is not aware of changes in tax legislation since filing its 2012 Cost of Service Rate Application (EB-2011-0319) that would result in any annual tax changes. Therefore, ERHDC is not proposing a rate rider for the sharing of tax changes. ERHDC has included in Exhibit 6 the completed 2014 IR Tax Sharing Model. An electronic copy is filed with the application.

5. Review and Disposition of Group 1 Deferral and Variance Account Balances

ERHDC followed the *Report of the Board on Electricity Distributors' Deferral and Variance Account Review Report* (the "EDDVAR Report"). The report provides that under the 4th Generation IR, the distributors Group 1 audited account balances will be reviewed and disposed of if the pre-set disposition threshold of \$0.001 per kWh is exceeded. The Group 1 accounts are as follows:

- 1550 Low Voltage Account;
- 1580 RSVA Wholesale Market Service Charge Account;
- 1584 RSVA Retail Transmission Network Charges Account;
- 1586 RSVA Retail Transmission Connection Charge Account;
- 1588 RSVA Power Account;
- 1589 RSVA Global Adjustment Account;
- 1590 Recovery of Regulatory Asset Balances Account (if applicable); and
- 1595 Disposition and Recovery/Refund of Regulatory Balances Account.

ERHDC exceeded the threshold test of \$0.001 per kWh as shown below:

Threshold Test

Total Claim (including Account 1521, 1562 and 1568)	(\$145,045)
Total Claim for Threshold Test (All Group 1 Accounts)	(\$145,045)
Threshold Test (Total claim per kWh) ³	(0.0023)

ERHDC is applying for disposal of the following accounts:

1550 – Low Voltage Account

- 1580 Wholesale Market Service Charge
- 1584 RSVA Retail Transmission Network Charge
- 1586 RSVA Retail Transmission Connection Charge
- 1588 RSVA Power (Excluding Global Adjustment)
- 1589 RSVA Global Adjustment
- 1595 Residual Balance of Recovery of Regulatory Asset Balance (2010)
- 1595 Residual Balance of Recovery of Regulatory Asset Balance (2011)

ERHDC has completed the continuity schedule in Sheet 5 of the 2014 IRM Rate Generator. In the continuity schedule ERHDC included the December 31, 2012 Group 1 account balances, 2013 dispositions instructed by the Board, and projected carrying charges to April 30, 2014 using the Boards prescribed interest rate of 1.47%. The balances for disposition are as follows:

1550 – Low Voltage Account	143,381
1580 – Wholesale Market Service Charge	(61,926)
1584 – RSVA Retail Transmission Network Charge	(55,307)
1586 – RSVA Retail Transmission Connection Charge	(29,201)
1588 – RSVA Power	(293,202)
1589 – RSVA Global Adjustment	151,308

1595 – Balance of Recovery of Regulatory Assets (2010)	966
1595 – Balance of Recovery of Regulatory Assets (2011)	(1,064)
Total	(145,045)

ERHDC used billing determinants from the last Board-approved volumetric forecast to allocate the regulatory asset recovery balances for accounts 1550, 1580, 1584, 1586, and 1588 to the rate classes. The residual balance in 1595 is recovered based on the proportionate share by rate class at the time the recoveries were approved. Global adjustment sub-account 1589 is allocated to the rate classes based on non-RPP kWh's. ERHDC is applying for a recovery (refund) period of two years from May 1, 2014 to April 30, 2016 to be consistent with the 2012 disposition rate rider in effect until April 30, 2016 and to mitigate rate impacts.

The regulatory asset rate rider as calculated in the rate generator model (excluding 1589 account Global Adjustment) is as follows:

Residential	(0.0024)
General Service less than 50 kW	(0.0024)
General Service 50 to 4,999 kW	(0.9427)
Unmetered Scattered Load	(0.0024)
Sentinel Lighting	(0.8716)
Street Lighting	(0.8351)

The regulatory asset rate rider as calculated in the rate generator model that is applicable only to Non-RPP customers for the Global Adjustment is as follows:

Residential	0.0033
General Service less than 50 kW	0.0033
General Service 50 to 4,999 kW	1.3189
Unmetered Scattered Load	0
Sentinel Lighting	0
Street Lighting	0

6. LRAM and LRAMVA Variance Account

<u>LRAM</u>

The lost revenue adjustment mechanism ("LRAM") is a retrospective adjustment which is designed to account for differences between the forecast revenue loss embedded in rates and the actual revenue loss for programs delivered pre-2010. In ERHDC's 2012 Cost of Service Rate Application (EB-2011-0319) an LRAM amount of \$152,728 was approved which represents the effect of CDM programs implemented from 2006 to 2010 for the period 2006 to 2010. In this application, ERHDC is applying for the persisting losses from the pre-2010 programs in 2011 until April 30, 2012 when ERHDC rebased.

As part of the 2012 Cost of Service Rate Application, ERHDC engaged IndEco Strategic Consulting Inc. to review its CDM programs and aid in the calculation of the recovery following the OEB guidelines. The IndEco report supported the LRAM claim amount until

April 30, 2012. ERHDC has included the report as Exhibit 9 and has provided below tables that summarize the results of the IndEco report by rate class.

Program Years	2006	2007	2008	2009	2010	2011	Jan 1 - Apr 30 2012	Total
2006	\$4,607	\$4,557	\$4,720	\$4,528	\$651	\$643	\$146	\$19,852
2007		\$32,670	\$33,075	\$31,636	\$26,173	\$1,726	\$415	\$125,695
2008			\$2,577	\$2,465	\$2,040	\$2,017	\$457	\$9,556
2009				\$1,229	\$995	\$984	\$244	\$3,452
2010					\$484	\$478	\$119	\$1,081
Total	\$4,607	\$37,227	\$40,372	\$39,858	\$30,343	\$5,848	\$1,381	\$159,636

Residential rate class LRAM claims

GS < 50 kW rate class LRAM claims

Program Years	2006	2007	2008	2009	2010	2011	Jan 1 - Apr 30 2012	Total
2006	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
2007		\$0	\$0	\$0	\$0	\$0	\$0	\$0
2008			\$2	\$2	\$2	\$2	\$0	\$8
2009				\$62	\$53	\$53	\$13	\$181
2010					\$200	\$198	\$49	\$447
Total	\$0	\$0	\$2	\$64	\$255	\$253	\$62	\$636

ERHDC has summarized the persisting losses by rate class from pre-2010 programs in 2011 and for the 4 months of 2012 ending April 30, 2012.

	2011	January 1 to April 30, 2012	Total
Residential	\$5,848	\$1,381	\$7,229
GS<50	\$253	\$62	\$315

ERHDC proposed to dispose of the LRAM balance over a one year period as a volumetric rate rider from May 1, 2014 to April 30, 2015. The rate rider below is calculated using the most recent Board approved load forecast from the 2012 COS Application (EB-2011-0319).

	Residential	GS<50
	\$7,229	\$315
kWh's	32,680,721	11,265,899
Rate Rider	\$0.0002	\$0.0000

<u>LRAMVA</u>

For CDM programs delivered within the 2011 to 2014 term, the Board established Account 1568 - LRAMVA to capture the variance between the Board Approved CDM forecast and the actual results at the customer rate class level. In ERHDC's 2012 Cost of Service Rate Application (EB-2011-0319) the Board approved a CDM adjustment of 522,000 kWhs to the load forecast. ERHDC proposes to defer applying for disposition of the LRAMVA balance until future rate applications when the balance is deemed to be significant.

7. <u>Revenue-to-cost Ratio Adjustment</u>

In ERHDC's 2012 Cost of Service Rate Application (EB-2011-0319) the Board's decision did not include a phase-in period to adjust the revenue-to-cost ratios. Therefore, ERHDC is not applying for a revenue-to-cost ratio adjustment in this application.

8. <u>Electricity Distribution Retail Transmission Service Rates</u>

ERHDC is applying for an increase in the network service and transmission connection rates in accordance with the OEB guidelines (G-2008-0001) issued October 22, 2008. The increase is calculated using the 2014 RTSR Model issued by the OEB that applies historical wholesale and retail consumption to current and future wholesale and retail rates. The 2014 RTSR workform is included as Exhibit 5 and an electronic copy is filed with this application. When the January 1, 2014 rates are determined, Board Staff will adjust the rate application model accordingly.

A summary of the current and proposed RTSR – Network and Connection rates are in the Table below:

	Current RTSR - Network (\$)	Proposed RTSR -	Current RTSR -	Proposed RTSR –
	(+)	Network (\$)	Connection	Connection
Residential (kWh)	0.0061	0.0064	0.0040	0.0042
General Service <50 kW (kWh)	0.0057	0.0060	0.0036	0.0038
General Service > 50kW (kW)	2.2869	2.3953	1.3968	1.4673
General Service >50 kW Interval Metered (kW)	2.5707	2.6926	1.9349	2.0325
USL (kWh)	0.0057	0.0060	0.0036	0.0038
Sentinel Lighting (kW)	1.7335	1.8157	1.1023	1.1579
Street Lighting (kW)	1.7248	1.8066	1.0797	1.1342

9. <u>Regulatory Accounting Policy Changes to the Depreciation Expense and</u> <u>Capitalization Policies</u>

Per the Board's letter of July 17, 2012, electricity distributors electing to remain on CGAAP must implement regulatory accounting changes for depreciation expense and

capitalization policies by January 1, 2013. ERHDC made the mandatory changes consistent with the Board's regulatory accounting policies as set out for modified IFRS as contained in the Report of the Board, *Transition to International Financial Reporting Standards EB-2008-0408*, the Kinectrics Report, and the revised 2012 Accounting Procedures Handbook.

10. Incremental Capital Module

The Incremental Capital Module (ICM) is intended to address the treatment of capital investment needs that arise during the rate-setting plan which are incremental to the materiality threshold. ERHDC is applying for the incremental capital module to recover incremental capital costs of \$2,062,500 associated with the design and construction of a new municipal substation and the required 44 kV line build. The new municipal substation is required to provide relief for the critical shortage of supply to ERHDC's customers. The capital costs are non-discretionary and are outside the base upon which current rates were derived. ERHDC is requesting that these costs be recovered by means of a rate rider that would be in place until such time that ERHDC files its next rebasing application. Costello Associates Inc. was engaged to provide supporting technical information and budgetary estimates regarding the new municipal substation which are included as Exhibit 12 of this application.

The eligibility criteria for an ICM to be recovered through rates, prior to rebasing, are materiality, need and prudence as defined below.

Criteria	Description
Materiality	The amounts must exceed the Board-defined materiality threshold and
	clearly have a significant influence on the operation of the distributor;
	otherwise they should be dealt with at rebasing.
Need	Amounts should be directly related to the claimed driver, which must be
	clearly non-discretionary. The amounts must be clearly outside of the
	base upon which rates were derived.
Prudence	The amounts to be incurred must be prudent. This means that the
	distributor's decision to incur the amounts must represent the most
	cost-effective option (not necessarily least initial cost) for ratepayers.

Materiality Threshold

The Board has determined the following formula is to be used by a distributor to calculate the materiality threshold as discussed in section 2.3 of the *Supplemental Report of the Board on 3rd Generation Incentive Regulation for Ontario's Electricity Distributors (the Supplemental Report")* EB-2007-0673.

Threshold Value =
$$1 + \left(\frac{RB}{d}\right)^* (g + PCI^*(1+g)) + 20\%$$

Where:

- RB = rate base included in base rates (\$);
- d = depreciation expense included in base rates (\$);
- g = distribution revenue change from load growth (%); and
- PCI = price cap index (% inflation less productivity factor less stretch factor).

The values for "RB" and "d" are the Board-approved amounts in the distributor's base year rate decision.

The capital expenditure materiality threshold test has been met as demonstrated below and included in the IRM Incremental Capital Workform sheet *E2.1 Threshold Test*.

Threshold Test			
Year		2012	
Price Con Index		0 599/	<u> </u>
Growth		0.58%	B
Dead Band		20%	C
Average Net Eived Assets		2070	
Gross Eived Assets Opening		\$7043875	
Add: CM/IP Opening		\$1,943,013 ¢	
Capital Additions		\$ 369 686	
Capital Disposals		\$ 361.846	
Capital Disposais		¢ 501,040	
Deduct: CWIP Closing		ч - ¢	
Gross Fixed Assets - Closing		\$7951715	
Cross Fixed Assets - Crosing		ψ1,301,110	
Average Gross Fixed Assets		\$7,947,795	
Accumulated Depreciation - Opening		\$4,881,329	
Depreciation Expense		\$ 193,562	D
Disposals		-\$ 274,079	
Retirements		\$ -	
Accumulated Depreciation - Closing		\$4,800,812	
Average Accumulated Depreciation		\$4,841,071	
Average Net Fixed Assets		\$3,106,725	E
Working Capital Allowance			
Working Capital Allowance Base		\$7,586,737	
Working Capital Allowance Rate		15%	
Working Capital Allowance		\$1,138,011	F
Rate Base		\$4,244,735	G = E + F
Depreciation	D	\$ 193,562	Н
Threshold Test		151.66%	I = 1 + (G / H) * (B + A * (1 + B)) + C
Threshold CAPEX		\$ 293 556	J = H *I
		200,000	

ERHDC has provided below the preliminary 2014 Capital Budget. None of the capital costs provided in the table have been included in the rate base and none of the capital projects are discretionary in nature. ERHDC is requesting an Incremental Capital recovery for the new municipal substation and the related 44 kV line extension for the amount of \$2,062,500. Based on projected budgets, ERHDC does not expect that future expenditure levels will trigger another Incremental Capital request before the end of the IR term.

Espanola Regional Hydro Distribution Corporation 2014 Preliminary Budget

Project	Cost
Spanish River Drive (install underground cables)	\$41,589
Pole Replacements (15 poles)	\$84,518
Tools	\$16,915
Replace Restricted Wire	\$58,638
Substation Upgrades	\$54,127
New Services	\$24,452
Upgrade Services	\$66,025
Fit/Micro Fit Installations	\$7,099
New Municipal Substation	\$1,787,500
44 kV line extension required for the new substation	<u>\$275,000</u>
Total	\$2,415,863

In the Supplement Report, the Board determined the eligible incremental capital amount sought for recovery should be in excess of the materiality threshold. ERHDC forecast cost for the new municipal substation is \$2,062,500 (substation plus required 44kV line build costs) which significantly exceeds the materiality threshold of \$293,556. The new municipal substation is projected to be 85% of the 2014 capital budget. Although all of the 2014 projects are non-discretionary, the amount in the ICM relates only to the municipal substation and the build of the required 44 kV line to minimize bill impacts. The total ICM amount in this application is \$2,062,500 (\$1,787,500 – substation costs and \$275,000 – 44 KV line build costs).

The ICM amount clearly exceeds the Board-defined materiality threshold; will have a significant influence on the operation of the distributor (as discussed in Exhibit 10, 11 & 12); and is outside the base upon which current rates were derived.

Need

The standard utility practice is to have enough supply and routing capacity to accommodate at least one contingency failure of any system component. ERHDC's present capacity matches almost exactly the loading requirements and there is no allowance for failure of any one of the existing substations. A winter-time failure would most likely result in prolonged lengthy outages and rotating blackouts that would last at least several days. Most, if not all, of ERHDC's customers in the service territory would be affected. The Substation Condition Assessment Study performed in 2008 (Exhibit 10)

indicated that all three of the existing substation are approaching the end of their useful life. As the existing stations age, the risk of an unplanned failure increases. As discussed in Exhibit 10, 11, and 12, ERHDC has capacity restraints and there is no additional capacity for future growth or to provide additional station capacity for an unplanned failure of any single substation without prolonged interruptions to customers.

In addition to ERHDC's main concern related to capacity and the potential for longduration outages, the new substation will be compatible with any level of automation or SCADA. The current substations do not have this compatibility. If a SCADA system is utilized it would provide the ability to continuously monitor and control the electric distribution system to improve reliability, reduce system losses, improve public and worker safety, and make efficient use of the operating staff.

Furthermore, the three existing substations are designed with fuses which inherently do not provide functionality for automatic restoration, transfer trips for distribution generation and the abilities often associated with Smart Grid applications.

Prudence

ERHDC analyzed several alternatives for additional capacity to ensure the costs incurred are prudent. The proposed alternative to build a new municipal substation represents the most cost-effective but not the least initial cost for rate payers. The alternatives for additional capacity are further discussed in Exhibit 12 - *Costello Associates Inc. Report* supporting the new municipal substation.

Application of the Half-Year Rule

In the Supplemental Report of the Board on 3rd Generation Incentive Regulation for Ontario's Electricity Distributors EB-2007-0673 the Board determined that the half-year rule should not apply so as not to build a deficiency for the subsequent years of the IRM plan term. In a subsequent decision, with respect to the application of the half-year rule in the context of an ICM, the Board decided that the half-year rule would apply in the final year of the IRM plan term. ERHDC rebased in 2012 and is in the second year of the five year IRM plan term therefore, ERHDC did not apply the half-year rule in the ICM application.

Revenue Requirement Calculation

ERHDC used the following parameters when calculating the revenue requirement associated with the ICM:

Cost of Capital: In the December 11, 2009 *Report of the Board on Cost of Capital for Ontario's Regulated Utilities (The "2009 Report")*, the Board confirmed the continuation of a deemed 60/40 debt-equity ratio. ERHDC used the deemed capital structure of 60/40 debt-equity in the ICM. The 2009 report also states that a distributor filing an ICM adjustment shall use the last Board-approved cost of capital parameters determined during the distributor's last rebasing application when calculating the revenue requirement associated with the ICM. ERHDC used the short-term interest rate of 2.08%, a long-term interest rate of 4.41% and return on equity of 9.12% as approved in ERHDC's 2012 Cost of Service Rate Application (EB-2011-0319).

PILS: ERHDC used the current tax rate reflected in the 2014 IRM tax sharing model of 15.50% when calculating the revenue requirement associated with the ICM.

Working Capital Allowance: ERHDC used a working capital allowance of 15% to calculate the revenue requirement associated with the ICM. In ERHDC's 2012 Cost of Service rate application (EB-2011-0319) a 15% working capital allowance was approved by the Board.

Revenue Offsets

ERHDC will not have any incremental revenue as a result of the new municipal substation. The construction of a new municipal substation is to address capacity restraints and there will be no related load growth. No additional growth over and above the growth factor "g" as used in the threshold calculation should be factored into the revenue requirement for the new substation.

Funding

ERHDC is seeking funding from Infrastructure Ontario for a loan related to the costs of the new municipal substation.

Deemed Distribution Asset

Pursuant to section 84(a) of the *OEB Act*, ERHDC requests the new municipal substation to be deemed a distribution asset.

Expected in Service Date

ERHDC anticipates construction to start in late 2013 or early 2014. The estimated time frame for completion of the substation is 9 months. Therefore, the expected in service date is the Fall of 2014.

Approval of the ICM

The new substation is critical to ERHDC's infrastructure. ERHDC's primary objective for the construction of a new substation is to provide reliable power to its customers. The new substation is a non-discretionary cost and needs to be constructed to properly serve ERHDC's customers and to continue to be compliant with minimum reliability measures. In the 2012 Cost of Service rate application (EB-2011-0139), ERHDC addresses the need in Exhibit 2, Tab 3, Schedule 1, for the new substation and indicated planning and construction was on the horizon.

In the event the Board does not approve the ICM application, ERHDC will likely be faced with a significant negative cash flow in the short term and financial hardship during the IR term. If not approved, ERHDC will have to consider requesting an earlier rebasing date before the scheduled timeframe of 2017.

Incremental Capital Rate Rider

ERHDC is requesting an April 30, 2017 sunset date for the Incremental Capital Rate Rider. ERHDC is scheduled to file a Cost of Service rate application for the 2017 rate year which would set rates commencing May 1, 2017. At the time of the 2017 Cost of Service rate application, ERHDC will seek the incorporation of the requested incremental capital expenditures related to the new municipal substation into its rate base. At the time of rebasing, ERHDC will file a calculation of the actual ICM amount and the Board will make a determination on the treatment of any differences between forecast and actual capital spending during the IRM plan term.

ERHDC is requesting the Incremental Capital Rate Rider to be a fixed and variable volumetric charge as shown in the incremental capital workform as Option A on Tab F1.1. The ICM rate riders requested are shown in the Table below:

Rate Class	Service	Distribution	Distribution
	Charge Rate	Volumetric kWh	Volumetric kW
	Rider	Rate Rider	Rate Rider
Residential	\$ 1.39	\$ 0.00167	
General Service < 50 kW	\$ 2.48	\$ 0.00200	
General Service > 50kW	\$ 19.34		\$ 0.37363
Unmetered Scattered Loads	\$ 1.21	\$ 0.00155	
Sentinel Lighting	\$ 0.21		\$1.69906
Street Lighting	\$ 0.20		\$2.46929

EXHIBIT 1

2014 Proposed Tariff of Rates and Charges

Espanola Regional Hydro Distribution Corporation TARIFF OF RATES AND CHARGES

Effective and Implementation Date May 01, 2014

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2013-0127

RESIDENTIAL SERVICE CLASSIFICATION

This classification refers to an account taking electricity at 750 volts or less where the electricity is used exclusively in a single family unit, noncommercial. This can be a separately metered living accommodation, town house, apartment, semi-detached, duplex, triplex or quadruplex with residential zoning. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	s	13.73
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	S	1.12
Rate Rider for Recovery of Smart Meter Stranded Assets - effective until April 30, 2016	S	0.52
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	S	0.79
Distribution Volumetric Rate	\$/kWh	0.01660
Low Voltage Service Rate	\$/kWh	0.00370
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kWh	0.00040
Rate Rider for Recovery of Lost Revenue Adjustment Mechanism (LRAM) - effective until April 30, 2016	\$/kWh	0.00120
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 30, 2016	\$/kWh	(0.00240)
Rate Rider for Global Adjustment Sub-Account Disposition (2014) - effective until April 30, 2016		
Applicable only for Non-RPP Customers	\$/kWh	0.00330
Retail Transmission Rate - Network Service Rate	\$/kWh	0.00640
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kWh	0.00420
Rate Rider for Recovery of Lost Revenue Adjustment Mechanism (LRAM) - effective until April 30, 2015	\$/kWh	0.00020
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00167
Rate Rider for Incremental Capital - effective unitl April 30, 2017	S	1.39

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	S	0.25

GENERAL SERVICE LESS THAN 50 KW SERVICE CLASSIFICATION

This classification refers to a non residential account taking electricity at 750 volts or less whose monthly average peak demand is less than, or is forecast to be less than, 50 kW. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	S	24.60
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	S	1.34
Rate Rider for Recovery of Stranded Assets - effective until April 30, 2016	S	0.68
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	S	0.79
Distribution Volumetric Rate	\$/kWh	0.02020
Low Voltage Service Rate	\$/kWh	0.00350
Rate Rider for Deferral/Variance Account Disposition (2012) - effective until April 30, 2016	\$/kWh	0.00040
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 30, 2016	\$/kWh	(0.00240)
Rate Rider for Global Adjustment Sub-Account Disposition (2014) - effective until April 30, 2016		
Applicable only for Non-RPP Customers	\$/kWh	0.00330
Retail Transmission Rate - Network Service Rate	\$/kWh	0.00600
Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.00380
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00200
Rate Rider for Incremental Capital - effective unitl April 30, 2017	S	2.48

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	S	0.25

GENERAL SERVICE 50 TO 4,999 KW SERVICE CLASSIFICATION

This classification refers to a non residential account whose average peak demand is greater than, or is forecast to be greater than, 50 kW but less than 5,000 kW. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	S	191.58
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	S	2.75
Rate Rider for Recovery of Stranded Assets - effective until April 30, 2016	S	2.15
Distribution Volumetric Rate	\$/kW	3.70130
Low Voltage Service Rate	\$/kW	1.48400
Rate Rider for Deferral/Variance Account Disposition (2012) - effective until April 30, 2016	\$/kW	0.18860
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 30, 2016	\$/kW	(0.94270)
Rate Rider for Global Adjustment Sub-Account Disposition (2014) - effective until April 30, 2016		
Applicable only for Non-RPP Customers	\$/kW	1.31890
Retail Transmission Rate - Network Service Rate	\$/kW	2.39530
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.46730
Retail Transmission Rate - Network Service Rate - Interval Metered	\$/kW	2.69260
Retail Transmission Rate - Line and Transformation Connection Service Rate - Interval Metered	\$/kW	2.03250
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kW	0.37363
Rate Rider for Incremental Capital - effective unitl April 30, 2017	S	19.34

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	s	0.25

UNMETERED SCATTERED LOAD SERVICE CLASSIFICATION

This classification refers to an account taking electricity at 750 volts or less whose monthly average peak demand is less than, or is forecast to be less than, 50 kW and the consumption is unmetered. Such connections include cable TV power packs, bus shelters, telephone booths, traffic lights, railway crossings, etc. The customer will provide detailed manufacturer information/ documentation with regard to electrical demand/consumption of the proposed unmetered load. Further servicing details are available in the distributor's Conditions of Service.

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	S	11.96
Distribution Volumetric Rate	\$/kWh	0.01540
Low Voltage Service Rate	\$/kWh	0.00350
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kWh	0.00040
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 30, 2016	\$/kWh	(0.00240)
Retail Transmission Rate - Network Service Rate	\$/kWh	0.00600
Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.00380
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00155
Rate Rider for Incremental Capital - effective unitl April 30, 2017	S	1.21

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	s	0.25

SENTINEL LIGHTING SERVICE CLASSIFICATION

This classification applies to safety/security lighting with a Residential or General Service customer. This is typically exterior lighting, and unmetered. Consumption is estimated based on the equipment rating and estimated hours of use. Further servicing details are available in the

APPLICATION

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Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	S	2.09
Distribution Volumetric Rate	\$/kW	16.83120
Low Voltage Service Rate	\$/kW	1.06840
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kW	0.13140
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 30, 2016	\$/kW	(0.87160)
Retail Transmission Rate - Network Service Rate	\$/kW	1.81570
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.15790
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kW	1.69906
Rate Rider for Incremental Capital - effective unitl April 30, 2017	S	0.21

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	S	0.25

STREET LIGHTING SERVICE CLASSIFICATION

This classification refers to an account for roadway lighting with a Municipality, Regional Municipality, Ministry of Transportation and private roadway lighting operation, controlled by photo cells. The consumption for these customers will be based on the calculated connected load times the required lighting times established in the approved OEB Street Lighting Load Shape Template. Further servicing details are available in the

APPLICATION

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No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	S	1.94
Distribution Volumetric Rate	\$/kW	24.46120
Low Voltage Service Rate	S/kW	1.04660
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kW	0.06650
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 30, 2016	\$/kW	(0.83510)
Retail Transmission Rate - Network Service Rate	\$/kW	1.80660
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.13420
Rate Rider for Incremental Capital - effective unitI April 30, 2017	\$/kW	2.46929
Rate Rider for Incremental Capital - effective unitl April 30, 2017	S	0.20

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	S	0.25

s

MICROFIT SERVICE CLASSIFICATION

This classification applies to an electricity generation facility contracted under the Ontario Power Authority's microFIT program and connected to the distributor's distribution system. Further servicing details are available in the distributor's Conditions of Service.

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

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MONTHLY RATES AND CHARGES - Delivery Component

Service Charge

5.40

MONTHLY RATES AND CHARGES - Regulatory Component

ALLOWANCES

Transformer Allowance for Ownership - per kW of billing demand/month	kW	(0.60)
Primary Metering Allowance for transformer losses - applied to measured demand and energy	%	(1.00)

SPECIFIC SERVICE CHARGES

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule

No charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

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Customer Administration

Arrears certificate	S	15.00
Account History	S	15.00
Returned cheque charge (plus bank charges)	S	15.00
Account set up charge/change of occupancy charge (plus credit agency costs if applicable)	\$	30.00
Special meter reads	\$	30.00
Meter dispute charge plus Measurement Canada fees (if meter found correct)	S	30.00

Non-Payment of Account

Late Payment – per month	%	1.50
Late Payment – per annum	%	19.56
Collection of account charge – no disconnection	S	30.00
Disconnect/Reconnect Charges for non payment of account - At Meter During Regular Hours	\$	65.00
Disconnect/Reconnect at meter – during regular hours	S	185.00
Temporary Service – Install & remove – overhead – no transformer	S	500.00
Temporary Service – Install & remove – underground – no transformer	S	300.00
Specific Charge for Access to the Power Poles - \$/pole/year	S	22.35

RETAIL SERVICE CHARGES (if applicable)

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

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Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable.

It should be noted that this schedule does not list any charges, assessments, or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

Retail Service Charges refer to services provided by a distributor to retailers or customers related to the supply of competitive electricity

One-time charge, per retailer, to establish the service agreement between the distributor and the retailer	\$	100.00
Monthly Fixed Charge, per retailer	\$	20.00
Monthly Variable Charge, per customer, per retailer	\$/cust.	0.50
Distributor-consolidated billing monthly charge, per customer, per retailer	\$/cust.	0.30
Retailer-consolidated billing monthly credit, per customer, per retailer	\$/cust.	(0.30)
Service Transaction Requests (STR)		
Request fee, per request, applied to the requesting party	\$	0.25
Processing fee, per request, applied to the requesting party	\$	0.50
Request for customer information as outlined in Section 10.6.3 and Chapter 11 of the Retail		
Settlement Code directly to retailers and customers, if not delivered electronically through the		
Electronic Business Transaction (EBT) system, applied to the requesting party		
Up to twice a year	\$	no charge
More than twice a year, per request (plus incremental delivery costs)	\$	2.00

LOSS FACTORS

If the distributor is not capable of prorating changed loss factors jointly with distribution rates, the revised loss factors will be implemented upon the fi

Total Loss Factor – Secondary Metered Customer < 5,000 kW	1.0687
Total Loss Factor – Primary Metered Customer < 5,000 kW	1.0587

EXHIBIT 2

Bill Impacts

Rate Class RESIDENTIAL

Loss Factor

kWh

kW

Consumption

1.0687 800

<u>If Billed on a kW basis:</u> Demand Load Factor

		Curr	Current Board-Approved					Propose	ed			Impact	
		Rate	Volume		Charge		Rate	Volume		Charge			
		(\$)			(\$)		(\$)			(\$)		\$ Change	% Change
Monthly Service Charge	\$	13.66	1	\$	13.66		\$ 13.73	1	\$	13.73	5	0.07	0.51%
Distribution Volumetric Rate	\$	0.0165	800	\$	13.20		\$ 0.0166	800	\$	13.28	\$	0.08	0.61%
Fixed Rate Riders	\$	1.64	1	\$	1.64		\$ 3.03	1	\$	3.03	\$	1.39	84.76%
Volumetric Rate Riders		0.0062	800	\$	4.96		0.0031	800	\$	2.46	-\$	2.50	-50.48%
Sub-Total A (excluding pass through)				\$	33.46				\$	32.50	-\$	0.96	-2.88%
Line Losses on Cost of Power	\$	0.0839	55	\$	4.61		\$ 0.0839	55	\$	4.61	\$	-	0.00%
Total Deferral/Variance		0 0004	800	¢	0.32		-0.0020	800	-\$	1.60	-9	1 92	-600.00%
Account Rate Riders		0.0001	000	Č	0.02		0.0020	000	Ľ	1.00		1.02	000.0070
Low Voltage Service Charge	\$	0.0037	800	\$	2.96		\$ 0.0037	800	\$	2.96	\$	-	0.00%
Smart Meter Entity Charge	\$	0.7900	1	\$	0.79	1	\$ 0.7900	1	\$	0.79	\$	-	0.00%
Sub-Total B - Distribution				\$	42.14				\$	39.26	-\$	2.88	-6.84%
DTSD_Network	¢	0.0061	055	¢	E 00		¢ 0.0064	055	0	E 47	0	0.26	4.0294
DTSD Connection and/or Line and	9	0.0001	000	ð	0.22		\$ 0.0004	600	°	0.47	3	0.20	4.92%
Transformation Connection	\$	0.0040	855	\$	3.42	:	\$ 0.0042	855	\$	3.59	\$	0.17	5.00%
Sub-Total C - Delivery (including Sub-Total B)				\$	50.78				\$	48.32	-\$	2.46	-4.84%
Wholesale Market Service	\$	0.0044	855	\$	3.76	:	\$ 0.0044	855	\$	3.76	\$	-	0.00%
Dural and Remote Pate													
Protection (RRRP)	\$	0.0012	855	\$	1.03		\$ 0.0012	855	\$	1.03	\$	-	0.00%
Standard Supply Service Charge	\$	0.2500	1	\$	0.25		\$ 0.2500	1	\$	0.25	\$	-	0.00%
Debt Retirement Charge (DRC)	S	0.0070	800	\$	5.60		\$ 0.0070	800	S	5.60	\$	-	0.00%
TOU - Off Peak	S	0.0670	512	\$	34.30		\$ 0.0670	512	S	34,30	S	-	0.00%
TOU - Mid Peak	ŝ	0 1040	144	ŝ	14 98		\$ 0 1040	144	s	14 98	s	-	0.00%
TOU - On Peak	\$	0.1240	144	\$	17.86		\$ 0.1240	144	\$	17.86	\$	-	0.00%
lotal Bill on TOU (before Taxes)				\$	128.55				\$	126.09	-\$	2.46	-1.91%
HSI		13%		\$	16.71		13%		\$	16.39	-\$	0.32	-1.91%
Total Bill (including HST)				\$	145.26				\$	142.49	-\$	2.78	-1.91%
Ontario Clean Energy Benefit ¹				-\$	14.53				-\$	14.25	\$	0.28	-1.93%
Total Bill on TOU (including OCEB)				\$	130.73				\$	128.24	-\$	2.50	-1.91%

Rate Class GENERAL SERVICE LESS THAN 50 KW

1.0687

kWh

kW

Loss Factor Consumption

2,000

If Billed on a kW basis: Demand Load Factor

		Curr	rent Board-Ap	prov	ed				Proposed				Impact	
		Rate	Volume		Charge		R	ate	Volume		Charge			
		(\$)			(\$)	ŀ	((\$)			(\$)		\$ Change	% Change
Monthly Service Charge	\$	24.48	1	\$	24.48		\$	24.60	1	\$	24.60	9	0.12	0.49%
Distribution Volumetric Rate	\$	0.0201	2,000	\$	40.20		\$ 0	0.0202	2,000	\$	40.40	9	0.20	0.50%
Fixed Rate Riders	\$	2.02	1	\$	2.02		\$	4.50	1	\$	4.50	5	2.48	122.77%
Volumetric Rate Riders		0.0050	2,000	\$	10.00		(0.0020	2,000	\$	4.00	-9	6.00	-60.00%
Sub-Total A (excluding pass through)				\$	76.70					\$	73.50	-\$	3.20	-4.17%
Line Losses on Cost of Power	\$	0.0839	137	\$	11.53		\$ 0	0.0839	137	\$	11.53	\$	-	0.00%
Total Deferral/Variance		0.0004	2,000	\$	0.80		-(0.0020	2,000	-\$	4.00	-9	4.80	-600.00%
Low Voltage Service Charge	¢	0.0035	2 000	¢	7.00		\$ 0	0035	2 000	¢	7.00	¢		0.00%
Smart Meter Entity Charge	¢	0.0000	2,000	¢	0.79		ŝ	7900	2,000	č	0.79	¢		0.00%
Sub-Total B - Distribution	J.	0.1500		•	06.90	ł	ψŪ	.1000	1	•	0.15		8.00	0.0070
(includes Sub-Total A)				*	30.02					*	00.02	-	0.00	-0.20 /0
RTSR - Network	\$	0.0057	2,137	\$	12.18		\$ 0	0.0060	2,137	\$	12.82	9	0.64	5.26%
RTSR - Connection and/or Line and	¢	0.0026	2 1 2 7	e	7.60		• •	0020	2 1 2 7	e	0 12		0.42	5 56%
Transformation Connection	9	0.0030	2,137	9	1.08		9 0	0.0030	2,137	9	0.12	4	0.43	5.50%
Sub-Total C - Delivery (including Sub-Total B)				\$	116.70					\$	109.77	-\$	6.93	-5.94%
Wholesale Market Service	\$	0.0044	2,137	\$	9.40		\$ 0	0.0044	2,137	\$	9.40	\$	-	0.00%
Rural and Remote Rate														
Protection (RRRP)	\$	0.0012	2,137	\$	2.56		\$ 0	0.0012	2,137	\$	2.56	\$	-	0.00%
Standard Supply Service Charge	s	0.2500	1	S	0.25		\$ 0	0.2500	1	s	0.25	s	-	0.00%
Debt Retirement Charge (DRC)	S	0.0070	2,000	ŝ	14.00		\$ 0	0.0070	2,000	ŝ	14.00	S	-	0.00%
TOU - Off Peak	ŝ	0.0670	1,280	s	85.76		\$ 0	0.0670	1,280	ŝ	85.76	s	-	0.00%
TOU - Mid Peak	ŝ	0 1040	360	s	37 44		\$ 0	0 1040	360	ŝ	37 44	s	-	0.00%
TOU - On Peak	S	0.1240	360	S	44.64		\$ 0	0.1240	360	S	44.64	S	-	0.00%
							•			÷				
Total Bill on TOU (before Taxes)				\$	310.76					\$	303.83	-\$	6.93	-2.23%
HST		13%		\$	40.40			13%		\$	39.50	-9	0.90	-2.23%
Total Bill (including HST)				\$	351.16					\$	343.32	-9	7.83	-2.23%
Ontario Clean Energy Benefit ¹				-\$	35.12					-\$	34.33	\$	0.79	-2.25%
Total Bill on TOU (including OCEB)				\$	316.04					\$	308.99	-\$	7.04	-2.23%

Rate Class GENERAL SERVICE 50 TO 4,999 KW

1.0687

54,203

135 55%

Loss Factor

Consumption kWh

If Billed on a kW basis: Demand kW Load Factor

		Curr	Current Board Approved				Proposed						Impact	
		Rate	Volume		Charge			Rate	Volume		Charge			
		(\$)			(\$)			(\$)			(\$)		\$ Change	% Change
Monthly Service Charge	\$	190.66	1	\$	190.66		\$	191.58	1	\$	191.58		\$ 0.92	0.48%
Distribution Volumetric Rate	\$	3.6836	135	\$	497.29		\$	3.7013	135	\$	499.68		\$ 2.39	0.48%
Fixed Rate Riders	\$	4.90	1	\$	4.90		\$	24.24	1	\$	24.24		\$ 19.34	394.69%
Volumetric Rate Riders		0.7997	135	\$	107.96			0.3736	135	\$	50.44	-	\$ 57.52	-53.28%
Sub-Total A (excluding pass through)				\$	800.81					\$	765.94	-	\$ 34.87	-4.35%
Line Losses on Cost of Power	\$	0.0839	3,724	\$	312.49		\$	0.0839	3,724	\$	312.49		\$-	0.00%
Total Deferral/Variance		0.1886	135	\$	25.46			-0.7541	135	-\$	101.80	-	\$ 127.26	-499.84%
Low Voltage Service Charge	s	1 4840	135	s	200.34		s	1 4840	135	s	200.34		s	0.00%
Smart Meter Entity Charge	Ŭ	1.1010	1	Š	-		Ť	1.1010	1	ŝ	-		\$ -	0.0070
Sub-Total B - Distribution				s	1 339 10					\$	1 176 97		\$ 162.13	-12 11%
(includes Sub-Total A)				•	1,000.10					•	1,110.01			12.1170
RTSR - Network	\$	2.2869	135	\$	308.73		\$	2.3953	135	\$	323.37		\$ 14.63	4.74%
RTSR - Connection and/or Line and	¢	1 3968	135	¢	188 57		¢	1 4673	135	¢	198.09		¢ 9.52	5.05%
Transformation Connection	•	1.0000	100	у	100.01		<u> </u>	1.4010	100	*	100.00		ψ 0.52	0.0070
Sub-Total C - Delivery (including Sub-Total B)				\$	1,836.40					\$	1,698.42	-	\$ 137.98	-7.51%
Wholesale Market Service Charge (WMSC)	\$	0.0044	57,926	\$	254.88		\$	0.0044	57,926	\$	254.88	:	\$-	0.00%
Rural and Remote Rate	s	0.0012	57,926	s	69.51		s	0.0012	57,926	s	69.51		\$ -	0.00%
Protection (RKRP) Standard Supply Service Charge		0.0500	· · ·		0.05		~	0.0500	· · ·		0.05		•	0.000/
Standard Supply Service Charge	2	0.2500	54.000	3	0.25		2	0.2500	54.000	3	0.25		Þ -	0.00%
Debt Retirement Charge (DRC)	\$	0.0070	54,203	\$	379.42		\$	0.0070	54,203	\$	379.42		5 -	0.00%
TOU - Off Peak	S	0.0670	34,690	\$	2,324.20		\$	0.0670	34,690	\$	2,324.20		5 -	0.00%
IOU - Mid Peak	\$	0.1040	9,756	\$	1,014.67		\$	0.1040	9,756	\$	1,014.67		5 -	0.00%
TOU - On Peak	\$	0.1240	9,756	\$	1,209.80		\$	0.1240	9,756	\$	1,209.80		\$-	0.00%
Total Bill on TOU (before Taxes)				\$	7.089.13					\$	6,951,15	-	\$ 137.98	-1.95%
HST , ,		13%		s	921.59			13%		s	903.65		\$ 17.94	-1.95%
Total Bill (including HST)		1070		s	8 010 71			1070		ŝ	7 854 79		\$ 155.92	-1.95%
Ontario Clean Energy Benefit ¹				Š	801.07					ŝ	785 / 9		\$ 15.50	-1.95%
Total Bill on TOU (including OCEB)				\$	7,209.64					\$	7,069.31	-	\$ 140.33	-1.95%

Rate Class UNMETERED SCATTERED LOAD

1.0687

kW

500

Loss Factor kWh Consumption

<u>If Billed on a kW basis:</u> Demand Load Factor

		Current Board-Approved						Propose	ed			Impact	
		Rate	Volume		Charge		Rate	Volume		Charge			
		(\$)			(\$)		(\$)			(\$)		\$ Change	% Change
Monthly Service Charge	\$	11.90	1	\$	11.90	1	5 11.96	1	\$	11.96	\$	0.06	0.50%
Distribution Volumetric Rate	\$	0.0153	500	\$	7.65	1	6 0.0154	500	\$	7.70	\$	0.05	0.65%
Fixed Rate Riders	\$	-	1	\$	-	1	5 1.21	1	\$	1.21	\$	1.21	
Volumetric Rate Riders		0.0059	500	\$	2.95		0.0016	500	\$	0.78	-\$	2.17	-73.69%
Sub-Total A (excluding pass through)				\$	22.50				\$	21.65	-\$	0.85	-3.80%
Line Losses on Cost of Power	\$	0.0839	34	\$	2.88	5	0.0839	34	\$	2.88	\$	-	0.00%
Total Deferral/Variance		0.0004	500	e	0.20		0 0020	500	e	1.00	e	1 20	600.00%
Account Rate Riders		0.0004	500	۹	0.20		-0.0020	500	-•	1.00	-0	1.20	-000.0070
Low Voltage Service Charge	\$	0.0035	500	\$	1.75	5	0.0035	500	\$	1.75	\$	-	0.00%
Smart Meter Entity Charge			1	\$	-			1	\$	-	\$	-	
Sub-Total B - Distribution				s	27.33				\$	25.28	-\$	2.05	-7.51%
(includes Sub-Total A)													
RTSR - Network	\$	0.0057	534	\$	3.05	1	6 0.0060	534	\$	3.21	\$	0.16	5.26%
RTSR - Connection and/or Line and	s	0.0036	534	s	1.92	9	0.0038	534	s	2.03	s	0.11	5.56%
Transformation Connection	•	0.0000		ľ.	1.02	Ľ	0.0000	001	Ľ.	2.00	Ľ	0.11	0.0070
Sub-Total C - Delivery (including Sub-Total B)				\$	32.30				\$	30.52	-\$	1.79	-5.53%
Wholesale Market Service	•	0.0044	524	e	2.25		0.0044	524	e	2.25	¢		0.00%
Charge (WMSC)	9	0.0044	504	ľ	2.00		0.0044	004	۳.	2.00	, and a second s	-	0.0070
Rural and Remote Rate	s	0.0012	534	s	0.64	5	6 0 0012	534	\$	0.64	s	-	0.00%
Protection (RRRP)													
Standard Supply Service Charge	\$	0.2500	1	\$	0.25	1	6 0.2500	1	\$	0.25	\$	-	0.00%
Debt Retirement Charge (DRC)	\$	0.0070	500	\$	3.50	1	6 0.0070	500	\$	3.50	\$	-	0.00%
TOU - Off Peak	\$	0.0670	320	\$	21.44	1	6 0.0670	320	\$	21.44	\$	-	0.00%
TOU - Mid Peak	\$	0.1040	90	\$	9.36	1	6 0.1040	90	\$	9.36	\$	-	0.00%
TOU - On Peak	\$	0.1240	90	\$	11.16	5	6 0.1240	90	\$	11.16	\$	-	0.00%
Total Bill on TOU (before Taxes)				s	81.00				\$	79.22	-\$	1 79	-2 21%
HST		1204		č	10.52		120/		ě	10.20	¢	0.22	2 210/
Total Bill (including HST)		1370		¢	01.54		1370		¢	00.50	-0	0.20	-2.2170
Ontaria Clean Engrue Banafit 1				0	91.04				0	09.02	-3	2.02	-2.21%
Total Bill on TOLI (including OCER)				-5	9.10				-0	8.95	3	0.20	-2.19%
Total bill on TOO (including OCEB)	_			\$	62.39				\$	80.57	->	1.82	-2.21%

Rate Class SENTINEL LIGHTING

Loss Factor

1.0687

80

0.2

55%

kWh Consumption

If Billed on a kW basis: Demand Load Factor

kW

	Cur	Current Board-Approved					Propose	ed			Impact	
	Rate	Volume		Charge	Γ	Rate	Volume		Charge			
	(\$)			(\$)	L	(\$)			(\$)		\$ Change	% Change
Monthly Service Charge	\$ 2.08	1	\$	2.08		\$ 2.09	1	\$	2.09	\$	0.01	0.48%
Distribution Volumetric Rate	\$ 16.7508	0	\$	3.35		\$ 16.8312	0	\$	3.37	\$	0.02	0.48%
Fixed Rate Riders	s -	1	\$	-		\$ 0.21	1	\$	0.21	\$	0.21	
Volumetric Rate Riders	4.3158	0	\$	0.86		1.6991	0	\$	0.34	-\$	0.52	-60.63%
Sub-Total A (excluding pass through)			\$	6.29				\$	6.01	-\$	0.29	-4.56%
Line Losses on Cost of Power	\$ 0.0839	6	\$	0.46	Γ	\$ 0.0839	6	\$	0.46	\$	-	0.00%
Total Deferral/Variance	0 1214	0	e	0.02		0 7402	0	e	0.15	e	0.17	662 2204
Account Rate Riders	0.1314	0	°	0.05		-0.7402	U	-9	0.15	-0	0.17	-003.3270
Low Voltage Service Charge	\$ 1.0684	0	\$	0.21		\$ 1.0684	0	\$	0.21	\$	-	0.00%
Smart Meter Entity Charge		1	\$	-	L		1	\$	-	\$	-	
Sub-Total B - Distribution			\$	7.00				\$	6.53	-\$	0.46	-6 60%
(includes Sub-Total A)								•				
RTSR - Network	\$ 1.7335	0	\$	0.35		\$ 1.8157	0	\$	0.36	\$	0.02	4.74%
RTSR - Connection and/or Line and	\$ 1 1023	0	s	0.22		\$ 1 1579	0	s	0.23	s	0.01	5.04%
Transformation Connection	↓ 1.1020	, v	, v	0.22		¢ 1.1070	-	Ľ.	0.20	Ľ	0.01	0.0470
Sub-Total C - Delivery (including Sub-Total B)			\$	7.56				\$	7.13	-\$	0.43	-5.74%
Wholesale Market Service	¢ 0.0044	90	e	0.20		¢ 0.0044	96	¢	0.20	e		0.00%
Charge (WMSC)	a 0.0044	00	l °	0.50		φ 0.0044	00	l °	0.50	°	-	0.00%
Rural and Remote Rate	\$ 0.0012	86	s	0 10		\$ 0.0012	86	s	0.10	s		0.00%
Protection (RRRP)			Ľ	0.10		. 0.0012		Ľ	0.10	Ĩ		0.0070
Standard Supply Service Charge	\$ 0.2500	1	\$	0.25		\$ 0.2500	1	\$	0.25	\$	-	0.00%
Debt Retirement Charge (DRC)	\$ 0.0070	80	\$	0.56		\$ 0.0070	80	\$	0.56	\$	-	0.00%
TOU - Off Peak	\$ 0.0670	51	\$	3.44		\$ 0.0670	51	\$	3.44	\$	-	0.00%
TOU - Mid Peak	\$ 0.1040	14	\$	1.50		\$ 0.1040	14	\$	1.50	\$	-	0.00%
TOU - On Peak	\$ 0.1240	14	\$	1.79		\$ 0.1240	14	\$	1.79	\$	-	0.00%
Total Bill on TOU (before Taxes)			\$	15.59				\$	15.16		0.43	-2 78%
HST	100/		ě	2.02		100/		ě	1.07	e	0.06	2.70%
Total Bill (including HST)	1370		¢	17.62		1370		é	17.12	-0	0.00	-2.10%
Ontaria Clean Engrue Banafit 1			0	17.02				0	17.13	-3	0.49	-2.18%
Total Bill on TOLI (including OCER)			-5	45.00				-3	45.40	0	0.05	-2.84%
	_		\$	10.00	-			ð	10.42	-\$	0.44	-2.18%

Rate Class STREET LIGHTING

Loss Factor

kW

1.0687

140

Consumption kWh

<u>If Billed on a kW basis:</u> Demand Load Factor

	Current Board-Approved			[Proposed				Impact				
		Rate	Volume		Charge		Rate	Volume		Charge			
		(\$)			(\$)	H	(\$)			(\$)		\$ Change	% Change
Monthly Service Charge	\$	1.93	1000	\$	1,930.00		\$ 1.94	1000	\$	1,940.00	1	5 10.00	0.52%
Distribution Volumetric Rate	\$ 2	24.3443	140	\$	3,408.20		\$ 24.4612	140	\$	3,424.57	9	6 16.37	0.48%
Fixed Rate Riders	\$	-	1000	\$	-		\$ 0.20	1000	\$	200.00	9	\$ 200.00	
Volumetric Rate Riders		6.1847	140	\$	865.86		2.4693	140	\$	345.70	-9	520.16	-60.07%
Sub-Total A (excluding pass through)				\$	6,204.06				\$	5,910.27	-{	293.79	-4.74%
Line Losses on Cost of Power	\$	0.0839	10	\$	0.81		\$ 0.0839	10	\$	0.81	\$	-	0.00%
Total Deferral/Variance		0.0665	140	¢	9.31		-0 1701	140	\$	23.81		33.12	355 79%
Account Rate Riders		0.0000	011	Ű	0.01		-0.1701	140	-•	20.01		00.12	-000.1070
Low Voltage Service Charge	\$	1.0466	140	\$	146.52		\$ 1.0466	140	\$	146.52	9	-	0.00%
Smart Meter Entity Charge			1	\$	-	L		1	\$	-	\$	-	
Sub-Total B - Distribution				\$	6,360.70				\$	6,033.79	-9	326.91	-5.14%
(Includes Sub-Lotal A)	•	4 70 40	450			-	A 4 0000	450		070.00		40.04	4 7 40/
RTSR - Network	3	1.7248	150	3	258.06		\$ 1.8066	150	3	270.30	1) 12.24	4.74%
RISR - Connection and/or Line and	\$	1.0797	150	\$	161.54		\$ 1.1342	150	\$	169.70	9	8.15	5.05%
						-							
(including Sub-Total B)				\$	6,780.30				\$	6,473.78	-\$	306.52	-4.52%
Wholesale Market Service	s	0.0044	150	\$	0.66		\$ 0.0044	150	\$	0.66	9	-	0.00%
Charge (VVMSC)													
Rural and Remote Rate	\$	0.0012	150	\$	0.18		\$ 0.0012	150	\$	0.18	\$	-	0.00%
Standard Supply Sanica Charge	¢	0.2500	4	¢	0.25		¢ 0.2500	1	•	0.25			0.00%
Debt Batiroment Charge (DBC)	0	0.2000	140	0	0.20		\$ 0.2000 ¢ 0.0070	140	0	0.20	3	-	0.00%
TOUL Off Deak	9	0.0070	140	2	0.98		\$ 0.0070 \$ 0.0070	140	3	0.98	3	-	0.00%
TOU - OIL Peak	2	0.0670	90	2	0.00		\$ 0.0070 \$ 0.4040	90	3	0.00	3	-	0.00%
TOU - Mild Peak	2	0.1040	25	2	2.02		5 0.1040	25	3	2.02	3	-	0.00%
100 - On Peak	3	0.1240	25	3	3.1Z	_	\$ 0.1240	25	3	3.1Z	3) -	0.00%
Total Bill on TOU (before Taxes)				\$	6,794.12				\$	6,487.60	-9	306.52	-4.51%
HST		13%		\$	883.24		13%		\$	843.39	-9	39.85	-4.51%
Total Bill (including HST)				\$	7.677.36				S	7,330,99	_	346.37	-4.51%
Ontario Clean Energy Benefit ¹				-\$	767.74				-\$	733.10	9	34 64	-4.51%
Total Bill on TOU (including OCEB)				\$	6,909.62				\$	6,597.89	-9	311.73	-4.51%
					,				-	-,			

EXHIBIT 3

Current Tariff of Rates and Charges

Espanola Regional Hydro Distribution Corporation TARIFF OF RATES AND CHARGES

Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2012-0122

RESIDENTIAL SERVICE CLASSIFICATION

This classification refers to an account taking electricity at 750 volts or less where the electricity is used exclusively in a single family unit, non-commercial. This can be a separately metered living accommodation, town house, apartment, semidetached, duplex, triplex or quadruplex with residential zoning. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES – Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	\$	13.66
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	1.12
Rate Rider for Recovery of Stranded Meter Assets - effective until April 30, 2016	\$	0.52
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$	0.79
Distribution Volumetric Rate	\$/kWh	0.0165
Low Voltage Service Rate	\$/kWh	0.0037
Rate Rider for Disposition of Deferral/Variance Account (2012) - effective until April 30, 2016	\$/kWh	0.0004
Rate Rider for Recovery of Lost Revenue Adjustment (LRAM) - effective until April 30, 2016	\$/kWh	0.0012
Rate Rider for Recovery of Foregone Revenue - effective until April 30, 2014	\$/kWh	0.0050
Retail Transmission Rate - Network Service Rate	\$/kWh	0.0061
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kWh	0.0040

Wholesale Market Service Rate	\$/kWh	0.0044
Rural Rate Protection Charge	\$/kWh	0.0012
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

EB-2012-0122

Espanola Regional Hydro Distribution Corporation TARIFF OF RATES AND CHARGES

Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

GENERAL SERVICE LESS THAN 50 KW SERVICE CLASSIFICATION

This classification refers to a non residential account taking electricity at 750 volts or less whose monthly average peak demand is less than, or is forecast to be less than, 50 kW. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES – Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	\$	24.48
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	1.34
Rate Rider for Recovery of Stranded Meter Assets - effective until April 30, 2016	\$	0.68
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$	0.79
Distribution Volumetric Rate	\$/kWh	0.0201
Low Voltage Service Rate	\$/kWh	0.0035
Rate Rider for Deferral/Variance Account (2012) - effective unitl April 30, 2016	\$/kWh	0.0004
Rate Rider for Recovery of Foregone Revenue - effective until April 30, 2014	\$/kWh	0.0050
Retail Transmission Rate - Network Service Rate	\$/kWh	0.0057
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kWh	0.0036

Wholesale Market Service Rate	\$/kWh	0.0044
Rural Rate Protection Charge	\$/kWh	0.0012
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

Espanola Regional Hydro Distribution Corporation TARIFF OF RATES AND CHARGES

Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2012-0122

GENERAL SERVICE 50 TO 4,999 KW SERVICE CLASSIFICATION

This classification refers to a non residential account whose average peak demand is greater than, or is forecast to be greater than, 50 kW but less than 5,000 kW. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES – Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	\$	190.66
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	2.75
Rate Rider for Recovery of Stranded Meter Assets - effective until April 30, 2016	\$	2.15
Distribution Volumetric Rate	\$/kW	3.6836
Low Voltage Service Rate	\$/kW	1.4840
Rate Rider for Disposition of Deferral/Variance Account (2012) - effective until April 30, 2016	\$/kW	0.1886
Rate Rider for Recovery of Foregone Revenue - effective until April 30, 2014	\$/kW	0.7997
Retail Transmission Rate - Network Service Rate	\$/kW	2.2869
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.3968
Retail Transmission Rate - Network Service Rate - Interval Metered	\$/kW	2.5707
Retail Transmission Rate - Line and Transformation Connection Service Rate - Interval Metered	\$/kW	1.9349

Wholesale Market Service Rate	\$/kWh	0.0044
Rural Rate Protection Charge	\$/kWh	0.0012
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

Espanola Regional Hydro Distribution Corporation TARIFF OF RATES AND CHARGES

Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2012-0122

UNMETERED SCATTERED LOAD SERVICE CLASSIFICATION

This classification refers to an account taking electricity at 750 volts or less whose monthly average peak demand is less than, or is forecast to be less than, 50 kW and the consumption is unmetered. Such connections include cable TV power packs, bus shelters, telephone booths, traffic lights, railway crossings, etc. The customer will provide detailed manufacturer information/ documentation with regard to electrical demand/consumption of the proposed unmetered load. Further servicing details are available in the distributor's Conditions of Service.

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES – Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	\$	11.90
Distribution Volumetric Rate	\$/kWh	0.0153
Low Voltage Service Rate	\$/kWh	0.0035
Rate Rider for Disposition of Deferral/Variance Account (2012) - effective until April 30, 2016	\$/kWh	0.0004
Rate Rider for Recovery of Foregone Revenue - effective until April 30, 2014	\$/kWh	0.0059
Retail Transmission Rate - Network Service Rate	\$/kWh	0.0057
Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.0036

Wholesale Market Service Rate	\$/kWh	0.0044
Rural Rate Protection Charge	\$/kWh	0.0012
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25
Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2012-0122

SENTINEL LIGHTING SERVICE CLASSIFICATION

This classification applies to safety/security lighting with a Residential or General Service customer. This is typically exterior lighting, and unmetered. Consumption is estimated based on the equipment rating and estimated hours of use. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES – Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	\$	2.08
Distribution Volumetric Rate	\$/kW	16.7508
Low Voltage Service Rate	\$/kW	1.0684
Rate Rider for Disposition of Deferral/Variance Account (2012) - effective until April 30, 2016	\$/kW	0.1314
Rate Rider for Recovery of Foregone Revenue - effective until April 30, 2014	\$/kW	4.3158
Retail Transmission Rate - Network Service Rate	\$/kW	1.7335
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.1023

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	\$/kWh	0.0044
Rural Rate Protection Charge	\$/kWh	0.0012
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2012-0122

STREET LIGHTING SERVICE CLASSIFICATION

This classification refers to an account for roadway lighting with a Municipality, Regional Municipality, Ministry of Transportation and private roadway lighting operation, controlled by photo cells. The consumption for these customers will be based on the calculated connected load times the required lighting times established in the approved OEB Street Lighting Load Shape Template. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

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MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	\$	1.93
Distribution Volumetric Rate	\$/kW	24.3443
Low Voltage Service Rate	\$/kW	1.0466
Rate Rider for Disposition of Deferral/Variance Account (2012) - effective until April 30, 2016	\$/kW	0.0665
Rate Rider for Recovery of Foregone Revenue - effective until April 30, 2014	\$/kW	6.1847
Retail Transmission Rate - Network Service Rate	\$/kW	1.7248
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.0797

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	\$/kWh	0.0044
Rural Rate Protection Charge	\$/kWh	0.0012
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2012-0122

MICROFIT SERVICE CLASSIFICATION

This classification applies to an electricity generation facility contracted under the Ontario Power Authority's microFIT program and connected to the distributor's distribution system. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

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MONTHLY RATES AND CHARGES - Delivery Component

Service Charge

5.40

\$

EB-2012-0122

Espanola Regional Hydro Distribution Corporation TARIFF OF RATES AND CHARGES

Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

ALLOWANCES

Transformer Allowance for Ownership - per kW of billing demand/month	kW	(0.60)
Primary Metering Allowance for transformer losses - applied to measured demand and energy	%	(1.00)

SPECIFIC SERVICE CHARGES

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Orderof the Board, and amendments thereto as approved by the Board, or as specified herein.

It should be noted that this schedule does not list any charges, assessments, or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, charges forthe Ministry of Energy Conservation and Renewable Energy Program, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

Customer Administration

Arrears certificate	\$	15.00
Account History	\$	15.00
Returned cheque (plus bank charges)	\$	15.00
Account set up charge/change of occupancy charge (plus credit agency costs if applicable)	\$	30.00
Special meter reads	\$	30.00
Meter dispute charge plus Measurement Canada fees (if meter found correct)	\$	30.00
Non-Payment of Account		
Late Payment – per month	%	1.50
Late Payment – per annum	%	19.56
Collection of account charge – no disconnection	\$	30.00
Disconnect/Reconnect Charges for non payment of account - At Meter During Regular Hours	\$	65.00
Disconnect/Reconnect at pole – during regular hours	\$	185.00
Temporary Service – Install & remove – overhead – no transformer	\$	500.00
Temporary Service Install & Remove – Underground – No Transformer	\$	300.00
Specific Charge for Access to the Power Poles - \$/pole/year	\$	22.35

Effective and Implementation Date May 1, 2013

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

EB-2012-0122

RETAIL SERVICE CHARGES (if applicable)

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

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It should be noted that this schedule does not list any charges, assessments, or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, charges for the Ministry of Energy Conservation and Renewable Energy Program, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

Retail Service Charges refer to services provided by a distributor to retailers or customers related to the supply of competitive electricity.

One-time charge, per retailer, to establish the service agreement between the distributor and the retailer	\$	100.00
Monthly Fixed Charge, per retailer	\$	20.00
Monthly Variable Charge, per customer, per retailer	\$/cust.	0.50
Distributor-consolidated billing monthly charge, per customer, per retailer	\$/cust.	0.30
Retailer-consolidated billing monthly credit, per customer, per retailer	\$/cust.	(0.30)
Service Transaction Requests (STR)		
Request fee, per request, applied to the requesting party	\$	0.25
Processing fee, per request, applied to the requesting party	\$	0.50
Request for customer information as outlined in Section 10.6.3 and Chapter 11 of the Retail		
Settlement Code directly to retailers and customers, if not delivered electronically through the		
Electronic Business Transaction (EBT) system, applied to the requesting party		
Up to twice a year	\$	no charge
More than twice a year, per request (plus incremental delivery costs)	\$	2.00

LOSS FACTORS

If the distributor is not capable of prorating changed loss factors jointly with distribution rates, the revised loss factors will be implemented upon the first subsequent billing for each billing cycle.

Total Loss Factor – Secondary Metered Customer < 5,000 kW	1.0687
Total Loss Factor – Primary Metered Customer < 5,000 kW	1.0587

EXHIBIT 4

2014 Rate Generator Workform Model



Version 2.3

Utility Name	Espanola Regional Hydro Distril	oution Corporation
Service Territory	nship of Sables-Spanish Ri	ver
Assigned EB Number	EB-2013-0127	
Name of Contact and Title	Jennifer Uchmanowicz, Rates a	nd Regulatory Affairs
Phone Number	705-759-3009	
Email Address	Jennifer.Uchmanowicz@ssmpu	c.com
We are applying for rates effective	Thursday, May 01, 2014	
Rate-Setting Method	IRM 4	
Please indicate in which Rate Year the Group 1 accounts were last cleared ¹	2012	
Notes		
Pale green cells represent input cells.		
Pale blue cells represent drop-down lists. The applicant should select the appropriate item from the drop-down list.		
White cells contain fixed values, a	automatically generated values or for	mulae.

Note:

1. Rate year of application

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your IRM application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, translation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



Espanola Regional Hydro Distribution Corporation - Espanola and

- 1. Information Sheet
- 2. Table of Contents
- 3. Rate Class Selection
- 4. Current Tariff Schedule
- 5. 2014 Continuity Schedule
- 6. Billing Det. for Def-Var
- 7. Cost Allocation for Def-Var

- 8. Calculation of Def-Var RR
- 9. Rev2Cost_GDPIPI
- 10. Other Charges & LF
- 11. Proposed Rates
- 12. Summary Sheet
- 13. Final Tariff Schedule
- 14. Bill Impacts



Espanola Regional Hydro Distribution Corporation - Espanola and

Select the appropriate rate classes as they appear on your most recent Board-Approved Tariff of Rates and Charges, including the MicroFit Class.

How many classes are listed on your most recent Board-Approved Tariff of Rates and Charges?

7

Select Your Rate Classes from the **Blue Cells** below. Please ensure that a rate class is assigned to **each shaded cell**.

	Rate Class Classification
1	RESIDENTIAL
2	GENERAL SERVICE LESS THAN 50 KW
3	GENERAL SERVICE 50 TO 4,999 KW
4	UNMETERED SCATTERED LOAD
5	SENTINEL LIGHTING
6	STREET LIGHTING
7	microFIT



Incentive Regulation Model for 2014 Filers Espanola Regional Hydro Distribution Corporation -

For each class, Applicants are required to copy and paste the class descriptions (located directly under the class name) and the description of the applicability of those rates (description is found under the class name and directly under the word "APPLICATION"). By using the drop-down lists located under the column labeled "Rate Description", please select the descriptions of the rates and charges that **BEST MATCHES** the descriptions on your most recent Board-Approved Tariff of Rates and Charges. If the description is not found in the drop-down list, please enter the description recent Board-Approved Tariff of Rates and Charges. If the description is not found in the drop-down list, please enter the description recent Board the the correct class exactly as it appears on the tariff. Please do not enter more than one "Service Charge" for each class for which a base monthly fixed charge applies.

Espanola Regional Hydro Distribution Corporation TARIFF OF RATES AND CHARGES

RESIDENTIAL Service Classification

This classification refers to an account taking electricity at 750 volts or less where the electricity is used exclusively in a single family init, non-commercial. This can be a separately metered living accommodation, town house, apartment, semi-detached, duplex, riplex or quadruplex with residential zoning. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

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MONTHLY RATES AND CHARGES - Delivery Component	(If applicable, Effective Date MUST I	be included	in rate description
Service Charge		\$	13.66
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until	April 30, 2016	\$	1.12
Rate Rider for Recovery of Smart Meter Stranded Assets - effective until April 30, 2	016	\$	0.52
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018		\$	0.79
Distribution Volumetric Rate		\$/kWh	0.0165
Low Voltage Service Rate		\$/kWh	0.0037
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until Apr	il 30, 2016	\$/kWh	0.0004
Rate Rider for Recovery of Lost Revenue Adjustment Mechanism (LRAM) - effective	e until April 30, 2016	\$/kWh	0.0012
Rate Rider for Recovery of Forgone Revenue - effective until April 30, 2014		\$/kWh	0.0050
Retail Transmission Rate - Network Service Rate		\$/kWh	0.0061
Retail Transmission Rate - Line and Transformation Connection Service Rate		\$/kWh	0.0040
MONTHLY RATES AND CHARGES - Regulatory Component	t		
5			
Wholesale Market Service Rate		\$/kWh	0.0044
Rural Rate Protection Charge		Ś/kWh	0.0012

Standard Supply Service - Administrative Charge (if applicable)

\$/kWh	0.0044
\$/kWh	0.0012
\$	0.25

GENERAL SERVICE LESS THAN 50 KW Service Classification

This classification refers to a non residential account taking electricity at 750 volts or less whose monthly average peak demand is
less than, or is forecast to be less than, 50 kW. Further servicing details are available in the distributor's Conditions of Service
APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule

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MONTHLY RATES AND CHARGES - Delivery Component (If applicable, Effective Date MUST	be included	in rate description
Service Charge	\$	24.48
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	1.34
Rate Rider for Recovery of Stranded Assets - effective until April 30, 2016	\$	0.68
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$	0.79
Distribution Volumetric Rate	\$/kWh	0.0201
Low Voltage Service Rate	\$/kWh	0.0035
Rate Rider for Deferral/Variance Account Disposition (2012) - effective until April 30, 2016	\$/kWh	0.0004

Rate Rider for Recovery of Forgone Revenue - effective until April 30, 2014	\$/kWh	0.0050
Retail Transmission Rate - Network Service Rate	\$/kWh	0.0057
Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.0036
MONTHLY RATES AND CHARGES - Regulatory Component		
Wholesale Market Service Rate	\$/kWh	0.0044
Rural Rate Protection Charge	\$/kWh	0.0012
Standard Supply Service - Administrative Charge (if applicable)	\$	0.2500

GENERAL SERVICE 50 TO 4,999 KW Service Classification

This classification refers to a non residential account whose average peak demand is greater than, or is forecast to be greater than, 50 kW but less than 5,000 kW. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

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MONTHLY RATES AND CHARGES - Delivery Component (If applicable, Effective Date)	ate MUST be includ	led in rate description
Service Charge	\$	190.66
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	2.75
Rate Rider for Recovery of Stranded Assets - effective until April 30, 2016	\$	2.15
Distribution Volumetric Rate	\$/kW	3.6836
Low Voltage Service Rate	\$/kW	1.4840
Rate Rider for Deferral/Variance Account Disposition (2012) - effective until April 30, 2016	\$/kW	0.1886
Rate Rider for Recovery of Forgone Revenue - effective until April 30, 2014	\$/kW	0.7997
Retail Transmission Rate - Network Service Rate	\$/kW	2.2869
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.3968
Retail Transmission Rate - Network Service Rate - Interval Metered	\$/kW	2.5707
Retail Transmission Rate - Line and Transformation Connection Service Rate - Interval Metered	\$/kW	1.9349
MONTHLY RATES AND CHARGES - Regulatory Component		
Wholesale Market Service Rate	\$/kW	h 0.0044
Rural Rate Protection Charge	\$/kW	h 0.0012
Standard Supply Service - Administrative Charge (if applicable)	\$	0.2500

UNMETERED SCATTERED LOAD Service Classification

This classification refers to an account taking electricity at 750 volts or less whose monthly average peak demand is less than, or is forecast to be less than, 50 kW and the consumption is unmetered. Such connections include cable TV power packs, bus shelters, telephone booths, traffic lights, railway crossings, etc. The customer will provide detailed manufacturer information/ documentation with regard to electrical demand/consumption of the proposed unmetered load. Further servicing details are available in the distributor's Conditions of Service.

APPLICATION

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IONTHLY RATES AND CHARGES - Delivery Component	(If applicable, Effective Date MUST	be included	in rate description
ervice Charge (per connection)		\$	11.90
istribution Volumetric Rate		\$/kWh	0.0153
ow Voltage Service Rate		\$/kWh	0.0035
ate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until Apri	il 30, 2016	\$/kWh	0.0004
ate Rider for Recovery of Forgone Revenue - effective until April 30, 2014		\$/kWh	0.0059
etail Transmission Rate - Network Service Rate		\$/kWh	0.0057
etail Transmission Rate - Line Connection Service Rate		\$/kWh	0.0036

Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service - Administrative Charge (if applicable)

Ş/KWN	0.0044
\$/kWh	0.0012
Ś	0.2500

SENTINEL LIGHTING Service Classification

This classification applies to safety/security lighting with a Residential or General Service customer. This is typically exterior lighting,
and unmetered. Consumption is estimated based on the equipment rating and estimated hours of use. Further servicing details are
available in the distributor's Conditions of Service

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MONTHLY RATES AND CHARGES - Delivery Component	(If applicable, Effective Date MUST t	e included	I in rate description
Service Charge (per connection)		\$	2.08
Distribution Volumetric Rate		\$/kW	16.7508
Low Voltage Service Rate		\$/kW	1.0684
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until Ap	pril 30, 2016	\$/kW	0.1314
Rate Rider for Recovery of Forgone Revenue - effective until April 30, 2014		\$/kW	4.3158
Retail Transmission Rate - Network Service Rate		\$/kW	1.7335
Retail Transmission Rate - Line and Transformation Connection Service Rate		\$/kW	1.1023
MONTHLY RATES AND CHARGES - Regulatory Componer	nt		
Wholesale Market Service Rate		\$/kWh	0.0044
Rural Rate Protection Charge		\$/kWh	0.0012
Standard Supply Service - Administrative Charge (if applicable)		\$	0.2500

STREET LIGHTING Service Classification

This classification refers to an account for roadway lighting with a Municipality, Regional Municipality, Ministry of Transportation and private roadway lighting operation, controlled by photo cells. The consumption for these customers will be based on the calculated connected load times the required lighting times established in the approved OEB Street Lighting Load Shape Template. Further servicing details are available in the distributor's Conditions of Service

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To rates and charges for the distribution of electricity and charges to meet the costs of any work or ser nurpose of the distribution of electricity shall be made except as permitted by this schedule, unless rec icence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as spe	vice done c uired by th cified herei	or furnished for the e Distributor's n.
Inless specifically noted, this schedule does not contain any charges for the electricity commodity, be tegulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In additio MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer t	it under the n, the charg hat is an en	e ses in the nbedded
t should be noted that this schedule does not list any charges, assessments or credits that are requirec listributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Clean Energy Benefit and the HST.	l by law to l Adjustmen	be invoiced by a t, the Ontario
MONTHLY RATES AND CHARGES - Delivery Component (If applicable, Effective Date MUST	be include	d in rate description
service Charge (per connection)	\$	1.93
Jistribution Volumetric Rate	\$/kW	24.3443
ow Voltage Service Rate	\$/kW	1.0466
late Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kW	0.0665
tate Rider for Recovery of Forgone Revenue - effective until April 30, 2014	\$/kW	6.1847
tetail Transmission Rate - Network Service Rate	\$/kW	1.7248
tetail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.0797

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service - Administrative Charge (if applicable)

\$/kWh	0.0044
\$/kWh	0.0012
\$	0.2500

n)

microFIT Service Classification

This classification applies to an electricity generation facility contracted under the Ontario Power Authority's microFIT program and connected to the distributor's distribution system. Further servicing details are available in the distributor's Conditions of Service.

APPLICATION

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MONTHLY RATES AND CHARGES - Delivery Component <u>(If applicable, Effective Date MUST be included in rate descrip</u> Service Charge \$ 5.40



Please complete the following continuity schedule for the following Deferral / Variance Accounts. Enter information into green cells only.

If you have received approval to dispose of balances from prior years, the starting point for entries in the 2014 DVA schedule below will be the balance sheet date as per your GAL for which you received approval. For example, if in the 2013 EDR process (CoS or IRM) you received approval for the December 31, 2011 balances, the starting point for your entries below should be the adjustment column BQ for principal and column BV for interest. This will allow for the correct starting point for the 2012 opening balance columns for both principal and interest.

Please refer to the footnotes for further instructions.

		20	10					2011							
Account Descriptions	Account Number	Closing Principal Balance as of Dec-31-10	Closing Interest Amounts as of Dec-31-10	Opening Principal Amounts as of Jan-1-11	Transactions Debit / (Credit) during 2011 excluding interest and adjustments ²	Board-Approved Disposition during 2011	Adjustments during 2011 - other ¹	Closing Principal Balance as of Dec-31-11	Opening Interest Amounts as of Jan-1-11	Interest Jan-1 to Dec-31-11	Board- Approved Disposition during 2011	Adjustments during 2011 - other ²	Closing Interest Amounts as of Dec-31-11	Opening Principal Amounts as of Jan-1-12	Transactions Debit / (Credit) during 2012 excluding interest and adjustments 2
Group 1 Accounts															
LV Variance Account	1550	(9,454)	(357)	(9,454)	69,659			60,205	(357)	(43)			(400	60,205	69,662
RSVA - Wholesale Market Service Charge	1580	(133,104)	(1,537)	(133,104)	(51,682)			(184,786)	(1,537)	(2,887)			(4,424	(184,786)	(5,714)
RSVA - Retail Transmission Network Charge	1584	1,162	(508)	1,162	(17,204)			(16,042)	(508)	(504)			(1,012	(16,042)	(37,228)
RSVA - Retail Transmission Connection Charge	1586	(8,576)	(554)	(8,576)	(10,098)			(18,674)	(554)	(522)			(1,076	(18,674)	(17,487)
RSVA - Power (excluding Global Adjustment)	1588	282,678	(8,011)	282,678	(79,912)			202,766	(8,011)	(1,278)			(9,289)	202,766	(195,922)
RSVA - Global Adjustment	1589	(4,861)	(243)	(4,861)	47,758			42,897	(243)	37			(206	42,897	98,542
Recovery of Regulatory Asset Balances	1590			0				0	0				(0	
Disposition and Recovery/Retund of Regulatory Balances (2008)	1595	224	11,028	224				224	11,028	3			11,031	224	
Disposition and Recovery/Refund of Regulatory Balances (2009)	1595			0				0	0				C	0	
Disposition and Recovery/Refund of Regulatory Balances (2010)	1595	101,414	(18,528)	101,414	(82,217)			19,197	(18,528)	547			(17,981	19,197	
Disposition and Recovery/Refund of Regulatory Balances (2011) ⁵	1595			0		1,044		(1,044)	0				C	(1,044)	
Group 1 Sub-Total (including Account 1589 - Global Adjustment) Group 1 Sub-Total (excluding Account 1589 - Global Adjustment) RSVA - Global Adjustment	1589	229,483 234,344 (4,861)	(18,710) (18,467) (243)	229,483 234,344 (4,861)	(123,696) (171,454) 47,758	1,044 1,044 0	000000000000000000000000000000000000000	104,743 61,846 42,897	(18,710) (18,467) (243)	(4,647) (4,684) 37	0 0 0) (23,357)) (23,151)) (206)	104,743 61,846 42,897	(88,147) (186,689) 98,542
Deferred Payments in Lieu of Taxes	1562			0				0	0				C	0	(28,245)
Total of Group 1 and Account 1562		229,483	(18,710)	229,483	(123,696)	1,044	0	104,743	(18,710)	(4,647)	0) () (23,357)	104,743	(116,392)
Special Purpose Charge Assessment Variance Account ⁴	1521	11,895	116	11,895	(11,966)			(71)	116	40			156	(71)	71
LRAM Variance Account ⁶	1568							0					C	0	
Total including Accounts 1562 and 1568		229,483	(18,710)	229,483	(123,696)	1,044	0	104,743	(18,710)	(4,647)	0) () (23,357)	104,743	(116,392)

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.

¹ 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.

2 For RSVA accounts only, report the net variance to the account during the year. For all other accounts, record the transactions during the year.

the transactions during the year. 3 If the LDC's 2013 rate year begins January 1, 2014, the projected interest is recorded from January 1, 2013 to December 31, 2013 on the December 31, 2012 balance adjusted for the disposed balances approved by the Board in the 2013 rate decision. If the LDC's 2014 rate year begins May 1, 2014 the projected interest is recorded from January 1, 2013 to April 30, 2014 on the December 31, 2012 balance adjusted for the disposed balances approved by the Board in the 2013 rate decision.

⁴ Applicants that did not have the balance in Account 1521 cleared by the Board in the 2012 rate proceedings are expected to file to dispose of Account 1521 in the 2013 rate proceedings. No Account 1521 balance is to be filed for clearance in the 2013 rate proceedings for those distributors that had account 1521 cleared by the Board in the 2012 rate proceedings.

In accordance with section 8 of the Special Purpose Charge ("SPC") Regulation, Ontario Regulation 66/10, distributors were required to apply to the Board no later than April 15, 2012 for an order authorizing the distributor to clear the balance in Account 1521. As per the Board's April 23, 2010 letter, the Board stated that it expected that requests for disposition of the balance in Account 1521 were to be addressed as part of the proceedings to set rates for the 2012 rate year, except in cases where this approach would result in noncompliance with the timeline set out in section 8 of the SPC Regulation.

⁵ Include Account 1595 as part of Group 1 accounts (lines 31, 32, 33 and 34) for review and disposition if the recovery (or refund) period has been completed. If the recovery (or refund) period has not been completed, do not include the respective balance in Account 1595 for disposition at this time.



Please complete the following continuity schedule for the following Deferral / Variance Accounts. Enter information into green cells only.

If you have received approval to dispose of balances from prior years, the starting point for entries in the 2014 DVA schedule below will be the balance sherd take as per your GAI, for which your encived approval. For example, If in the 2013 EDR process (CoS or IRM) you received approval for the December 31, 2011 balances, the starting point for your entries below should be the adjustment column BO for principal and column BV for interest. This will allow for the correct starting point for the 2012 opening balance columns for both principal and interest.

Please refer to the footnotes for further instructions.

		2012												2013			
Account Descriptions	Account Number	Board-Approved Disposition during 2012	Other 1 Adjustments during Q1 2012	Other 1 Adjustments during Q2 2012	Other 1 Adjustments during Q3 2012	Other 1 Adjustments during Q4 2012	Closing Principal Balance as of Dec-31-12	Opening Interest Amounts as of Jan-1-12	Interest Jan-1 to Dec-31-12	Board- Approved Disposition during 2012	Adjustments during 2012 - other 1	Closing Interest Amounts as of Dec-31-12	Principal Disposition during 2013 - instructed by Board	Interest Disposition during 2013 - instructed by Board	Closing Principal Balances as of Dec 31-12 Adjusted for Dispositions during 2013	Closing Interest Balances as of Dec 31-12 Adjusted for Dispositions during 2013	
Group 1 Accounts																	
LV Variance Account	1550	(9.454)					139.321	(400)	1.187	(542)		1.329			139.321	1.329	
RSVA - Wholesale Market Service Charge	1580	(133,104)					(57,396)	(4,424)	(3.127)	(4,146)		(3,405)			(57,396)	(3,405)	
RSVA - Retail Transmission Network Charge	1584	(486)					(52,784)	(1,012)	(1,638)	(1,162)		(1,488)			(52,784)	(1,488)	
RSVA - Retail Transmission Connection Charge	1586	(8,576)					(27,585)	(1,076)	(721)	(722)		(1,075)			(27,585)	(1,075)	
RSVA - Power (excluding Global Adjustment)	1588	282,678					(275,834)	(9,289)	(203)	2,470		(11,962)			(275,834)	(11,962)	
RSVA - Global Adjustment	1589	(4,861)					146,300	(206)	2,009	(338)		2,141			146,300	2,141	
Recovery of Regulatory Asset Balances	1590						0	0				0			C	C	
Disposition and Recovery/Refund of Regulatory Balances (2008) ⁵	1595	224					0	11,031		11,031		0			C	0	
Disposition and Recovery/Refund of Regulatory Balances (2009) ⁵	1595						0	0				0			C	C	
Disposition and Recovery/Refund of Regulatory Balances (2010) ⁵	1595						19,197	(17,981)	(626)			(18,607)			19.197	(18,607)	
Disposition and Recovery/Refund of Regulatory Balances (2011) ⁵	1595						(1,044)	0				0			(1,044)	C	
Group 1 Sub-Total (including Account 1589 - Global Adjustment) Group 1 Sub-Total (excluding Account 1589 - Global Adjustment) RSVA - Global Adjustment	1589	126,421 131,282 (4,861)	0 0 0			0 0 0	(109,825) (256,125) 146,300	(23,357) (23,151) (206)	(3,119) (5,128) 2,009	6,591 6,929 (338)) (33,067)) (35,208)) 2,141	0 0 0	0 0 0	(109,825) (256,125) 146,300	(33,067) (35,208) 2,141	
Deferred Payments in Lieu of Taxes	1562	(28,245)					0	0				0			C	C	
Total of Group 1 and Account 1562		98,176	0	C	0	0	(109,825)	(23,357)	(3,119)	6,591	c	(33,067)	C	0	(109,825)	(33,067)	
Special Purpose Charge Assessment Variance Account ⁴	1521						0	156	(156)			0					
LRAM Variance Account ⁶	1568						0	0				0			C	C	
Total including Accounts 1562 and 1568		98,176	0	C	0	0	(109,825)	(23,357)	(3,119)	6,591	C	(33,067)	0	0	(109,825)	(33,067)	

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.

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.

For RSVA accounts only, report the net variance to the account during the year. For all other accounts, record the transactions during the year.

the transactions during the year. If the LDC's 2013 rate year begins January 1, 2014, the projected interest is recorded from January 1, 2013 to December 31, 2013 on the December 31, 2012 balance adjusted for the disposed balances approved by the Board in the 2013 rate decision. If the LDC's 2014 rate year begins May 1, 2014 the projected interest is recorded from January 1, 2013 to April 30, 2014 on the December 31, 2012 balance adjusted for the disposed balances approved by the Board in the 2013 rate decision.

Applicants that did not have the balance in Account 1521 cleared by the Board in the 2012 rate proceedings are expected to file to dispose of Account 1521 in the 2013 rate proceedings. No Account 1521 balance is to be filed for clearance in the 2013 rate proceedings for those distributors that had account 1521 cleared by the Board in the 2012 rate proceedings.

In accordance with section 8 of the Special Purpose Charge ("SPC") Regulation, Ontario Regulation 66/10, distributors were required to apply to the Board no later than April 15, 2012 for an order authorizing the distributor to clear the balance in Account 1521. As per the Board's April 23, 2010 letters, the Board stated that it expected that requests for disposition of the balance in Account 1521 were to be addressed as part of the proceedings to set rates for the 2012 rate year, except in cases where this approach would result in noncompliance with the timelines est out in section 3 of the SPC Regulation.

Include Account 1595 as part of Group 1 accounts (lines 31, 32, 33 and 34) for review and disposition if the recovery (or refund) period has been completed. If the recovery (or refund) period has not been completed, do not include the respective balance in Account 1595 for disposition at this time.



Please complete the following continuity schedule for the following Deferral / Variance Accounts. Enter information into green cells only.

If you have received approval to dispose of balances from prior years, the starting point for entries in the 2014 DVA schedule below will be the balance sherd take as per your GAI, for which your encived approval. For example, If in the 2013 EDR process (CoS or IRM) you received approval for the December 31, 2011 balances, the starting point for your entries below should be the adjustment column BO for principal and column BV for interest. This will allow for the correct starting point for the 2012 opening balance columns for both principal and interest.

Please refer to the footnotes for further instructions.

		Projected In	terest on Dec-31-	12 Balances	2.1.7 RRR	
Account Descriptions	Account Number	Projected Interest from Jan 1, 2013 to December 31, 2013 on Dec 31 -12 balance adjusted for disposition during 2013 ³	Projected Interest from January 1, 2013 to April 30, 2013 on Dec 31 - 12 balance adjusted for disposition during 2013 ³	Total Claim	As of Dec 31-12	Variance RRR vs. 2012 Balance (Principal + Interest)
Group 1 Accounts						
LV Variance Account	1550	2,048	683	143,381	140,650	0
RSVA - Wholesale Market Service Charge	1580	(844)	(281)	(61,926)	(60,801)	0
RSVA - Retail Transmission Network Charge	1584	(776)	(259)	(55,307)	(54,272)	0
RSVA - Retail Transmission Connection Charge	1586	(405)	(135)	(29,201)	(28,660)	0
RSVA - Power (excluding Global Adjustment)	1588	(4,055)	(1,352)	(293,202)	(287,796)	0
RSVA - Global Adjustment	1589	2,151	717	151,308	148,441	0
Recovery of Regulatory Asset Balances	1590	0	0	0		0
Disposition and Recovery/Refund of Regulatory Balances (2008) ^b	1595	0	0	0		0
Disposition and Recovery/Refund of Regulatory Balances (2009) ⁵	1595	0	0	0		0
Disposition and Recovery/Refund of Regulatory Balances (2010) ⁵	1595	282	94	966	590	0
Disposition and Recovery/Refund of Regulatory Balances (2011) ⁵	1595	(15)	(5)	(1,064)	(1,044)	0
Group 1 Sub-Total (including Account 1589 - Global Adjustment) Group 1 Sub-Total (excluding Account 1589 - Global Adjustment) RSVA - Global Adjustment	1589	(1,614) (3,765) 2,151	(538) (1,255) 717	(145,045) (296,353) 151,308	(142,892) (291,333) 148,441	0 0 0
Deferred Payments in Lieu of Taxes	1562	0	0	0		0
Total of Group 1 and Account 1562		(1,614)	(538)	(145,045)	(142,892)	0
Special Purpose Charge Assessment Variance Account ⁴	1521					
LRAM Variance Account ⁶	1568	0	0	0		0
Total including Accounts 1562 and 1568		(1,614)	(538)	(145,045)	(142,892)	0

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.

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.

For RSVA accounts only, report the net variance to the account during the year. For all other accounts, record the transactions during the year.

the transactions during the year. If the LDC's 2013 rate year begins January 1, 2014, the projected interest is recorded from January 1, 2013 to December 31, 2013 on the December 31, 2012 balance adjusted for the disposed balances approved by the Board in the 2013 rate decision. If the LDC's 2014 rate year begins May 1, 2014 the projected interest is recorded from January 1, 2013 to April 30, 2014 on the December 31, 2012 balance adjusted for the disposed balances approved by the Board in the 2013 rate decision.

Applicants that did not have the balance in Account 1521 cleared by the Board in the 2012 rate proceedings are expected to file to dispose of Account 1521 in the 2013 rate proceedings. No Account 1521 balance is to be filed for clearance in the 2013 rate proceedings for those distributors that had account 1521 cleared by the Board in the 2012 rate proceedings.

In accordance with section 8 of the Special Purpose Charge ("SPC") Regulation, Ontario Regulation 66/10, distributors were required to apply to the Board no later than April 15, 2012 for an order authorizing the distributor to clear the balance in Account 1521. As per the Board's April 23, 2010 letters, the Board stated that it expected that requests for disposition of the balance in Account 1521 were to be addressed as part of the proceedings to set rates for the 2012 rate year, except in cases where this approach would result in noncompliance with the timelines est out in section 3 of the SPC Regulation.

Include Account 1595 as part of Group 1 accounts (lines 31, 32, 33 and 34) for review and disposition if the recovery (or refund) period has been completed. If the recovery (or refund) period has not been completed, do not include the respective balance in Account 1595 for disposition at this time.



In the green shaded cells, enter the most recent Board Approved volumetric forecast. If there is a material difference between the latest Board-approved volumetric forecast and the most recent 12-month actual volumetric data, use the most recent 12-month actual data. Do not enter data for the MicroFit class.

				Billed kWh for	Estimated kW for	Distribution	1590 Recovery	1595 Recovery	1595 Recovery	1595 Recovery	1595 Recovery	1568 LRAM Variance Account Class
Rate Class	Unit	Metered kWh	Metered kW	Non-RPP Customers	Non-RPP Customers	Revenue ¹	Share Proportion*	Share Proportion (2008) ²	Share Proportion (2009) ²	Share Proportion (2010) ²	Share Proportion (2011) ²	Allocation (\$ amounts)



No input required. This workshseet allocates the deferral/variance account balances (Group 1, 1521, 1588 GA, 1562 and 1568) to the appropriate classes as per the EDDVAR Report dated July 31, 2009

Allocation of Group 1 Accounts (including Accounts 1521, 1562, 1568)

			% of Total													
		% of Total non-	Distribution								1595	1595	1595	1595		
Rate Class	% of Total kWh	RPP kWh	Revenue	1550	1580	1584	1586	1588*	1588 GA	1590	(2008)	(2009)	(2010)	(2011)	1562	1568



Espanola Regional Hydro Distribution

Input required at cell C15 only. This workshseet calculates rate riders related to the Deferral/Variance Account Disposition (if applicable) and associated rate riders for the global adjustment sub-account. Rate Riders will not be generated for the MicroFit class.

Please indicate the Rate Rider Recovery Period (in years)

2

Rate Class

Unit Billed kWh Billed kW

Balance of Accounts	Deferral/Variance	Allocation of	Billed kWh or	Global
Allocated by kWh/kW	Account Rate	Balance in Account	Estimated kW	Adjustment
(RPP) or Distribution	Rider	1588 Global	for Non-RPP	Rate Rider



Espanola Regional Hydro Distribution

If applicable, please enter any adjustments related to the revenue to cost ratio model into columns C and E. The Price Escalator has been set at the 2013 values and will be updated by Board staff. The Stretch Factor Value may be updated by Board staff.

Price Escalator Productivity Factor	1.60% 0.72%	Choose Stretch Fac Associated Stretch	<mark>ctor Group</mark> Factor Value	∨ 0.40%			
Price Cap Index	0.48%				Duice Concludents		Duouoood
		MFC Adjustment	Current Volumetric	DVR Adjustment from	be Applied to MFC		Volumetric
Rate Class	Current MFC	from R/C Model	Charge	R/C Model	and DVR	Proposed MFC	Charge



Espanola Regional Hydro Distribution Corporation -

Please enter the following charges as found on your most recent Board-Approved Tariff Schedule. The standard Allowance rates have been included as default entries. If you have different rates, please make the appropriate corrections in the applicable cells below. As well, please enter the current Specific Service Charges below. The standard Retail Service Charges have been entered below. If you have different rates, please make the appropriate corrections in columns A. C or D as applicable (cells are unlocked).

UNIT	RATE

ALLOWANCES

Transformer Allowance for Ownership - per kW of billing demand/month	kW	(0.60
Primary Metering Allowance for transformer losses – applied to measured demand and energy	%	(1.00

SPECIFIC SERVICE CHARGES

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule

No charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

It should be noted that this schedule does not list any charges, assessments, or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

Customer Administration

Arrears certificate	\$	15.00
Account History	\$	15.00
Returned cheque charge (plus bank charges)	\$	15.00
Account set up charge/change of occupancy charge (plus credit agency costs if applicable)	\$	30.00
Special meter reads	\$	30.00
Meter dispute charge plus Measurement Canada fees (if meter found correct)	\$	30.00

kW	(0.60)
%	(1.00)



Non-Payment of Account

Late Payment – per month
Late Payment – per annum
Collection of account charge – no disconnection
Disconnect/Reconnect Charges for non payment of account - At Meter During Regular Hours
Disconnect/Reconnect at meter – during regular hours
Temporary Service – Install & remove – overhead – no transformer
Temporary Service – Install & remove – underground – no transformer
Specific Charge for Access to the Power Poles - \$/pole/year

%	1.50
%	19.56
\$	30.00
\$	65.00
\$	185.00
\$	500.00
\$	300.00
\$	22.35





RETAIL SERVICE CHARGES (if applicable)

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable.

It should be noted that this schedule does not list any charges, assessments, or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

Retail Service Charges refer to services provided by a distributor to retailers or customers related to the supply of competitive electricity

One-time charge, per retailer, to establish the service agreement between the distributor and the retailer	\$	100.00
Monthly Fixed Charge, per retailer	\$	20.00
Monthly Variable Charge, per customer, per retailer	\$/cust.	0.50
Distributor-consolidated billing monthly charge, per customer, per retailer	\$/cust.	0.30
Retailer-consolidated billing monthly credit, per customer, per retailer	\$/cust.	(0.30)
Service Transaction Requests (STR)		
Request fee, per request, applied to the requesting party	\$	0.25
Processing fee, per request, applied to the requesting party	\$	0.50
Request for customer information as outlined in Section 10.6.3 and Chapter 11 of the Retail		
Settlement Code directly to retailers and customers, if not delivered electronically through the		
Electronic Business Transaction (EBT) system, applied to the requesting party		
Up to twice a year	\$	no charge
More than twice a year, per request (plus incremental delivery costs)	\$	2.00

LOSS FACTORS

If the distributor is not capable of prorating changed loss factors jointly with distribution rates, the revised loss factors will be implemented upon the first subsequent billing for each billing cycle.

Total Loss Factor – Secondary Metered Customer < 5,000 kW	1.0687
Total Loss Factor – Primary Metered Customer < 5,000 kW	1.0587



Below is a listing of the proposed Monthly Fixed Charges, proposed Distribution Volumetric Rates, proposed Deferral and Variance account Rate Riders and all unexpired volumetric rates that were entered on Sheet 4. In the green cells (column A) below, please enter any additional rates being proposed (eg: LRAM/SSM, Tax Adjustments, etc). Please ensure that the word "Rider" or "Adder" is included in the description (as applicable). Note: All rates with expired effective dates have been removed. As well, the Current RTSR-Network and RTSR-Connection rate descriptions entered on Sheet 4 can be found below. The associated rates have been removed from this sheet, giving the applicant the opportunity to enter updated rates (from Sheet 13 in the Board-Approved RTSR model into the cells in column I.



Espanola Regional Hydro Distribution Corporation - Espanola

The following table provides applicants with a class to class comparison of current vs. proposed rates.

Current Rates

Rate Description	Unit	Amount
RESIDENTIAL		
Service Charge	\$	13
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	1
Rate Rider for Recovery of Smart Meter Stranded Assets - effective until April 30, 2016	\$	(
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$	(
Distribution Volumetric Rate	\$/kWh	0.01
Low Voltage Service Rate	\$/kWh	0.00
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kWh	0.00
Rate Rider for Recovery of Lost Revenue Adjustment Mechanism (LRAM) - effective until April 30, 2016	\$/kWh	0.00
Rate Rider for Recovery of Forgone Revenue - effective until April 30, 2014	\$/kWh	0.00
Retail Transmission Rate - Network Service Rate	\$/kWh	0.00
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kWh	0.00
Wholesale Market Service Rate	\$/kWh	0.00
Rural Rate Protection Charge	\$/kWh	0.00
Standard Supply Service - Administrative Charge (if applicable)	\$	(

GENERAL SERVICE LESS THAN 50 KW	
Service Charge	\$
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$
Rate Rider for Recovery of Stranded Assets - effective until April 30, 2016	\$
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$
Distribution Volumetric Rate	\$/kWh
Low Voltage Service Rate	\$/kWh
Rate Rider for Deferral/Variance Account Disposition (2012) - effective until April 30, 2016	\$/kWh
Rate Rider for Recovery of Forgone Revenue - effective until April 30, 2014	\$/kWh
Retail Transmission Rate - Network Service Rate	\$/kWh
Retail Transmission Rate - Line Connection Service Rate	\$/kWh
Wholesale Market Service Rate	\$/kWh
Rural Rate Protection Charge	\$/kWh
Standard Supply Service - Administrative Charge (if applicable)	\$

	Proposed Rates		
unt	Rate Description	Unit	Amount
	RESIDENTIAL		
13.66	Service Charge	\$	13.73
1.12	Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	1.12
0.52	Rate Rider for Recovery of Smart Meter Stranded Assets - effective until April 30, 2016	\$	0.52
0.79	Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$	0.79
0.01650	Distribution Volumetric Rate	\$/kWh	0.01660
0.00370	Low Voltage Service Rate	\$/kWh	0.00370
0.00040	Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kWh	0.00040
0.00120	Rate Rider for Recovery of Lost Revenue Adjustment Mechanism (LRAM) - effective until April 30, 2016	\$/kWh	0.00120
0.00500	Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 28, 2016	\$/kWh	(0.00240)
0.00610	Rate Rider for Global Adjustment Sub-Account Disposition (2014) - effective until April 28, 2016 Applicable only for Non-RPP Customers	\$/kWh	0.00330
0.00400	Retail Transmission Rate - Network Service Rate	\$/kWh	0.00640
0.00440	Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kWh	0.00420
0.00120	Rate Rider for Recovery of Lost Revenue Adjustment Mechanism (LRAM) - effective until April 30, 2015	\$/kWh	0.00020
0.25	Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00167
	Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	1.39
	Wholesale Market Service Rate	\$/kWh	0.00440
	Rural Rate Protection Charge	\$/kWh	0.00120
	Standard Supply Service - Administrative Charge (if applicable)	\$	0.25
	GENERAL SERVICE LESS THAN 50 KW		
24.48	Service Charge	\$	24.60
1.34	Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	1.34
0.68	2016	\$	0.68
0.79	Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$	0.79
0.02010	Distribution Volumetric Rate	\$/kWh	0.02020
0.00350	Low Voltage Service Rate	\$/kWh	0.00350
0.00040	until April 30, 2016 Pate Pider for Deferral/Variance Account Disposition (2012) - effective Pate Pider for Deferral/Variance Account Disposition (2014) effective	\$/kWh	0.00040
0.00500	until April 28, 2016	\$/kWh	(0.00240)
0.00570	Rate Rider for Global Adjustment Sub-Account Disposition (2014) - effective until April 28, 2016 Applicable only for Non-RPP Customers	\$/kWh	0.00330
0.00360	Retail Transmission Rate - Network Service Rate	\$/kWh	0.00600
0.00440	Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.00380
0.00120	Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00200
0.25	Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	2.48
	Wholesale Market Service Rate	\$/kWh	0.00440
	Rural Rate Protection Charge	\$/kWh	0.00120

Standard Supply Service - Administrative Charge (if applicable)

\$

0.25

					Page 2 of 3
GENERAL SERVICE 50 TO 4,999 KW	¢	100.00	GENERAL SERVICE 50 TO 4,999 KW	¢	404.50
Rate Rider for Disposition of Residual Historical Smart Meter Costs -	Φ	190.00	Rate Rider for Disposition of Residual Historical Smart Meter Costs -	φ	191.56
effective until April 30, 2016	\$	2.75	effective until April 30, 2016	\$	2.75
Rate Rider for Recovery of Stranded Assets - effective until April 30,			Rate Rider for Recovery of Stranded Assets - effective until April 30,		
2016	\$	2.15	2016	\$	2.15
Distribution Volumetric Rate	\$/kW	3.68360	Distribution Volumetric Rate	\$/kW	3.70130
Low Voltage Service Rate	\$/kW	1.48400	Low Voltage Service Rate	\$/kW	1.48400
Rate Rider for Deferral/Variance Account Disposition (2012) - effective	\$/k\//	0 18860	Rate Rider for Deferral/Variance Account Disposition (2012) - effective	\$/k\//	0 18860
Rate Rider for Recovery of Forgone Revenue - effective until April 30.	φ/ιζν	0.10000	Rate Rider for Deferral/Variance Account Disposition (2014) - effective	ψ/Κνν	0.10000
2014	\$/kW	0.79970	until April 28, 2016	\$/kW	(0.94270)
Retail Transmission Rate - Network Service Rate	\$/k\N/	2 28690	Rate Rider for Global Adjustment Sub-Account Disposition (2014) -	\$/k\N/	1 31890
Retail Transmission Rate - Line and Transformation Connection Service	φ/ιζνν	2.20030		ψηταν	1.51050
Rate	\$/kW	1.39680	Retail Transmission Rate - Network Service Rate	\$/kW	2.39530
	• " • • •	0 57070	Retail Transmission Rate - Line and Transformation Connection Service	A 4 1 4 4	1 10700
Retail Transmission Rate - Network Service Rate - Interval Metered	\$/kVV	2.57070	Rate	\$/kVV	1.46730
Retail Transmission Rate - Line and Transformation Connection Service Rate - Interval Metered	\$/kW	1.93490	Retail Transmission Rate - Network Service Rate - Interval Metered	\$/kW	2.69260
	•		Retail Transmission Rate - Line and Transformation Connection Service	•	
Wholesale Market Service Rate	\$/kWh	0.00440	Rate - Interval Metered	\$/kW	2.03250
Purel Date Protection Charge	¢/1.00/16	0.00120	Pate Diday for Incompatel Conital officiative unit April 20, 2017	¢//.\\\	0.07000
Rural Rate Protection Charge	\$/KVVN	0.00120	Rate Rider for incremental Capital - effective uniti April 30, 2017	\$/KVV	0.37363
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25	Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	19.34
			Wholesale Market Service Rate	\$/kWh	0.00440
			Rural Rate Protection Charge	\$/kWh	0.00120
			Standard Supply Service - Administrative Charge (if applicable)	\$	0.25
UNMETERED SCATTERED LOAD			UNMETERED SCATTERED LOAD		
Service Charge (per connection)	\$	11.90	Service Charge (per connection)	\$	11.96
Distribution Volumetric Rate	\$/kWh	0.01530	Distribution Volumetric Rate	\$/kWh	0.01540
Low Voltage Service Rate	\$/k\//b	0.00350	Low Voltage Service Rate	\$/k\Wh	0.00350
Rate Rider for Disposition of Deferral/Variance Accounts (2012) -	\$	0.00000	Rate Rider for Disposition of Deferral/Variance Accounts (2012) -	<i>φ</i>	0.00000
effective until April 30, 2016	\$/kWh	0.00040	effective until April 30, 2016	\$/kWh	0.00040
Rate Rider for Recovery of Forgone Revenue - effective until April 30,	• " • • • •		Rate Rider for Deferral/Variance Account Disposition (2014) - effective	• # > • #	(2,000,10)
2014	\$/KVVh	0.00590		\$/KVVh	(0.00240)
Retail Transmission Rate - Network Service Rate	\$/kWh	0.00570	Retail Transmission Rate - Network Service Rate	\$/kWh	0.00600
Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.00360	Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.00380
Wholesale Market Service Rate	\$/kWh	0.00440	Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00155
Rural Rate Protection Charge	\$/k\//b	0.00120	Rate Rider for Incremental Capital - effective unit! April 30, 2017	\$	1 21
Standard Supply Service - Administrative Charge (if applicable)	\$	0.00120	Wholesale Market Service Rate	φ \$/k\//b	0.00440
	Ψ	0.25	Purel Pate Protection Charge	¢/kwh	0.00120
			Rural Rate Protection Charge	\$/KVVII	0.00120
				φ	0.25
SENTINEL LIGHTING	¢	2.00	SENTINEL LIGHTING	¢	2.00
Service Charge (per connection)	Φ (1.).()	2.00	Service Charge (per connection)	Φ Φ (1.) (1	2.09
Distribution volumetric Rate	\$/KVV	16.75080	Distribution volumetric Rate	\$/KVV	16.83120
Low Voltage Service Rate	\$/KVV	1.06840	Low Voltage Service Rate	\$/kVV	1.06840
effective until April 30, 2016	\$/kW	0.13140	effective until April 30, 2016	\$/kW	0.13140
Rate Rider for Recovery of Forgone Revenue - effective until April 30,			Rate Rider for Deferral/Variance Account Disposition (2014) - effective		
2014	\$/kW	4.31580	until April 28, 2016	\$/kW	(0.87160)
Retail Transmission Rate - Network Service Rate	\$/kW	1.73350	Retail Transmission Rate - Network Service Rate	\$/kW	1.81570
Retail Transmission Rate - Line and Transformation Connection Service	¢/1.3.6/	4 40000	Retail Transmission Rate - Line and Transformation Connection Service	¢4.564	4 4 5 7 0 0
Rate	\$/KVV	1.10230	Rate	\$/KVV	1.15790
Wholesale Market Service Rate	\$/kWh	0.00440	Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kW	1.69906
Rural Rate Protection Charge	\$/kWh	0.00120	Rate Rider for Incremental Capital - effective unit! April 30, 2017	\$	0.21
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25	Wholesale Market Service Rate	* \$/k\//h	0.00440
	Ŧ	5.20	Rural Rate Protection Charge	\$/kWh	0.00120
			Standard Supply Service - Administrative Charge (if applicable)	\$	0.00120
STREET LIGHTING			STREET LIGHTING	-	0.20
Service Charge (per connection)	\$	1.93	Service Charge (per connection)	\$	1 94
Distribution Volumetric Rate	\$/kW	24 34430	Distribution Volumetric Rate	\$/kW	24 46120
	\$/K\V	1 04660		\$/L\N/	1 04660
Luw voilage Service Rate Rate Rider for Disposition of Deferral/Variance Accounts (2012)	φ/ K V V	1.04000	Luw voilage Service Rate Rate Rider for Disposition of Deferral/Variance Accounts (2012)	φ/ΚΥΥ	1.04000
effective until April 30, 2016	\$/kW	0.06650	effective until April 30, 2016	\$/kW	0.06650
Rate Rider for Recovery of Forgone Revenue - effective until April 30,			Rate Rider for Deferral/Variance Account Disposition (2014) - effective		
2014	\$/kW	6.18470	until April 28, 2016	\$/kW	(0.83510)
Retail Transmission Rate - Network Service Rate	\$/kW	1.72480	Retail Transmission Rate - Network Service Rate	\$/kW	1.80660
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.07970	Retail I ransmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.13420

What water Martin Over the Date	¢//	0.00440		¢//.).//	Page 3 of 3
Wholesale Market Service Rate	\$/KVVh	0.00440	Rate Rider for incremental Capital - effective uniti April 30, 2017	\$/KVV	2.46929
Rural Rate Protection Charge	\$/kWh	0.00120	Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	0.20
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25	Wholesale Market Service Rate	\$/kWh	0.00440
			Rural Rate Protection Charge	\$/kWh	0.00120
			Standard Supply Service - Administrative Charge (if applicable)	\$	0.25
microFIT			microFIT		
Service Charge	\$	5.40	Service Charge	\$	5.40

EB-2013-0127



The following is a complete Tariff Schedule based on the information entered in this model. Pressing the button on the right hand side will transfer the tariff schedule to a new file.

Espanola Regional Hydro Distribution Corporation TARIFF OF RATES AND CHARGES

Effective and Implementation Date May 01, 2014

This schedule supersedes and replaces all previously approved schedules of Rates, Charges and Loss Factors

RESIDENTIAL SERVICE CLASSIFICATION

This classification refers to an account taking electricity at 750 volts or less where the electricity is used exclusively in a single family unit, non-commercial. This can be a separately metered living accommodation, town house, apartment, semi-detached, duplex, triplex or quadruplex with residential zoning. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	\$	13.73
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	1.12
Rate Rider for Recovery of Smart Meter Stranded Assets - effective until April 30, 2016	\$	0.52
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$	0.79
Distribution Volumetric Rate	\$/kWh	0.01660
Low Voltage Service Rate	\$/kWh	0.00370
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kWh	0.00040
Rate Rider for Recovery of Lost Revenue Adjustment Mechanism (LRAM) - effective until April 30, 2016	\$/kWh	0.00120
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 28, 2016	\$/kWh	(0.00240)
Rate Rider for Global Adjustment Sub-Account Disposition (2014) - effective until April 28, 2016		
Applicable only for Non-RPP Customers	\$/kWh	0.00330
Retail Transmission Rate - Network Service Rate	\$/kWh	0.00640
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kWh	0.00420
Rate Rider for Recovery of Lost Revenue Adjustment Mechanism (LRAM) - effective until April 30, 2015	\$/kWh	0.00020
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00167
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	1.39

MONTHLY RATES AND CHARGES - Regulatory Component

GENERAL SERVICE LESS THAN 50 KW SERVICE CLASSIFICATION

This classification refers to a non residential account taking electricity at 750 volts or less whose monthly average peak demand is less than, or is forecast to be less than, 50 kW. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

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MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	\$	24.60
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	1.34
Rate Rider for Recovery of Stranded Assets - effective until April 30, 2016	\$	0.68
Rate Rider for Smart Metering Entity Charge - effective until October 31, 2018	\$	0.79
Distribution Volumetric Rate	\$/kWh	0.02020
Low Voltage Service Rate	\$/kWh	0.00350
Rate Rider for Deferral/Variance Account Disposition (2012) - effective until April 30, 2016	\$/kWh	0.00040
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 28, 2016	\$/kWh	(0.00240)
Rate Rider for Global Adjustment Sub-Account Disposition (2014) - effective until April 28, 2016		
Applicable only for Non-RPP Customers	\$/kWh	0.00330
Retail Transmission Rate - Network Service Rate	\$/kWh	0.00600
Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.00380
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00200
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	2.48

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

GENERAL SERVICE 50 TO 4,999 KW SERVICE CLASSIFICATION

This classification refers to a non residential account whose average peak demand is greater than, or is forecast to be greater than, 50 kW but less than 5,000 kW. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

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It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	\$	191.58
Rate Rider for Disposition of Residual Historical Smart Meter Costs - effective until April 30, 2016	\$	2.75
Rate Rider for Recovery of Stranded Assets - effective until April 30, 2016	\$	2.15
Distribution Volumetric Rate	\$/kW	3.70130
Low Voltage Service Rate	\$/kW	1.48400
Rate Rider for Deferral/Variance Account Disposition (2012) - effective until April 30, 2016	\$/kW	0.18860
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 28, 2016	\$/kW	(0.94270)
Rate Rider for Global Adjustment Sub-Account Disposition (2014) - effective until April 28, 2016		
Applicable only for Non-RPP Customers	\$/kW	1.31890
Retail Transmission Rate - Network Service Rate	\$/kW	2.39530
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.46730
Retail Transmission Rate - Network Service Rate - Interval Metered	\$/kW	2.69260
Retail Transmission Rate - Line and Transformation Connection Service Rate - Interval Metered	\$/kW	2.03250
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kW	0.37363
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	19.34

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

UNMETERED SCATTERED LOAD SERVICE CLASSIFICATION

and the consumption is unmetered. Such connections include cable TV power packs, bus shelters, telephone booths, traffic lights, railway crossings, etc. The customer will provide detailed manufacturer information/ documentation with regard to electrical demand/consumption of the proposed unmetered load. Further servicing details are available in the distributor's Conditions of Service.

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	\$	11.96
Distribution Volumetric Rate	\$/kWh	0.01540
Low Voltage Service Rate	\$/kWh	0.00350
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kWh	0.00040
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 28, 2016	\$/kWh	(0.00240)
Retail Transmission Rate - Network Service Rate	\$/kWh	0.00600
Retail Transmission Rate - Line Connection Service Rate	\$/kWh	0.00380
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kWh	0.00155
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	1.21

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

SENTINEL LIGHTING SERVICE CLASSIFICATION

This classification applies to safety/security lighting with a Residential or General Service customer. This is typically exterior lighting, and unmetered. Consumption is estimated based on the equipment rating and estimated hours of use. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	\$	2.09
Distribution Volumetric Rate	\$/kW	16.83120
Low Voltage Service Rate	\$/kW	1.06840
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kW	0.13140
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 28, 2016	\$/kW	(0.87160)
Retail Transmission Rate - Network Service Rate	\$/kW	1.81570
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.15790
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kW	1.69906
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	0.21

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

STREET LIGHTING SERVICE CLASSIFICATION

This classification refers to an account for roadway lighting with a Municipality, Regional Municipality, Ministry of Transportation and private roadway lighting operation, controlled by photo cells. The consumption for these customers will be based on the calculated connected load times the required lighting times established in the approved OEB Street Lighting Load Shape Template. Further servicing details are available in the distributor's Conditions of Service

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable. In addition, the charges in the MONTHLY RATES AND CHARGES - Regulatory Component of this schedule do not apply to a customer that is an embedded wholesale market participant.

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge (per connection)	\$	1.94
Distribution Volumetric Rate	\$/kW	24.46120
Low Voltage Service Rate	\$/kW	1.04660
Rate Rider for Disposition of Deferral/Variance Accounts (2012) - effective until April 30, 2016	\$/kW	0.06650

			Page 5 of 6
Rate Rider for Deferral/Variance Account Disposition (2014) - effective until April 28, 2016	\$/kW	(0.83510)	Tuge 5010
Retail Transmission Rate - Network Service Rate	\$/kW	1.80660	
Retail Transmission Rate - Line and Transformation Connection Service Rate	\$/kW	1.13420	
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$/kW	2.46929	
Rate Rider for Incremental Capital - effective unitl April 30, 2017	\$	0.20	

MONTHLY RATES AND CHARGES - Regulatory Component

Wholesale Market Service Rate	\$/kWh	0.00440
Rural Rate Protection Charge	\$/kWh	0.00120
Standard Supply Service - Administrative Charge (if applicable)	\$	0.25

MICROFIT SERVICE CLASSIFICATION

This classification applies to an electricity generation facility contracted under the Ontario Power Authority's microFIT program and connected to the distributor's distribution system. Further servicing details are available in the distributor's Conditions of Service.

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the

It should be noted that this schedule does not list any charges, assessments or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

MONTHLY RATES AND CHARGES - Delivery Component

Service Charge	\$ 5.40
MONTHLY RATES AND CHARGES - Regulatory Component	
MONTHLY RATES AND CHARGES - Regulatory Component	
ALLOWANCES	

Transformer Allowance for Ownership - per kW of billing demand/month	kW	(0.60)
Primary Metering Allowance for transformer losses – applied to measured demand and energy	%	(1.00)

SPECIFIC SERVICE CHARGES

APPLICATION

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule

No charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

It should be noted that this schedule does not list any charges, assessments, or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

Customer Administration

\$

Account History	\$ 15.00
Returned cheque charge (plus bank charges)	\$ 15.00
Account set up charge/change of occupancy charge (plus credit agency costs if applicable)	\$ 30.00
Special meter reads	\$ 30.00
Meter dispute charge plus Measurement Canada fees (if meter found correct)	\$ 30.00

Non-Payment of Account

Late Payment – per month	%	1.50
Late Payment – per annum	%	19.56
Collection of account charge – no disconnection	\$	30.00
Disconnect/Reconnect Charges for non payment of account - At Meter During Regular Hours	\$	65.00
Disconnect/Reconnect at meter – during regular hours	\$	185.00
Temporary Service – Install & remove – overhead – no transformer	\$	500.00
Temporary Service – Install & remove – underground – no transformer	\$	300.00
Specific Charge for Access to the Power Poles - \$/pole/year	\$	22.35

RETAIL SERVICE CHARGES (if applicable)

The application of these rates and charges shall be in accordance with the Licence of the Distributor and any Code or Order of the Board, and amendments thereto as approved by the Board, which may be applicable to the administration of this schedule.

No rates and charges for the distribution of electricity and charges to meet the costs of any work or service done or furnished for the purpose of the distribution of electricity shall be made except as permitted by this schedule, unless required by the Distributor's Licence or a Code or Order of the Board, and amendments thereto as approved by the Board, or as specified herein.

Unless specifically noted, this schedule does not contain any charges for the electricity commodity, be it under the Regulated Price Plan, a contract with a retailer or the wholesale market price, as applicable.

It should be noted that this schedule does not list any charges, assessments, or credits that are required by law to be invoiced by a distributor and that are not subject to Board approval, such as the Debt Retirement Charge, the Global Adjustment, the Ontario Clean Energy Benefit and the HST.

Retail Service Charges refer to services provided by a distributor to retailers or customers related to the supply of competitive electricity

One-time charge, per retailer, to establish the service agreement between the distributor and the retailer	\$	100.00
Monthly Fixed Charge, per retailer	\$	20.00
Monthly Variable Charge, per customer, per retailer	\$/cust.	0.50
Distributor-consolidated billing monthly charge, per customer, per retailer	\$/cust.	0.30
Retailer-consolidated billing monthly credit, per customer, per retailer	\$/cust.	(0.30)
Service Transaction Requests (STR)		
Request fee, per request, applied to the requesting party	\$	0.25
Processing fee, per request, applied to the requesting party	\$	0.50
Request for customer information as outlined in Section 10.6.3 and Chapter 11 of the Retail		
Settlement Code directly to retailers and customers, if not delivered electronically through the		
Electronic Business Transaction (EBT) system, applied to the requesting party		
Up to twice a year	\$	no charge
More than twice a year, per request (plus incremental delivery costs)	\$	2.00

LOSS FACTORS

If the distributor is not capable of prorating changed loss factors jointly with distribution rates, the revised loss factors will be implemented upon the first subsequent bill

Total Loss Factor – Secondary Metered Customer < 5,000 kW	1.0687
Total Loss Factor – Primary Metered Customer < 5,000 kW	1.0587



Espanola Regional Hydro Distribution Corporation - Espanola and the

Rate Class STREET LIGHTING

Loss Factor		1.0687
Consumption	kWh	140
<u>If Billed on a kW basis:</u> Demand	kW	
Load Factor		

	Current Board-Approved				Proposed						Impact			
		Rate	Volume Charge			Rate Volume			Charge					
		(\$)			(\$)		(\$)			(\$)			\$ Change	% Change
Monthly Service Charge	\$	1.93	1000	\$	1,930.00	9	5 1.94	1000	\$	1,940.00		\$	10.00	0.52%
Distribution Volumetric Rate	\$	24.3443	140	\$	3,408.20	9	5 24.4612	140	\$	3,424.57		\$	16.37	0.48%
Fixed Rate Riders	\$	-	1000	\$	-	9	6 0.20	1000	\$	200.00		\$	200.00	
Volumetric Rate Riders		6.1847	140	\$	865.86		2.4693	140	\$	345.70		-\$	520.16	-60.07%
Sub-Total A (excluding pass through)				\$	6,204.06				\$	5,910.27		-\$	293.79	-4.74%
Line Losses on Cost of Power	\$	0.0839	10	\$	0.81	9	0.0839	10	\$	0.81		\$	-	0.00%
Total Deferral/Variance Account Rate Riders		0.0665	140	\$	9.31		-0.1701	140	-\$	23.81		-\$	33.12	-355.79%
Low Voltage Service Charge	\$	1.0466	140	\$	146.52	9	1.0466	140	\$	146.52		\$	-	0.00%
Smart Meter Entity Charge			1	\$	-			1	\$	-		\$	-	
Sub-Total B - Distribution				\$	6.360.70				\$	6.033.79		-\$	326.91	-5.14%
(includes Sub-Total A)				*	0,000.10				•	0,000110		•	020101	0
RTSR - Network	\$	1.7248	150	\$	258.06	9	5 1.8066	150	\$	270.30		\$	12.24	4.74%
RTSR - Connection and/or Line and Transformation Connection	\$	1.0797	150	\$	161.54	9	1.1342	150	\$	169.70		\$	8.15	5.05%
Sub-Total C - Delivery				÷	6 780 30				¢	6 473 78		_¢	206 52	-4 52%
(including Sub-Total B)				9	0,700.30				φ	0,473.70		-φ	300.32	-4.JZ /0
Wholesale Market Service	\$	0 0044	150	\$	0.66	9	0 0044	150	\$	0.66		\$	-	0.00%
Charge (WMSC)	Ŷ	0.0011	100	Ŷ	0.00		0.0011		Ŷ	0.00		Ť		0.0070
Rural and Remote Rate	\$	0.0012	150	\$	0.18	9	0.0012	150	\$	0.18		\$	-	0.00%
Protection (KRKP) Standard Supply Sanica Charge	¢	0.2500	1	¢	0.25	d	0.2500	1	¢	0.25		¢		0.00%
Debt Betirement Charge (DBC)	ф Ф	0.2300	140	ф Ф	0.23	4	0.2300	140	ф Ф	0.25		φ Φ	-	0.00%
	¢ ¢	0.0070	140	¢ ¢	0.98	4	0.0070	140	¢ ¢	0.98		ф ф	-	0.00%
TOU - OII Feak	¢ ¢	0.0070	90	¢ ¢	0.00	4	0.0070	90	¢ ¢	0.00		ф ф	-	0.00%
	¢ ¢	0.1040	25	ф Ф	2.02	4	0.1040	20	¢ ¢	2.02		ф ф	-	0.00%
TOU - On Peak	Þ	0.1240	20	Ð	3.12	1	0.1240	20	Þ	3.12		Ф	-	0.00%
Total Bill on TOU (before Taxes)				\$	6,794.12				\$	6,487.60		-\$	306.52	-4.51%
HST		13%		\$	883.24		13%		\$	843.39		-\$	39.85	-4.51%
Total Bill (including HST)				\$	7.677.36				\$	7.330.99		-\$	346.37	-4.51%
Ontario Clean Energy Benefit ¹				-\$	767.74				-\$	733.10		\$	34.64	-4.51%
Total Bill on TOU (including OCEB)				\$	6,909.62				\$	6,597.89		-\$	311.73	-4.51%

Note: For distributors who have a majority of customers on Tiered pricing, please provide a separate bill impact for such customers.

EXHIBIT 5

2014 RTSR Workform Model



Utility Name	Espanola Regional Hydro Distribution Corporation		
Service Territory	Espanola and the Township of Spanish-Sables River		
Assigned EB Number	EB-2013-0127		
Name and Title	Jennifer Uchmanowicz, Rates and Regulatory Affairs Officer		
Phone Number	705-759-3009		
Email Address	Jennifer.Uchmanowicz@ssmpuc.com		
Date	Aug-13		
Last COS Re-based Year	2012		

Note: Drop-down lists are shaded blue; Input cells are shaded green.

This Workbook Model is protected by copyright and is being made available to you solely for the purpose of filing your COS/RM application. You may use and copy this model for that purpose, and provide a copy of this model to any person that is advising or assisting you in that regard. Except as indicated above, any copying, reproduction, publication, sale, adaptation, ir ranslation, modification, reverse engineering or other use or dissemination of this model without the express written consent of the Ontario Energy Board is prohibited. If you provide a copy of this model to a person that is advising or assisting you in preparing the application or reviewing your draft rate order, you must ensure that the person understands and agrees to the restrictions noted above.

While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.


1. Info 2. Table of Contents 3. Rate Classes 4. RRR Data 5. UTRs and Sub-Transmission 6. Historical Wholesale

7. Current Wholesale 8. Forecast Wholesale 9. Adj Network to Current WS 10. Adj Conn. to Current WS

11. Adj Network to Forecast WS

12. Adj Conn. to Forecast WS

13. Final 2013 RTS Rates



1. Select the appropriate rate classes that appear on your most recent Board-Approved Tariff of Rates and Charges.

2. Enter the RTS Network and Connection Rate as it appears on the Tariff of Rates and Charges

Rate Class	Unit	RTSR-Network	RTSR-Connection
Residential General Service Less Than 50 kW General Service 50 to 4,999 kW General Service 50 to 4,999 kW – Interval Metered Unmetered Scattered Load Sentinel Lighting Street Lighting Choose Rate Class Choose Rate Class	kWh kW kW kWh kW kW	\$ 0.0061 \$ 0.0057 \$ 2.2869 \$ 2.5707 \$ 0.0057 \$ 1.7335 \$ 1.7248	\$ 0.0040 \$ 0.0036 \$ 1.3968 \$ 1.9349 \$ 0.0036 \$ 1.1023 \$ 1.0797



In the green shaded cells, enter the most recent reported RRR billing determinants. Please ensure that billing determinants are non-loss adjusted.

Rate Class	Unit	Non-Loss Adjusted Metered kWh	Non-Loss Adjusted Metered kW	Applicable Loss Factor	Load Factor	Loss Adjusted Billed kWh	Billed kW
Residential	kWh	30,758,632		1.0687		32,871,750	-
General Service Less Than 50 kW	kWh	11,730,167		1.0687		12,536,029	-
General Service 50 to 4,999 kW	kW	12,951,567	32,507		54.61%	12,951,567	32,507
General Service 50 to 4,999 kW – Interval Metered	kW	4,089,968	10,265		54.61%	4,089,968	10,265
Unmetered Scattered Load	kWh	131,160		1.0687		140,171	-
Sentinel Lighting	kW	25,725	72		48.97%	25,725	72
Street Lighting	kW	618,217	1,728		49.04%	618,217	1,728



Uniform Transmission Rates	Unit	Effective	e January 1, 2012	Effective	e January 1, 2013	Effective	e January 1, 2014
Rate Description		1	Rate]	Rate]	Rate
Network Service Rate	kW	\$	3.57	\$	3.63	\$	3.63
Line Connection Service Rate	kW	\$	0.80	\$	0.75	\$	0.75
Transformation Connection Service Rate	kW	\$	1.86	\$	1.85	\$	1.85
Hydro One Sub-Transmission Rates	Unit	Effective	e January 1, 2012	Effective	e January 1, 2013	Effective	e January 1, 2014
Rate Description		1	Rate	1	Rate	1	Rate
Network Service Rate	kW	\$	2.65	\$	3.18	\$	3.18
Line Connection Service Rate	kW	\$	0.64	\$	0.70	\$	0.70
Transformation Connection Service Rate	kW	\$	1.50	\$	1.63	\$	1.63
Both Line and Transformation Connection Service Rate	kW	\$	2.14	\$	2.33	\$	2.33
If needed , add extra host here (I)	Unit	Effective	e January 1, 2012	Effective	e January 1, 2013	Effective	e January 1, 2014
Rate Description		1	Rate]	Rate]	Rate
Network Service Rate	kW						
Line Connection Service Rate	kW						
Transformation Connection Service Rate	kW						
Both Line and Transformation Connection Service Rate	kW	\$	-	\$	-	\$	-
If needed , add extra host here (II)	Unit	Effective	e January 1, 2012	Effective	e January 1, 2013	Effective	e January 1, 2014
Rate Description		1	Rate]	Rate]	Rate
Network Service Rate	kW						
Line Connection Service Rate	kW						
Transformation Connection Service Rate	kW						
Both Line and Transformation Connection Service Rate	kW	\$	-	\$	-	\$	-
Uudea Ona Sub Tranomissian Pata Bidar 0A	11	Effective	e January 1,	Effective	e January 1,	Effective	e January 1,
	Unit		2012		2013		2014
Note Description RSVA Transmission network $= 4714$, which affects 1584	1-147	¢	Nate	¢	0 1/65	¢.	0 146E
RSVA Transmission connection $= 4714$ = which affects 1586	kW	\$	-	\$	0.0667	\$	0.0667

kW

kW

kW

\$

\$

\$

\$

\$

-\$

-

-

-

0.0475

0.0419

0.0270

\$ 0.0475

\$ 0.0419

-\$ 0.0270

RARA 1 – 2252 – which affects 1590 RARA 1 – 2252 – which affects 1590 (2008)

RSVA LV - 4750 - which affects 1550

RARA 1 - 2252 - which affects 1590 (2009)	kW	\$	-	-\$	0.0006	-\$	0.0006
Hydro One Sub-Transmission Rate Rider 9A	kW	\$	-	\$	0.2750	\$	0.2750
Transformer Allowance Credit (if applicable enter as a pegative		Histor	ical 2012	Cur	rent 2013	Fore	ecast 2014
value)	\$						



In the green shaded cells, enter billing detail for wholesale transmission for the same reporting period as the billing determinants on Sheet "4. RRR Data". For Hydro One Sub-transmission Rates, if you are charged a *combined* Line and Transformer connection rate, please ensure that both the line connection and transformer connection columns are completed.

IESO		Network		Line	e Connec	tion	Transform	nation C	onnection	Total Li	ne
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amoun	ıt
Ianuary		\$0.00			\$0.00			\$0.00		\$	
Fohrwart		\$0.00			\$0.00			\$0.00		φ	
February		\$0.00			\$0.00			\$0.00		\$	-
March		\$0.00			\$0.00			\$0.00		\$	-
April		\$0.00			\$0.00			\$0.00		\$	-
May		\$0.00			\$0.00			\$0.00		\$	-
June		\$0.00			\$0.00			\$0.00		\$	-
July		\$0.00			\$0.00			\$0.00		\$	-
Angust		\$0.00			\$0.00			\$0.00		¢	_
August		\$0.00			\$0.00			\$0.00		ф Ф	-
September		\$0.00			\$0.00			\$0.00		\$	-
October		\$0.00			\$0.00			\$0.00		\$	-
November		\$0.00			\$0.00			\$0.00		\$	-
December		\$0.00			\$0.00			\$0.00		\$	-
Total			\$ -		\$ -	\$ -		s -	\$ -	\$	
		Network	Ψ	1.50	¢	Ψ.	Trevelow	Ψ	φ		
Hydro One		Network		LIN	e Connec	tion	Transform		onnection	Total LI	ne
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amoun	ıt
January	12 276	\$2.65	\$ 32,532	12 467	\$0.64	\$ 7,070	0.042	\$1.50	¢ 1/ 013	\$ 22.5	802
Echrucary	12,270	\$2.00 \$2.05	¢ 30,967	12,407	\$0.04 \$0.04	¢ 7,01	0,342	¢1.50	\$ 14,513	φ <u>22,0</u>	202
February	11,648	\$2.65	\$ 30,867	12,189	\$0.64	\$ 7,801	9,728	\$1.50	\$ 14,592	\$ 22,3	393
March	11,597	\$2.65	\$ 30,732	11,724	\$0.64	\$ 7,503	9,380	\$1.50	\$ 14,070	\$ 21,5	573
April	8,331	\$2.65	\$ 22,077	8,461	\$0.64	\$ 5,415	6,909	\$1.50	\$ 10,364	\$ 15,7	779
May	7,724	\$2.65	\$ 20,469	7,899	\$0.64	\$ 5,055	6,735	\$1.50	\$ 10,103	\$ 15,1	158
June	8,414	\$2.65	\$ 22,297	8,576	\$0.64	\$ 5,489	7,519	\$1.50	\$ 11,279	\$ 16,7	767
Iuly	9 115	\$2.65	\$ 24 155	9 260	\$0.64	\$ 5.926	8 120	\$1.50	\$ 12.180	\$ 181	106
August	9 907	\$2.65	¢ 23,220	0,000	¢0.64	¢ 5,520	7,960	¢1.50	¢ 12,100	¢ 10,	556
August	0,007	\$2.05	\$ 23,339	9,009	\$0.04	\$ 5,700	7,000	\$1.50	\$ 11,790	φ 17,0	550
September	8,636	\$2.65	\$ 22,885	8,835	\$0.64	\$ 5,655	7,543	\$1.50	\$ 11,315	\$ 16,9	969
October	8,739	\$2.65	\$ 23,158	9,121	\$0.64	\$ 5,838	7,475	\$1.50	\$ 11,213	\$ 17,0	050
November	11,301	\$2.65	\$ 29,948	11,428	\$0.64	\$ 7,314	9,368	\$1.50	\$ 14,052	\$ 21,3	366
December	11,994	\$2.65	\$ 31,784	12,187	\$0.64	\$ 7,800	9,892	\$1.50	\$ 14,838	\$ 22,6	638
Total	118,582	2.65	\$ 314,243	121,156	\$ 0.64	\$ 77,540	100,471	\$ 1.50	\$ 150,707	\$ 228,2	247
Add Extra Host Here (I)		Network		Line	e Connec	tion	Transform	nation C	onnection	Total Li	ne
(if needed)											
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amoun	ıt
January		\$0.00			\$0.00			\$0.00		\$	-
February		\$0.00			\$0.00			\$0.00		\$	-
March		\$0.00			\$0.00			\$0.00		¢	
April		\$0.00			\$0.00			\$0.00		φ.	
April		\$0.00			\$0.00			\$0.00		\$	-
May		\$0.00			\$0.00			\$0.00		\$	-
June		\$0.00			\$0.00			\$0.00		\$	-
July		\$0.00			\$0.00			\$0.00		\$	-
August		\$0.00			\$0.00			\$0.00		\$	-
September		\$0.00			\$0.00			\$0.00		\$	-
October		\$0.00			\$0.00			¢0.00		¢	
October N. 1		\$0.00			\$0.00			\$0.00		ф .	-
November		\$0.00			\$0.00			\$0.00		\$	-
December		\$0.00			\$0.00			\$0.00		\$	-
Total	- 9	- S	\$-	-	\$-	\$ -	-	\$-	\$-	\$	-
Add Extra Host Here (II)		Network		Line	e Connec	tion	Transform	nation C	onnection	Total Li	ne
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amoun	ıt
January		\$0.00			\$0.00			\$0.00		\$	-
February		\$0.00			\$0.00			\$0.00		\$	-
March		\$0.00			\$0.00			\$0.00		\$	-
April		\$0.00			\$0.00			\$0.00		\$	



RTSR Workform for Electricity Distributors (2014 Filers)

In the green shaded cells, enter billing detail for wholesale transmission for the same reporting period as the billing determinants on Sheet "4. RRR Data". For Hydro One Sub-transmission Rates, if you are charged a *combined* Line and Transformer connection rate, please ensure that both the line connection and transformer connection columns are completed.

May		\$0.00				\$0.00				\$0.00			\$	-
June		\$0.00				\$0.00				\$0.00			\$	-
July		\$0.00				\$0.00				\$0.00			\$	-
August		\$0.00				\$0.00				\$0.00			\$	-
September		\$0.00				\$0.00				\$0.00			\$	-
October		\$0.00				\$0.00				\$0.00			\$	-
November		\$0.00				\$0.00				\$0.00			\$	-
December		\$0.00				\$0.00				\$0.00			\$	-
Total	- \$	-	\$	-	-	\$-	\$	-	-	\$-	\$	-	\$	-
Total		Network			Lin	e Connec	tion		Transform	nation C	onne	ction	То	tal Line
Month	Units Billed	Rate	А	mount	Units Billed	Rate	A	mount	Units Billed	Rate	A	mount	А	mount
January	12,276	\$2.65	\$	32,532	12,467	\$0.64	\$	7,979	9,942	\$1.50	\$	14,913	\$	22,892
February	11,648	\$2.65	\$	30,867	12,189	\$0.64	\$	7,801	9,728	\$1.50	\$	14,592	\$	22,393
March	11,597	\$2.65	\$	30,732	11,724	\$0.64	\$	7,503	9,380	\$1.50	\$	14,070	\$	21,573
April	8,331	\$2.65	\$	22,077	8,461	\$0.64	\$	5,415	6,909	\$1.50	\$	10,364	\$	15,779
May	7,724	\$2.65	\$	20,469	7,899	\$0.64	\$	5,055	6,735	\$1.50	\$	10,103	\$	15,158
June	8,414	\$2.65	\$	22,297	8,576	\$0.64	\$	5,489	7,519	\$1.50	\$	11,279	\$	16,767
Inly	9,115	\$2.65	\$	24,155	9,260	\$0.64	\$	5,926	8,120	\$1.50	\$	12,180	\$	18,106
July							¢	E 766	7 960	C4 50	¢	11 790	\$	17,556
August	8,807	\$2.65	\$	23,339	9,009	\$0.64	Ф	5,700	7,000	\$1.50	φ	11,100	•	
August September	8,807 8,636	\$2.65 \$2.65	\$ \$	23,339 22,885	9,009 8,835	\$0.64 \$0.64	э \$	5,655	7,543	\$1.50 \$1.50	э \$	11,315	\$	16,969
August September October	8,807 8,636 8,739	\$2.65 \$2.65 \$2.65	\$ \$ \$	23,339 22,885 23,158	9,009 8,835 9,121	\$0.64 \$0.64 \$0.64	э \$ \$	5,655 5,838	7,543 7,475	\$1.50 \$1.50 \$1.50	Գ Տ Տ	11,315 11,213	\$ \$	16,969 17,050
August September October November	8,807 8,636 8,739 11,301	\$2.65 \$2.65 \$2.65 \$2.65	\$ \$ \$	23,339 22,885 23,158 29,948	9,009 8,835 9,121 11,428	\$0.64 \$0.64 \$0.64 \$0.64	5 \$ \$ \$	5,655 5,838 7,314	7,600 7,543 7,475 9,368	\$1.50 \$1.50 \$1.50 \$1.50	9 \$ \$ \$	11,315 11,213 14,052	\$ \$ \$	16,969 17,050 21,366
August September October November December	8,807 8,636 8,739 11,301 11,994	\$2.65 \$2.65 \$2.65 \$2.65 \$2.65	\$ \$ \$ \$ \$	23,339 22,885 23,158 29,948 31,784	9,009 8,835 9,121 11,428 12,187	\$0.64 \$0.64 \$0.64 \$0.64 \$0.64	Դ Տ Տ Տ	5,655 5,838 7,314 7,800	7,543 7,475 9,368 9,892	\$1.50 \$1.50 \$1.50 \$1.50 \$1.50	9 69 69 69 69 69 69 69 69 69 69 69 69 69	11,315 11,213 14,052 14,838	\$ \$ \$ \$	16,969 17,050 21,366 22,638



The purpose of this sheet is to calculate the expected billing when current 2013 Uniform Transmission Rates are applied against historical 2012 transmission units.

IESO		Network		Line	Connect	ion	Transfor	mation Co	onnection	Total Line
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amount
January	- 9	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
February	- 5	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
March	- 5	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
April	- 5	\$ 3.6300	\$ -		\$ 0.7500	\$ -	-	\$ 1.8500	\$ -	\$ -
May	- 5	3.6300	\$ -		\$ 0.7500	\$ -	-	\$ 1.8500	s -	\$ -
Iune	- 9	\$ 3.6300	\$ -	-	\$ 0.7500	s -	-	\$ 1.8500	s -	s -
July		\$ 3,6300	\$		\$ 0.7500	\$ \$-		\$ 1.8500	\$	ŝ.
August		¢ 3.0300	φ -	-	¢ 0.7500	φ -	-	¢ 1.0000	φ -	φ - e
Cantanhan		¢ 3.0300	а - е	-	\$ 0.7500	з - с	-	\$ 1.0000	э - с	э - С
September		\$ 3.6300	ъ -	-	\$ 0.7500	\$ -	-	\$ 1.8500	\$ -	\$ -
October		\$ 3.6300	\$ -	-	\$ 0.7500	\$ - •	-	\$ 1.8500	\$ - -	\$ - •
November	- 5	\$ 3.6300	\$ -	-	\$ 0.7500	\$ -	-	\$ 1.8500	\$ -	\$ -
December	- 9	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$ -
Total	- 9	\$ -	\$ -	-	\$-	\$-	-	\$-	\$ -	\$ -
Hydro One		Network		Line	Connect	ion	Transfor	mation Co	onnection	Total Line
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amount
January	12,276	\$ 3.3265	\$ 40.836	12,467	\$ 0.7667	\$ 9,558	9,942	\$ 1.6300	\$ 16,205	\$ 25,764
February	11,648	\$ 3.3265	\$ 38,747	12,189	\$ 0.7667	\$ 9,345	9,728	\$ 1.6300	\$ 15,857	\$ 25,202
March	11 597	\$ 3,3265	\$ 38,577	11 724	\$ 0.7667	\$ 8.989	9,380	\$ 1,6300	\$ 15,289	\$ 24.278
April	8 3 3 1	\$ 3,3265	¢ 00,077 ¢ 27,713	8 /61	© 0.7667	¢ 0,505 \$ 6,487	6,000	¢ 1.6300	\$ 11.262	\$ 17.740
May	0,001 0	D 3.3203	\$ 27,713	7,401	\$ 0.7007	\$ 0,467 \$ 0,050	0,909	\$ 1.0300 © 1.0300	\$ 10,202	\$ 17,749
May	7,724	\$ 3.3265	\$ 25,694	7,899	\$ 0.7667	\$ 6,056	6,735	\$ 1.6300	\$ 10,978	\$ 17,034
June	8,414 \$	\$ 3.3265	\$ 27,989	8,576	\$ 0.7667	\$ 6,575	7,519	\$ 1.6300	\$ 12,256	\$ 18,831
July	9,115 9	\$ 3.3265	\$ 30,321	9,260	\$ 0.7667	\$ 7,099	8,120	\$ 1.6300	\$ 13,236	\$ 20,335
August	8,807 8	\$ 3.3265	\$ 29,296	9,009	\$ 0.7667	\$ 6,907	7,860	\$ 1.6300	\$ 12,812	\$ 19,719
September	8,636	\$ 3.3265	\$ 28,728	8,835	\$ 0.7667	\$ 6,774	7,543	\$ 1.6300	\$ 12,295	\$ 19,069
October	8,739	\$ 3.3265	\$ 29,070	9,121	\$ 0.7667	\$ 6,993	7,475	\$ 1.6300	\$ 12,184	\$ 19,178
November	11,301 \$	\$ 3.3265	\$ 37,593	11,428	\$ 0.7667	\$ 8,762	9,368	\$ 1.6300	\$ 15,270	\$ 24,032
December	11,994	\$ 3.3265	\$ 39,898	12,187	\$ 0.7667	\$ 9,344	9,892	\$ 1.6300	\$ 16,124	\$ 25,468
Total	118,582	\$ 3.33	\$ 394,463	121,156	\$ 0.77	\$ 92,891	100,471	\$ 1.63	\$ 163,768	\$ 256,658
Add Extra Host Here (I)		Network		Line	Connect	ion	Transfor	mation Co	onnection	Total Line
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amount
January	- 9	s -	\$ -	-	\$-	\$-	-	\$-	\$-	\$-
February	- 5	- 5 -	\$ -		s -	\$ -	-	s -	\$ -	\$ -
March		, 8 -	s -		s -	s -	-	s -	s -	s -
April		- -	÷ -		÷ \$.	s -		s .	s .	÷ .
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July		р -	ъ -	-	ф. -	ъ -	-	ъ-	ъ -	ъ -
August	- 5	⊅ -	ъ -	-	а -	ъ -	-	ъ-	ъ -	ъ -
September	- 5	5 -	\$ -	-	\$ -	\$ -	-	ş -	\$ -	\$ -
October	- 9	Б -	\$ -	-	ş -	\$-	-	\$ - •	\$ -	\$-
November	- 9	\$-	\$-	-	\$-	\$-	-	\$-	\$-	\$-
December	- 5	\$ -	\$ -	-	\$-	\$-	-	\$ -	\$-	\$-
Total	- :	\$-	\$-		\$-	\$-	-	\$-	\$-	\$-
Add Extra Host Here (II)		Network		Line	Connect	ion	Transfor	mation Co	onnection	Total Line
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amount
Januarv	- 9	\$-	\$-		\$-	\$-		s -	\$-	s -
February	_ (6 -	\$ -	-	s -	\$ -	-	s -	\$ -	s -
March	_ (8 -	\$ -	-	\$-	\$-	-	\$ -	\$-	\$ -
April	_ (- R -	÷ \$	_	÷ -	÷ \$	_	÷ -	÷ \$	\$ _
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June	- 9	Þ -	ъ -	-	ъ-	ъ -	-	\$ - -	ъ -	ş -
July	- 9	5 -	\$-	-	ş -	\$-	-	\$-	\$-	\$-
August	- 9	\$-	\$-	-	\$-	\$-	-	\$-	\$-	\$-
September	- 5	\$ -	\$-	-	\$-	\$-	-	\$-	\$-	\$-
October	- 5	\$-	\$-	-	\$-	\$-	-	\$-	\$-	\$-



The purpose of this sheet is to calculate the expected billing when current 2013 Uniform Transmission Rates are applied against historical 2012 transmission units.

December	- \$	-	\$	-		\$-	\$	-		\$-	\$-	\$	
Total	- \$	-	\$	-	-	\$-	\$		-	\$-	\$-	\$	-
Total		Network			Line	e Connec	tion		Transfor	mation C	onnection	То	otal Line
Month	Units Billed	Rate	A	Mount	Units Billed	Rate	A	mount	Units Billed	Rate	Amount	А	mount
January	12,276	\$3.33	\$	40,836	12,467	\$0.77	\$	9,558	9,942	\$1.63	\$ 16,205	\$	25,764
February	11,648	\$3.33	\$	38,747	12,189	\$0.77	\$	9,345	9,728	\$1.63	\$ 15,857	\$	25,202
March	11,597	\$3.33	\$	38,577	11,724	\$0.77	\$	8,989	9,380	\$1.63	\$ 15,289	\$	24,278
April	8,331	\$3.33	\$	27,713	8,461	\$0.77	\$	6,487	6,909	\$1.63	\$ 11,262	\$	17,749
May	7,724	\$3.33	\$	25,694	7,899	\$0.77	\$	6,056	6,735	\$1.63	\$ 10,978	\$	17,034
June	8,414	\$3.33	\$	27,989	8,576	\$0.77	\$	6,575	7,519	\$1.63	\$ 12,256	\$	18,831
July	9,115	\$3.33	\$	30,321	9,260	\$0.77	\$	7,099	8,120	\$1.63	\$ 13,236	\$	20,335
August	8,807	\$3.33	\$	29,296	9,009	\$0.77	\$	6,907	7,860	\$1.63	\$ 12,812	\$	19,719
September	8,636	\$3.33	\$	28,728	8,835	\$0.77	\$	6,774	7,543	\$1.63	\$ 12,295	\$	19,069
October	8,739	\$3.33	\$	29,070	9,121	\$0.77	\$	6,993	7,475	\$1.63	\$ 12,184	\$	19,178
November	11,301	\$3.33	\$	37,593	11,428	\$0.77	\$	8,762	9,368	\$1.63	\$ 15,270	\$	24,032
December	11,994	\$3.33	\$	39,898	12,187	\$0.77	\$	9,344	9,892	\$1.63	\$ 16,124	\$	25,468
Total	118,582 \$	3.33	3 \$	394,463	121,156	\$ 0.77	\$	92,891	100,471	\$ 1.63	\$ 163,768	\$	256,658



The purpose of this sheet is to calculate the expected billing when forecasted 2014 Uniform Transmission Rates are applied against historical 2012 transmission units.

IESO		Network		Lin	e Connec	tion	Transfor	mation Co	onnection	Total Line
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amount
January	-	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$ -
February	-	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
March	-	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
April	-	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
May	-	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
June	-	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
July	-	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
August	-	\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
September	-	\$ 3.6300	\$-	-	\$ 0.7500	\$ -	-	\$ 1.8500	\$ -	\$ -
Öctober	-	\$ 3.6300	\$-	-	\$ 0.7500	\$ -	-	\$ 1.8500	\$ -	\$ -
November	-	\$ 3.6300	s -		\$ 0.7500	\$-		\$ 1.8500	\$-	\$-
December		\$ 3.6300	\$-	-	\$ 0.7500	\$-	-	\$ 1.8500	\$-	\$-
Total	-	\$-	\$-	-	\$-	\$-	-	\$-	\$-	\$-
Hydro One		Network		Lin	e Connec	tion	Transfor	mation Co	onnection	Total Line
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amount
January	10.070	¢ 3 3 3 2 5 F	¢ 40.000	10 467	\$ 0.7667	¢ 0.550	0.040	¢ 1 6200	¢ 16 205	¢ 05.704
January	12,270	\$ 3.3205 © 3.3205	\$ 40,836	12,467	\$ 0.7667	\$ 9,556 © 0,245	9,942	\$ 1.0300 © 1.0300	\$ 16,205	\$ 25,764 \$ 25,000
March	11,040	\$ 3.3205 © 3.3205	\$ 30,747 \$ 20,577	12,169	\$ 0.7667	\$ 9,345 ¢ 9,090	9,728	\$ 1.0300 © 1.0300		\$ 25,202
A muil	11,597	\$ 3.3205 © 3.3205	\$ 30,377 © 37,740	11,724	\$ 0.7667	\$ 6,969 \$ 6,407	9,360	\$ 1.0300 © 1.0300	\$ 15,269 \$ 14,262	\$ 24,278 \$ 47,740
April	8,331	\$ 3.3265	\$ 27,713	8,461	\$ 0.7667	\$ 6,487	6,909	\$ 1.6300	\$ 11,262	\$ 17,749
iviay	7,724	\$ 3.3265	\$ 25,694	7,899	\$ 0.7667	\$ 6,056	6,735	\$ 1.6300	\$ 10,978	\$ 17,034
June	8,414	\$ 3.3265	\$ 27,989	8,576	\$ 0.7667	\$ 6,575	7,519	\$ 1.6300	\$ 12,256	\$ 18,831
July	9,115	\$ 3.3265	\$ 30,321	9,260	\$ 0.7667	\$ 7,099	8,120	\$ 1.6300	\$ 13,236	\$ 20,335
August	8,807	\$ 3.3265	\$ 29,296	9,009	\$ 0.7667	\$ 6,907	7,860	\$ 1.6300	\$ 12,812	\$ 19,719
September	8,636	\$ 3.3265	\$ 28,728	8,835	\$ 0.7667	\$ 6,774	7,543	\$ 1.6300	\$ 12,295	\$ 19,069
October	8,739	\$ 3.3265	\$ 29,070	9,121	\$ 0.7667	\$ 6,993	7,475	\$ 1.6300	\$ 12,184	\$ 19,178
November	11,301	\$ 3.3265	\$ 37,593	11,428	\$ 0.7667	\$ 8,762	9,368	\$ 1.6300	\$ 15,270	\$ 24,032
December	11,994	\$ 3.3265	\$ 39,898	12,187	\$ 0.7667	\$ 9,344	9,892	\$ 1.6300	\$ 16,124	\$ 25,468
Total	118,582	\$ 3.33	\$ 394,463	121,156	\$ 0.77	\$ 92,891	100,471	\$ 1.63	\$ 163,768	\$ 256,658
Add Extra Host Here (I)		Network		Lin	e Connec	tion	Transfor	mation Co	onnection	Total Line
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amount
January	-	\$-	s -	-	\$-	s -	-	\$ -	\$-	\$-
February	-	\$-	s -		\$-	\$-		\$-	\$-	\$-
March	-	\$-	\$-	-	\$-	\$-	-	\$-	\$-	\$-
April	-	\$ -	\$-	-	\$ -	\$ -	-	\$ -	\$ -	\$ -
May	-	\$ -	\$-	-	\$ -	\$ -	-	\$ -	\$ -	\$ -
Iune	-	s -	s -	-	s -	\$ -	-	s -	\$ -	\$ -
July	-	\$-	\$ -		\$-	\$ -	-	\$ -	\$ -	\$ -
Angust	-	\$ -	\$ -		s -	\$ -		s -	\$ -	\$ -
September	-	\$-	\$ -		\$-	\$ -	-	\$ -	\$ -	\$ -
October		¢ .	\$ \$.		ŝ.	\$		¢ .	¢ \$.	¢ ¢
November		φ ς _	\$ \$.		¢ \$.	\$		¢.	φ ς -	\$
December	-	\$ -	\$ -	-	\$ - \$ -	\$ -	-	\$ -	\$-	\$-
Total	-	\$-	\$ -	-	\$-	\$-		\$-	\$ -	\$-
Add Extra Host Here (II)		Network		Lin	e Connec	tion	Transfor	mation Co	onnection	Total Line
Month	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Units Billed	Rate	Amount	Amount
Ianuary	-	s -	s -	-	s -	s -	-	s -	s -	s -
February	-	\$-	S -	-	s -	S -	-	s -	\$-	÷ \$-
March	-	\$ -	\$ -	-	s -	s -	-	s -	s -	÷ \$-
April	-	÷ \$-	÷ \$-	-	ş -	÷ \$-	-	÷ \$-	÷ \$-	÷ \$-
May		÷ \$-	- s -	-	s -	- s -	-	\$ -	÷ \$-	÷ s -
Inpo	-	φ - \$	÷ -	-	ς -	÷ -	-	φ - \$	÷ -	÷ -
June	-	φ - ¢	φ - ¢	-	φ - ¢	φ - ¢	-	φ - ¢	φ - ¢	φ - ¢
July	-	ა - ღ	¢ -	-	ა - ი	φ -	-	ა - ი	ው - ድ	¢ -
August Contor-1	-	ა - ღ	¢ -	-	ა - ი	φ -	-	ა - ი	ው - ድ	¢ -
September	-	ф -	ъ -	-	ъ-	э - С	-	ъ-	ъ -	ъ -
	-	.h -	`		•			.b -		



The purpose of this sheet is to calculate the expected billing when forecasted 2014 Uniform Transmission Rates are applied against historical 2012 transmission units.

November December	-	\$ \$	-	\$ \$	-	-	\$ \$	-	\$ \$	-	-	\$ \$	-	\$ \$	-	\$ \$	-
Total	-	\$		\$	-	-	\$	-	\$	-	-	\$		\$	-	\$	-
Total		Ne	twork			Lin	e C	onnec	tio	ı	Transfor	mat	ion Co	onne	ection	То	otal Line
Month	Units Billed	I	Rate		Amount	Units Billed	1	Rate		Amount	Units Billed	I	Rate	1	Amount	A	mount
January	12,276	\$	3.33	\$	40,836	12,467	\$	0.77	\$	9,558	9,942	\$	1.63	\$	16,205	\$	25,764
February	11,648	\$	3.33	\$	38,747	12,189	\$	0.77	\$	9,345	9,728	\$	1.63	\$	15,857	\$	25,202
March	11,597	\$	3.33	\$	38,577	11,724	\$	0.77	\$	8,989	9,380	\$	1.63	\$	15,289	\$	24,278
April	8,331	\$	3.33	\$	27,713	8,461	\$	0.77	\$	6,487	6,909	\$	1.63	\$	11,262	\$	17,749
May	7,724	\$	3.33	\$	25,694	7,899	\$	0.77	\$	6,056	6,735	\$	1.63	\$	10,978	\$	17,034
June	8,414	\$	3.33	\$	27,989	8,576	\$	0.77	\$	6,575	7,519	\$	1.63	\$	12,256	\$	18,831
July	9,115	\$	3.33	\$	30,321	9,260	\$	0.77	\$	7,099	8,120	\$	1.63	\$	13,236	\$	20,335
August	8,807	\$	3.33	\$	29,296	9,009	\$	0.77	\$	6,907	7,860	\$	1.63	\$	12,812	\$	19,719
September	8,636	\$	3.33	\$	28,728	8,835	\$	0.77	\$	6,774	7,543	\$	1.63	\$	12,295	\$	19,069
October	8,739	\$	3.33	\$	29,070	9,121	\$	0.77	\$	6,993	7,475	\$	1.63	\$	12,184	\$	19,178
November	11,301	\$	3.33	\$	37,593	11,428	\$	0.77	\$	8,762	9,368	\$	1.63	\$	15,270	\$	24,032
December	11,994	\$	3.33	\$	39,898	12,187	\$	0.77	\$	9,344	9,892	\$	1.63	\$	16,124	\$	25,468
Total	118,582	\$	3.33	\$	394,463	121,156	\$	0.77	\$	92,891	100,471	\$	1.63	\$	163,768	\$	256,658



The purpose of this sheet is to re-align the current RTS Network Rates to recover current wholesale network costs.

Rate Class	Unit	Curi N	ent RTSR- letwork	Loss Adjusted Billed kWh	Loss Adjusted Billed kW	ļ	Billed Amount	Billed Amount %	W	Current /holesale Billing	Proposed RTSR Network
Residential	kWh	\$	0.0061	32,871,750	-	\$	200,518	53.2%	\$	210,025	\$0.0064
General Service Less Than 50 kW	kWh	\$	0.0057	12,536,029	-	\$	71,455	19.0%	\$	74,844	\$0.0060
General Service 50 to 4,999 kW	kW	\$	2.2869	12,951,567	32,507	\$	74,340	19.7%	\$	77,865	\$2.3953
General Service 50 to 4,999 kW – Interval Metered	kW	\$	2.5707	4,089,968	10,265	\$	26,388	7.0%	\$	27,639	\$2.6926
Unmetered Scattered Load	kWh	\$	0.0057	140,171	-	\$	799	0.2%	\$	837	\$0.0060
Sentinel Lighting	kW	\$	1.7335	25,725	72	\$	125	0.0%	\$	131	\$1.8157
Street Lighting	kW	\$	1.7248	618,217	1,728	\$	2,980	0.8%	\$	3,122	\$1.8066
						\$	376,606				



The purpose of this sheet is to re-align the current RTS Connection Rates to recover current wholesale connection costs.

Rate Class	Unit	Curr Co	ent RTSR- nnection	Loss Adjusted Billed kWh	Loss Adjusted Billed kW	,	Billed Amount	Billed Amount %	W	Current holesale Billing	Proposed RTSR Connection
Residential	kWh	\$	0.0040	32,871,750	-	\$	131,487	53.8%	\$	138,119	\$0.0042
General Service Less Than 50 kW	kWh	\$	0.0036	12,536,029	-	\$	45,130	18.5%	\$	47,406	\$0.0038
General Service 50 to 4,999 kW	kW	\$	1.3968	12,951,567	32,507	\$	45,406	18.6%	\$	47,696	\$1.4673
General Service 50 to 4,999 kW – Interval Metered	kW	\$	1.9349	4,089,968	10,265	\$	19,862	8.1%	\$	20,864	\$2.0325
Unmetered Scattered Load	kWh	\$	0.0036	140,171	-	\$	505	0.2%	\$	530	\$0.0038
Sentinel Lighting	kW	\$	1.1023	25,725	72	\$	79	0.0%	\$	83	\$1.1579
Street Lighting	kW	\$	1.0797	618,217	1,728	\$	1,866	0.8%	\$	1,960	\$1.1342
						\$	244,334				



The purpose of this sheet is to update the re-align RTS Network Rates to recover forecast wholesale network costs.

Rate Class	Unit	Adjusted RTSR- Network	Loss Adjusted Billed kWh	Loss Adjusted Billed kW	Billed Amount		Billed Amount %	F W	orecast holesale Billing	Proposed RTSR Network
Residential	kWh	\$0.0064	32,871,750	-		210,025.48	53.2%	\$	210,025	\$0.0064
General Service Less Than 50 kW	kWh	\$0.0060	12,536,029	-	\$	74,844	19.0%	\$	74,844	\$0.0060
General Service 50 to 4,999 kW	kW	\$2.3953	12,951,567	32,507	\$	77,865	19.7%	\$	77,865	\$2.3953
General Service 50 to 4,999 kW – Interval Metered	kW	\$2.6926	4,089,968	10,265	\$	27,639	7.0%	\$	27,639	\$2.6926
Unmetered Scattered Load	kWh	\$0.0060	140,171	-	\$	837	0.2%	\$	837	\$0.0060
Sentinel Lighting	kW	\$1.8157	25,725	72	\$	131	0.0%	\$	131	\$1.8157
Street Lighting	kW	\$1.8066	618,217	1,728	\$	3,122	0.8%	\$	3,122	\$1.8066
					\$	394,463				



The purpose of this sheet is to update the re-aligned RTS Connection Rates to recover forecast wholesale connection costs.

Rate Class	Unit	A I Co	djusted RTSR- nnection	Loss Adjusted Billed kWh	Loss Adjusted Billed kW	1	Billed Amount	Billed Amount %	F	orecast holesale Billing	Pro F Cor	oposed RTSR Inection
Residential	kWh	\$	0.0042	32,871,750	-	\$	138,119	53.8%	\$	138,119	\$	0.0042
General Service Less Than 50 kW	kWh	\$	0.0038	12,536,029	-	\$	47,406	18.5%	\$	47,406	\$	0.0038
General Service 50 to 4,999 kW	kW	\$	1.4673	12,951,567	32,507	\$	47,696	18.6%	\$	47,696	\$	1.4673
General Service 50 to 4,999 kW – Interval Metered	kW	\$	2.0325	4,089,968	10,265	\$	20,864	8.1%	\$	20,864	\$	2.0325
Unmetered Scattered Load	kWh	\$	0.0038	140,171	-	\$	530	0.2%	\$	530	\$	0.0038
Sentinel Lighting	kW	\$	1.1579	25,725	72	\$	83	0.0%	\$	83	\$	1.1579
Street Lighting	kW	\$	1.1342	618,217	1,728	\$ 1,960		0.8%	\$	1,960	\$	1.1342
						\$	256,658					



For Cost of Service Applicants, please enter the following Proposed RTS rates into your rates model.

For IRM applicants, please enter these rates into the 2013 IRM Rate Generator, Sheet 11 "Proposed Rates", column I. Please note that the rate descriptions for the RTSRs are transfered automatically from Sheet 4 to Sheet 11, Column A.

Rate Class	Unit	Pr RTSF	oposed R Network	Proposed RTSR Connection		
Residential	kWh	\$	0.0064	\$	0.0042	
General Service Less Than 50 kW	kWh	\$	0.0060	\$	0.0038	
General Service 50 to 4,999 kW	kW	\$	2.3953	\$	1.4673	
General Service 50 to 4,999 kW – Interval Metered	kW	\$	2.6926	\$	2.0325	
Unmetered Scattered Load	kWh	\$	0.0060	\$	0.0038	
Sentinel Lighting	kW	\$	1.8157	\$	1.1579	
Street Lighting	kW	\$	1.8066	\$	1.1342	

EXHIBIT 6

2014 Shared Tax Savings Workform



Version

1.1

Utility Name	Espanola Regional Hydro Distribu	ution Corporation
Service Territory Name	Espanola and the township of Spa	anish Sables River
Assigned EB Number	EB-2013-0137	
Name and Title	Jennifer Uchmanowicz, Rates and	d Regulatory Affairs Officer
Phone Number	705-759-3009	
Email Address	Jennifer.Uchmanowicz@ssmpuc.com	
Date		
Last COS Re-based Year	2012	

Note: Drop-down lists are shaded blue; Input cells are shaded green.

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- 1. Info
- 2. Table of Contents
- 3. Re-Based Billing Determinants and Rates
- 4. Re-Based Revenue from Rates
- 5. Z-Factor Tax Changes
- 6. Calculation of Tax Change Variable Rate Rider



Enter your 2013 Base Monthly Fixed Charge and Distribution Volumetric Charge into columns labeled "Rate ReBal Base Service Charge" and "Rate ReBal Base Distribution Volumetric Rate kWh/kW" respectively.

Last COS Re-based Year was in 2012

Rate Group	Rate Class	Fixed Metric	Vol Metric	Re-based Billed Customers or Connections A	Re-based Billed kWh B	Re-based Billed kW C	Rate ReBal Base Service Charge D	Rate ReBal Base Distribution Volumetric Rate kWh E	Rate ReBal Base Distribution Volumetric Rate kW F
RES	Residential	Customer	kWh	2,847	32,680,721		13.66	0.0165	
GSLT50	General Service Less Than 50 kW	Customer	kWh	425	11,265,899		24.48	0.0201	
GSGT50	General Service 50 to 4,999 kW	Customer	kW	27	17,442,772	44,045	190.66		3.6836
Sen	Sentinel Lighting	Connection	kW	26	24,161	66	2.08		16.7508
USL	Unmetered Scattered Load	Connection	kWh	32	216,280		11.90	0.0153	
SL	Street Lighting	Connection	kW	1,053	623,166	1,766	1.93		24.3443
NA	Rate Class 7	NA	NA						
NA	Rate Class 8	NA	NA						
NA	Rate Class 9	NA	NA						
NA	Rate Class 10	NA	NA						
NA	Rate Class 11	NA	NA						
NA	Rate Class 12	NA	NA						
NA	Rate Class 13	NA	NA						
NA	Rate Class 14	NA	NA						
NA	Rate Class 15	NA	NA						
NA	Rate Class 16	NA	NA						
NA	Rate Class 17	NA	NA						
NA	Rate Class 18	NA	NA						
NA	Rate Class 19	NA	NA						
NA	Rate Class 20	NA	NA						
NA	Rate Class 21	NA	NA						
NA	Rate Class 22	NA	NA						
NA	Rate Class 23	NA	NA						
NA	Rate Class 24	NA	NA						
NA	Rate Class 25	NA	NA						



Calculating Re-Based Revenue from rates. No input required.

Last COS Re-based Year was in 2012

Rate Class	Re-based Billed Customers or Connections A	Re-based Billed kWh B	Re-based Billed kW C	Rate ReBal Base Service Charge D	Rate ReBal Base Distribution Volumetric Rate kWh E	Rate ReBal Base Distribution Volumetric Rate kW F	Service Charge Revenue G = A * D *12	Distribution Volumetric Rate Revenue kWh H = B * E	Distribution Volumetric Rate Revenue kW I = C * F	Revenue Requirement from Rates J = G + H + I
Residential	2,847	32,680,721	0	13.66	0.0165	0.0000	466,680	539,232	0	1,005,912
General Service Less Than 50 kW	425	11,265,899	0	24.48	0.0201	0.0000	124,848	226,445	0	351,293
General Service 50 to 4,999 kW	27	17,442,772	44,045	190.66	0.0000	3.6836	61,774	0	162,244	224,018
Sentinel Lighting	26	24,161	66	2.08	0.0000	16.7508	649	0	1,106	1,755
Unmetered Scattered Load	32	216,280	0	11.90	0.0153	0.0000	4,570	3,309	0	7,879
Street Lighting	1,053	623,166	1,766	1.93	0.0000	24.3443	24,387	0	42,992	67,380
							682,908	768,986	206,342	1,658,235



This worksheet calculates the tax sharing amount.

Step 1: Press the Update Button (this will clear all input cells and reveal your latest cost of service re-basing year). Step 2: In the green input cells below, please enter the information related to the last Cost of Service Filing.

Cummon	Charing of	Tay Change	Enropact Amounto
Summary	/ - Sharing Or	I ax change	FUIECast Amounts

For the year, enter any Tax Credits from the Cost of Service Tax Calculation (Positive #) 2012 2014 1. Tax Related Amounts Forecast from Capital Tax Rate Changes Taxable Capital \$ -Deduction from taxable capital up to \$15,000,000 \$ -Net Taxable Capital \$ - \$ -Rate 0.000% 0.000% - \$ -Ontario Capital Tax (Deductible, not grossed-up) \$ 2. Tax Related Amounts Forecast from Income Tax Rate Changes 2012 2014 \$ 50,789 \$ 50,789 Regulatory Taxable Income 15.50% Corporate Tax Rate 15.50% Tax Impact \$ 7,872 \$ 7,872 \$ 9,316 \$ Grossed-up Tax Amount 9,316 Tax Related Amounts Forecast from Capital Tax Rate Changes \$ - \$ -\$ 9,316 \$ 9,316 Tax Related Amounts Forecast from Income Tax Rate Changes Total Tax Related Amounts \$ 9,316 \$ 9,316 Incremental Tax Savings \$ 0 Sharing of Tax Savings (50%) \$0



This worksheet calculates a tax change volumetric rate rider. No input required. The outputs in column Q and S are to be entered into Sheet 11 "Proposed Rates" of the 2014 IRM Rate Generator Model. Rate description should be entered as "Rate Rider for Tax Change".

Rate Class	Total Revenue \$ by Rate Class A	Total Revenue % by Rate Class B = A / \$H	Total Z-Factor Tax Change\$ by Rate Class C = \$I * B	Billed kWh D	Billed kW E	Distribution Volumetric Rate kWh Rate Rider F = C / D	Distribution Volumetric Rate kW Rate Rider G = C / E
Residential	\$1,005,912	60.66%	\$0	32,680,721	0	\$0.0000	
General Service Less Than 50 kW	\$351,293	21.18%	\$0	11,265,899	0	\$0.0000	
General Service 50 to 4,999 kW	\$224,018	13.51%	\$0	17,442,772	44,045		\$0.0000
Sentinel Lighting	\$1,755	0.11%	\$0	24,161	66		\$0.0000
Unmetered Scattered Load	\$7,879	0.48%	\$0	216,280	0	\$0.0000	
Street Lighting	\$67,380	4.06%	\$0	623,166	1,766		\$0.0000
	\$1,658,235	100.00%	\$0				
	Н		-				
			I				

EXHIBIT 7

2014 Incremental Capital Projects



Email Address: Jennifer.uchmanowicz@ssmpuc.com

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While this model has been provided in Excel format and is required to be filed with the applications, the onus remains on the applicant to ensure the accuracy of the data and the results.



Using the pull-down menu below, please identify what year of the IRM cycle you are in.

2nd year of IRM cycle

Name or General Description of Project

Municipal Substation

Details of Project

New Municipal Substation design and Construction

		Depreciation		
Asset Component	Capital Cost	Rate	CCA Class	CCA Rate
1 Land	54,000	0%		
2 Municipal Substation	1,733,500	3%	47	8%
3 44 kV line Build	275,000	3%	47	8%
4				
5				
	2014	2015	2016	2017
Closing Net Fixed Asset	2,012,288	1,962,075	1,911,863	1,861,650
Amortization Expense	50,213	50,213	50,213	50,213
CCA	160,680	147,826	136,000	125,120



Name or General Description of Project Municipal Substation

Asset Component

Land

Average Net Fixed Assets

	2014		2015		2016		2017		2018
	Forecasted		Forecasted		Forecasted		Forecasted	I	orecasted
_	\$-	\$	54,000	\$	54,000	\$	54,000	\$	54,000
	\$ 54,000	\$	-	\$		\$	-	\$	-
_	\$ 54,000	\$	54,000	\$	54,000	\$	54,000	\$	54,000
_									
	\$-	\$	-	\$	-	\$	-	\$	-
0%	\$-	\$	-	\$	-	\$	-	\$	-
	\$-	\$	-	\$	-	\$	-	\$	-
_	\$-	\$	54,000	\$	54,000	\$	54,000	\$	54,000
	\$ 54,000	\$	54,000	\$	54,000	\$	54,000	\$	54,000
	\$ 27,000	\$	54,000	\$	54,000	\$	54,000	\$	54,000
	0%	2014 Forecasted \$ 54,000 \$ 54,000 \$ - \$ - \$ - \$ 54,000 \$ - \$ - \$ - \$ - \$ 54,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	2014 Forecasted \$ - \$ \$ 54,000 \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ - \$ \$ 27,000 \$	2014 2015 Forecasted Forecasted \$ - \$ 54,000 \$ 54,000 \$ - \$ 54,000 \$ - \$ - \$ - \$ 0% \$ - \$ - \$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$ 54,000 \$ \$ - \$ 54,000 \$ \$ 54,000 \$ 54,000 \$ \$ 27,000 \$ 54,000 \$	2014 2015 Forecasted Forecasted \$ - \$ 54,000 \$ \$ 54,000 \$ - \$ \$ 54,000 \$ - \$ \$ 54,000 \$ 54,000 \$ \$ 54,000 \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$ - \$ \$ - \$ 54,000 \$ 54,000 \$ \$ 54,000 \$ 54,000 \$ 54,000 \$	2014 2015 2016 Forecasted Forecasted Forecasted \$ - \$ 54,000 \$ 54,000 \$ 54,000 \$ - \$ - \$ \$ 54,000 \$ - \$ - \$ \$ 54,000 \$ 54,000 \$ 54,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 54,000 \$ 54,000 \$ 54,000 \$ 54,000 \$ 54,000 \$	2014 2015 2016 Forecasted Forecasted Forecasted \$ - \$ 54,000 \$ 54,000 \$ \$ 54,000 \$ - \$ - \$ \$ 54,000 \$ 54,000 \$ 54,000 \$ \$ 54,000 \$ 54,000 \$ 54,000 \$ \$ - \$ - \$ - \$ \$ - \$ - \$ - \$ \$ - \$ - \$ - \$ \$ - \$ - \$ - \$ \$ - \$ - \$ - \$ \$ - \$ - \$ - \$ \$ - \$ - \$ - \$ \$ - \$ 54,000 \$ 54,000	2014 2015 2016 2017 Forecasted Forecasted Forecasted Forecasted Forecasted \$ - \$ 54,000 \$ 54,000 \$ 54,000 \$ 54,000 \$ - \$ - \$ - \$ 54,000 \$ 54,000 \$ 54,000 \$ 54,000 \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 54,000 \$ 54,000 \$ 54,000 \$ 54,000 \$ 54,000 \$ 54,000 \$ 54,000	2014 2015 2016 2017 Forecasted Forecasted </td

For PILs Calculation

UCC		2014 Forecasted	2015 Forecasted	2016 Forecasted	2017 Forecasted	2018 Forecasted
		rorecasteu	rorecasteu	rorecasteu	rorecasteu	orecasteu
Opening UCC	\$	-	\$ 54,000	\$ 54,000	\$ 54,000	\$ 54,000
Capital Additions	\$	54,000	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	\$	54,000	\$ 54,000	\$ 54,000	\$ 54,000	\$ 54,000
Half Year Rule (1/2 Additions - Disposals)	\$	-	\$ -	\$ -	\$ -	\$ -
Reduced UCC	\$	54,000	\$ 54,000	\$ 54,000	\$ 54,000	\$ 54,000
CCA Rate Class	0					
CCA Rate	0%					
CCA	\$	-	\$ -	\$ -	\$ -	\$ -
Closing UCC	\$	54,000	\$ 54,000	\$ 54,000	\$ 54,000	\$ 54,000



Name or General Description of Project Municipal Substation

Asset Component

Municipal Substation

Average Net Fixed Assets

Net Fixed Assets

Opening Capital Investment Capital Investment Closing Capital Investment

Opening Accumulated Amortization Amortization Closing Accumulated Amortization

Opening Net Fixed Assets Closing Net Fixed Assets Average Net Fixed Assets

2014	2015	2016	2017	2018
Forecasted	Forecasted	Forecasted	Forecasted	Forecasted

	\$	-	#	#######	#	#######	#	#######	#	#######
	#	#######	\$	-	\$	-	\$-		\$	-
	#	#######	#	#######	########		#	#######	#	#######
	\$	-	\$	43,338	\$	86,675	\$	130,013	\$	173,350
3%	\$	43,338	\$	43,338	\$	43,338	\$	43,338	\$	43,338
	\$	43,338	\$	86,675	\$	130,013	\$	173,350	\$	216,688
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For PILs Calculation

UCC

Opening UCC Capital Additions UCC Before Half Year Rule Half Year Rule (1/2 Additions - Disposals) Reduced UCC CCA Rate Class CCA Rate CCA Closing UCC

Forecasted	Forecasted	Forecasted	Forecasted	Forecasted		
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2016

2017

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2018

########

2014

########

2015

########

47					
8%					
	\$ 138,680	\$ 127,586	\$ 117,379	\$ 107,988	\$ 99,349
	########	########	########	########	########

########



Name or General Description of Project Municipal Substation

Asset Component

44 kV line Build

Average Net Fixed Assets

Net Fixed Assets

Opening Capital Investment Capital Investment Closing Capital Investment

Opening Accumulated Amortization Amortization Closing Accumulated Amortization

Opening Net Fixed Assets Closing Net Fixed Assets Average Net Fixed Assets

		2014		2015		2016		2017		2018
	Fo	precasted	Fo	precasted	Fo	precasted	Fo	precasted	Fo	precasted
	\$	-	\$ 275,000		\$ 275,000		\$ 275,000		\$ 275,000	
	\$	275,000	\$		\$		\$		\$	-
	\$	275,000	\$	275,000	\$	275,000	\$	275,000	\$	275,000
	\$	-	\$	6,875	\$	13,750	\$	20,625	\$	27,500
3%	\$	6,875	\$	6,875	\$	6,875	\$	6,875	\$	6,875
	\$	6,875	\$	13,750	\$	20,625	\$	27,500	\$	34,375

\$ -	\$ 268,125	\$ 261,250	\$ 254,375	\$ 247,500
\$ 268,125	\$ 261,250	\$ 254,375	\$ 247,500	\$ 240,625
\$ 134,063	\$ 264,688	\$ 257,813	\$ 250,938	\$ 244,063

2016

Forecasted Forecasted Forecasted Forecasted

2018

2017

For PILs Calculation

UCC

Opening UCC	-	\$ -	\$ 253,000	\$ 232,760	\$ 214,139	\$ 197,008
Capital Additions		\$ 275,000	\$ -	\$ -	\$ -	\$ -
UCC Before Half Year Rule	-	\$ 275,000	\$ 253,000	\$ 232,760	\$ 214,139	\$ 197,008
Half Year Rule (1/2 Additions - Disposals)	-	\$ -	\$ -	\$ -	\$ -	\$ -
Reduced UCC	-	\$ 275,000	\$ 253,000	\$ 232,760	\$ 214,139	\$ 197,008
CCA Rate Class	47					
CCA Rate	8%					
CCA		\$ 22,000	\$ 20,240	\$ 18,621	\$ 17,131	\$ 15,761
Closing UCC	-	\$ 253,000	\$ 232,760	\$ 214,139	\$ 197,008	\$ 181,247
	-					

2014

2015



Name or General Description of Project Municipal Substation

Asset Component

Average Net Fixed Assets

Net Fixed Assets

Opening Capital Investment Capital Investment Closing Capital Investment

Opening Accumulated Amortization Amortization Closing Accumulated Amortization

Opening Net Fixed Assets Closing Net Fixed Assets Average Net Fixed Assets

2014		2015			2016	2	2017	2018		
Forecasted		Forecasted		Forecasted		Forecasted		Forecasted		
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-										

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For PILs Calculation

UCC

Opening UCC Capital Additions UCC Before Half Year Rule Half Year Rule (1/2 Additions - Disposals) Reduced UCC CCA Rate Class CCA Rate CCA Closing UCC
 2014
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 2016
 2017
 2018

 Forecasted
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Name or General Description of Project Municipal Substation

Asset Component

Average Net Fixed Assets

Net Fixed Assets

Opening Capital Investment Capital Investment Closing Capital Investment

Opening Accumulated Amortization Amortization Closing Accumulated Amortization

Opening Net Fixed Assets Closing Net Fixed Assets Average Net Fixed Assets

2014		2015		2	2016	2	017	2018		
Forecasted		Forecasted		Forecasted		Forecasted		Forecasted		
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For PILs Calculation

UCC

Opening UCC Capital Additions UCC Before Half Year Rule Half Year Rule (1/2 Additions - Disposals) Reduced UCC CCA Rate Class CCA Rate CCA Closing UCC
 2014
 2015
 2016
 2017
 2018

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EXHIBIT 8

2014 Incremental Capital Workform



Incremental Capital Workform for 2014 Filers

VERSION 1.1

Applicant Name	Espanola Regional Hydro Distribution Corporation			
Service Territory Name	and the Township of Sables-Spanish River			
Application Type	IRM3			
LDC Licence Number	ED-2002-0502			
Applied for Effective Date	May 1, 2014			
Stretch Factor Group	III			
Stretch Factor Value	0.30%			
Last COS Re-based Year	2012			
Last COS OEB Application Number	EB-2011-0319			
ICM Billing Determinants for Growth - Numerator	2012 Re-based Forecast			
ICM Billing Determinants for Growth - Denominator	2011 Actual			

Incremental Capital Workform for 2014 Filers

Table of Contents

Sheet Name	Purpose of Sheet
A1.1 LDC Information	Enter LDC Data
A2.1 Table of Contents	Table of Contents
B1.1 Re-Based Bill Det & Rates	Set Up Rate Classes and enter Re-Based Billing Determinants and Tariff Rates
B1.2 Removal of Rate Adders	Removal of Rate Adders
B1.3 Re-Based Rev From Rates	Calculated Re-Based Revenue From Rates
B1.4 Re-Based Rev Req	Detailed Re-Based Revenue From Rates
C1.1 Ld Act-Mst Rcent Yr	Enter Billing Determinants for most recent actual year
D1.1 Current Revenue from Rates	Enter Current Rates to calculate current rate allocation
E1.1 Threshold Parameters	Shows calculation of Price Cap and Growth used for incremental capital threshold calculation
E2.1 Threshold Test	Input sheet to calculate Threshold and Incremental Capital
E3.1 Summary of I C Projects	Summary of Incremental Capital Projects
E4.1 IncrementalCapitalAdjust	Shows Calculation of Incremental Capital Revenue Requirement
F1.1 Incr Cap RRider Opt A FV	Option A - Calculation of Incremental Capital Rate Rider - Fixed & Variable Split
F1.2 Incr Cap RRider Opt B Var	Option B - Calculation of Incremental Capital Rate Rider - Variable Allocation



Rate Class and Re-Based Billing Determinants & Rates

Select the appropriate Rate Groups and Rate Classes from the drop-down menus in Columns C and D respectively. Following your selection, all appropriate input cells will be shaded green. Please input the billing determinants and base distribution rates from your last cost of service based rate application.

	Last COS Re-based Year Last COS OEB Application Number			2012									
				EB-2011-0319									
Rate Group	Rate Class	Fixed Metric Vol Metric		Fixed Metric Vol Metric		Fixed Metric Vol Metric		Re-based Billed Customers or Connections A	Re-based Billed kWh B	Re-based Billed kW C	Re-based Tariff Service Charge D	Re-based Tariff Distribution Volumetric Rate kWh E	Re-based Tariff Distribution Volumetric Rate kW F
RES	Residential	Customer	kWh	2,847	32,680,721		13.59	0.0164					
GSLT50	General Service Less Than 50 kW	Customer	kWh	425	11,265,899		24.36	0.0200					
GSGT50	General Service 50 to 4,999 kW	Customer	kW	27	17,442,772	44,045	189.75		3.6660				
USL	Unmetered Scattered Load	Connection	kWh	32	213,280		11.84	0.0152					
Sen	Sentinel Lighting	Connection	kW	26	24,161	66	2.07		16.6708				
SL	Street Lighting	Connection	kW	1,053	623,166	1,766	1.92		24.2280				
NA	Rate Class 7	NA	NA										
NA	Rate Class 8	NA	NA										
NA	Rate Class 9	NA	NA										
NA	Rate Class 10	NA	NA										
NA	Rate Class 11	NA	NA										
NA	Rate Class 12	NA	NA										
NA	Rate Class 13	NA	NA										
NA	Rate Class 14	NA	NA										
NA	Rate Class 15	NA	NA										
NA	Rate Class 16	NA	NA										
NA	Rate Class 17	NA	NA										
NA	Rate Class 18	NA	NA										
NA	Rate Class 19	NA	NA										
NA	Rate Class 20	NA	NA										
NA	Rate Class 21	NA	NA										
NA	Rate Class 22	NA	NA										
NA	Rate Class 23	NA	NA										
NA	Rate Class 24	NA	NA										
NA	Rate Class 25	NA	NA										



Removal of Rate Adders

Last COS Re-based Year	2012
Last COS OEB Application Number	EB-2011-0319

Rate Class	Re-based Tariff Service Charge A	Re-based Tariff Distribution Volumetric Rate kWh B	Re-based Tariff Distribution Volumetric Rate kW C	Service Charge Rate Adders D	Distribution Volumetric kWh Rate Adders E	Distribution Volumetric kW Rate Adders F
Residential	13.59	0.0164	0.0000	0.00	0.0000	0.0000
General Service Less Than 50 kW	24.36	0.0200	0.0000	0.00	0.0000	0.0000
General Service 50 to 4,999 kW	189.75	0.0000	3.6660	0.00	0.0000	0.0000
Unmetered Scattered Load	11.84	0.0152	0.0000	0.00	0.0000	0.0000
Sentinel Lighting	2.07	0.0000	16.6708	0.00	0.0000	0.0000
Street Lighting	1.92	0.0000	24.2280	0.00	0.0000	0.0000


Calculated Re-Based Revenue From Rates

Last COS Re-based Year

2012

EB-2011-0319

Last COS OEB Application Number

Rate Class	Re-based Billed Customers or Connections A	Re-based Billed kWh B	Re-based Billed kW C	Re-based Base Service Charge D	Re-based Base Distribution Volumetric Rate kWh E	Re-based Base Distribution Volumetric Rate kW F	Service Charge Revenue *12	Distribution Volumetric Rate Revenue kWh H = B * E	Distribution Volumetric Rate Revenue kW I = C * F	Revenue Requireme nt from Rates I
Residential	2,847	32,680,721	0	13.59	0.0164	0.0000	464,289	535,964	0	1,000,253
General Service Less Than 50 kW	425	11,265,899	0	24.36	0.0200	0.0000	124,245	225,318	0	349,563
General Service 50 to 4,999 kW	27	17,442,772	44,045	189.75	0.0000	3.6660	61,479	0	161,469	222,948
Unmetered Scattered Load	32	213,280	0	11.84	0.0152	0.0000	4,548	3,242	0	7,790
Sentinel Lighting	26	24,161	66	2.07	0.0000	16.6708	647	0	1,100	1,748
Street Lighting	1,053	623,166	1,766	1.92	0.0000	24.2280	24,219	0	42,787	67,006
							679,427	764,524	205,356	1,649,306



Incremental Capital Workform for 2014 Filers

Detailed Re-Based Revenue From Rates

Last COS Re-based Year

Last COS OEB Application Number

2012 EB-2011-0319

Applicants Rate Base		I	Last	Rate Re-	-based Amount	
Average Net Fixed Assets						
Gross Fixed Assets - Re-based Opening	\$	7,943,875	A			
Add: CWIP Re-based Opening Re-based Capital Additions	¢	260 696	В			
Re-based Capital Additions Re-based Capital Disposals	ъ -\$	369,000				
Re-based Capital Retirements	Ψ	001,040	E			
Deduct: CWIP Re-based Closing			F			
Gross Fixed Assets - Re-based Closing	\$	7,951,715	G			
Average Gross Fixed Assets				\$	7,947,795	H = (A + G) / 2
Accumulated Depreciation - Re-based Opening	¢	/ 881 320				
Re-based Depreciation Expense	\$	193.562	j			
Re-based Disposals	-\$	274,079	к			
Re-based Retirements			L			
Accumulated Depreciation - Re-based Closing	\$	4,800,812	М	•	4 0 4 4 0 7 4	
Average Accumulated Depreciation				\$	4,841,071	N = (1 + M)/2
Average Net Fixed Assets				\$	3,106,725	O = H - N
Working Capital Allowance						
Working Capital Allowance Base	\$	7,586,737	Р			
Working Capital Allowance Rate		15.0%	Q			
Working Capital Allowance				\$	1,138,011	R = P * Q
Rate Base				\$	4,244,735	S = O + R
Poturn on Rote Poop						
Return on Rate base		4 0.0%	т	¢	160 790	W - S * T
Deemed Long Term Debt %		56.00%	ι.	φ \$	2 377 052	X = S * U
Deemed Equity %		40.00%	V	\$	1,697,894	Y = S * V
Short Term Interest		2 08%	7	\$	3 532	AC = W * 7
Long Term Interest		4.41%	ĀĀ	\$	104,828	AD = X * AA
Return on Equity		9.12%	AB	\$	154,848	AE = Y * AB
Return on Rate Base				\$	263,208	AF = AC + AD + AE
Distribution Expenses						
OM&A Expenses	\$	1,360,124	AG			
Amortization	\$	146,055	AH			
Ontario Capital I ax (F1.1 Z-Factor Tax Changes)	¢	0.216	AI			
Low Voltage	φ	9,510	AK			
Transformer Allowance	\$	11,512	AL			
			AM			
			AN			
			AO	¢	1 527 007	$AP = SUM (AC \cdot AC)$
				Ψ	1,527,007	AI = 50101 (AO . AO)
Revenue Offsets						
Specific Service Charges	-\$	68,500	AQ			
Late Payment Charges	-\$	16,700	AR			
Other Distribution Income	-\$	57,199	AS	•		
			AI	-⊅	142,399	AU = SUM(AQ:AI)
Revenue Requirement from Distribution Rates				\$	1,647,816	AV = AF + AP + AU
Rate Classes Revenue						
Rate Classes Revenue - Total (B1.1 Re-based Revenue - Gen)				\$	1,649,306	AW



Load Actual - 2011 Actual

Rate Class	Fixed Metric	: Vol Metric	Billed Customers or Connections	Billed kWh	Billed kW	Base Service Charge	Base Distribution Volumetric Rate kWh	Base Distribution Volumetric Rate kW	Service Charge Revenue	Distribution Volumetric Rate Revenue kWh	Distribution Volumetric Rate Revenue kW	Total Revenue by Rate Class
Posidontial	Customor	k///b	A 2.940	D 22 245 047	C	¢12.50	E \$0.0164	F 0000	1 2			J = G + H + I
	Customer		2,049	33,345,047	0	\$13.59	φ0.0104	\$0.0000	φ404,01	5 \$546,659	4 0	φ1,011,474
General Service Less Than 50 kW	Customer	kvvh	425	12,483,210	0	\$24.36	\$0.0200	\$0.0000	\$124,24	5 \$249,664	\$0	\$373,909
General Service 50 to 4,999 kW	Customer	kW	25	17,814,143	40,289	\$189.75	\$0.0000	\$3.6660	\$56,92	5 \$0	\$147,699	\$204,624
Unmetered Scattered Load	Connection	kWh	21	179,553	0	\$11.84	\$0.0152	\$0.0000	\$2,98	5 \$2,729	\$0	\$5,714
Sentinel Lighting	Connection	kW	26	25,877	72	\$2.07	\$0.0000	\$16.6708	\$64	7 \$0	\$1,200	\$1,848
Street Lighting	Connection	kW	1,045	649,300	1,728	\$1.92	\$0.0000	\$24.2280	\$24,03	5 \$0	\$41,866	\$65,901
									\$673,45	2 \$799,252	\$190,766	\$1,663,470



This sheet is used to determine the applicants most current allocation of revenues (after the most recent revenue to cost ratio adjustment, if applicable) to be used to calculate the incremental capital rate riders.

Current Revenue from Rates

			Current Base	Current Base Distribution	Current Base Distribution	Re-based Billed Customers or	Re-based	Re-based	Current Base Service Charge	Current Base Distribution Volumetric	Current Base Distribution Volumetric	Total Current Base	Service Charge %	Distribution Volumetric Rate	Distribution Volumetric Rate	Total %
Rate Class	Fixed Metric	Vol Metric	Service Charge A	Volumetric Rate kWh B	Volumetric Rate kW C	Connections D	Billed kWh E	Billed kW F	Revenue G = A * D *12	Rate kWh Revenue H = B * E	Rate kW Revenue I = C * F	Revenue J = G + H + I	Total Revenue L = G / \$K	% Total Revenue M = H / \$K	% Total Revenue N = I / \$K	Revenue \$K
Residential	Customer	kWh	13.66	0.0165		2,847	32,680,721	0	466,680	539,232	0	1,005,912	28.1%	32.5%	0.0%	60.7%
General Service Less Than 50 kW	Customer	kWh	24.48	0.0201		425	11,265,899	0	124,848	226,445	0	351,293	7.5%	13.7%	0.0%	21.2%
General Service 50 to 4,999 kW	Customer	kW	190.66		3.6836	27	17,442,772	44,045	61,774	0	162,244	224,018	3.7%	0.0%	9.8%	13.5%
Unmetered Scattered Load	Connection	kWh	11.90	0.0153		32	213,280	0	4,570	3,263	0	7,833	0.3%	0.2%	0.0%	0.5%
Sentinel Lighting	Connection	kW	2.08		16.7508	26	24,161	66	649	0	1,106	1,755	0.0%	0.0%	0.1%	0.1%
Street Lighting	Connection	kW	1.93		24.3443	1,053	623,166	1,766	24,387	0	42,992	67,380	1.5%	0.0%	2.6%	4.1%
									682,908	768,940	206,342	1,658,190	41.2%	46.4%	12.4%	100.0%

к



Threshold Parameters

Price Cap I	ndex
-------------	------

Price Cap Index	0.58%
Less Stretch Factor	-0.30%
Less Productivity Factor	-0.72%
Price Escalator (GDP-IPI)	1.60%

Growth

Growth	0.86%	C = A / B
ICM Billing Determinants for Growth - Denominator : 2011 Actual	\$1,649,306	B
ICM Billing Determinants for Growth - Numerator : 2012 Re-based Forecast	\$1,663,470	A



Threshold Test

Year	2012	
Price Cap Index Growth Dead Band	0.58% 0.86% 20%	A B C
Average Net Fixed Assets Gross Fixed Assets Opening Add: CWIP Opening Capital Additions Capital Disposals Capital Retirements Deduct: CWIP Closing Gross Fixed Assets - Closing	\$7,943,875 \$ - \$ 369,686 -\$ 361,846 \$ - \$ - \$ 7,951,715	
Average Gross Fixed Assets	\$7,947,795	-
Accumulated Depreciation - Opening Depreciation Expense Disposals Retirements Accumulated Depreciation - Closing	\$4,881,329 \$ 193,562 -\$ 274,079 \$ - \$4,800,812	D
Average Accumulated Depreciation	\$4,841,071	-
Average Net Fixed Assets	\$3,106,725	E
Working Capital Allowance Working Capital Allowance Base Working Capital Allowance Rate Working Capital Allowance	\$7,586,737 15% \$1,138,011	_F
Rate Base	\$4,244,735	G = E + F
Depreciation E	0 \$ 193,562	н
Threshold Test	151.66%	I = 1 + (G / H) * (B + A * (1 + B)) + C

Threshold CAPEX

\$ 293,556 **J = H *I**

E2.1 Threshold Test



Summary of Incremental Capital Projects (ICPs)



Summary of Proposed Incremental Capital Projects

Number of ICPs	3			
6				
Project ID #	Incremental Capital Non-Discretionary Project Description	Incremental Capital CAPEX	Amortization Expense	CCA
ICP 1 ICP 2 ICP 3 ICP 4 ICP 5 ICP 6	Land Municipal Substation 44 kV line Build	\$54,000.00 \$1,733,500.00 \$275,000.00	\$43,338.00 \$6,875.00	\$138,680.00 \$22,000.00
	Total Proposed Incremental Capital CAPEX	\$2,062,500.00	\$50,213.00	\$160,680.00
		· /· /· · · · · · · · · · · · · · · · ·		

Total Incremental Capital Amount for ICM Rate Rider Calculation

\$2,062,500.00

Note: The total incremental capital amount for the ICM rate rider calculation cannot exceed the eligible incremental capital amount.



Incremental Capital Adjustment

Current Revenue Requirement					_
Current Revenue Requirement - Total	-		\$1	,647,816	А
	-				4
Return on Rate Base			^		1 _
Incremental Capital CAPEX			\$2	2,062,500	В
Depreciation Expense Incremental Capital CAPEX to be included in Rate Base			\$ \$2	50,213	D = B - C
Deemed ShortTerm Debt %	4.0%	Е	\$	80,491	G = D * E
Deemed Long Term Debt %	56.0%	F	\$1	,126,881	H = D * F
Short Term Interest	2.08%	I	\$	1,674	K = G * I
Long Term Interest	4.41%	J	\$	49,695	L = H * J
Return on Rate Base - Interest			\$	51,370	M = K + L
Deemed Equity %	40.0%	N	\$	804,915	P = D * N
Return on Rate Base -Equity	9.12%	о	\$	73,408	Q = P * O
Return on Rate Base - Total			\$	124,778	R = M + Q
Amortization Expense]

Amortization Expense - Incremental		с	\$	50,213	s
Grossed up PIL's					1
Regulatory Taxable Income		o	\$	73,408	т
Add Back Amortization Expense		s	\$	50,213	U
Deduct CCA			\$	160,680	v
Incremental Taxable Income			-\$	37,059	W = T + U - V
Current Tax Rate (F1.1 Z-Factor Tax Changes)	15.5%	х			
PIL's Before Gross Up			-\$	5,744	Y = W * X
Incremental Grossed Up PIL's			-\$	6,798	Z = Y / (1 - X)
Ontario Capital Tay	1				
Incremental Capital CAPEX			\$2	2,062,500	AA
Less : Available Capital Exemption (if any)			\$	-	AB
Incremental Capital CAPEX subject to OCT			\$2	2,062,500	AC = AA - AB
Ontario Capital Tax Rate (F1.1 Z-Factor Tax Changes)	0.000%	AD			
Incremental Ontario Capital Tax			\$	-	AE = AC * AD
Incremental Revenue Requirement	1				1
Return on Rate Base - Total	•	Q	\$	124,778	AF
Amortization Expense - Total		s	\$	50,213	AG
Incremental Grossed Up PIL's		Z	-\$	6,798	AH
Incremental Ontario Capital Tax		AĒ	\$	-	AI
Incremental Revenue Requirement			\$	168,193	AJ = AF + AG + AH + AI



Calculation of Incremental Capital Rate Rider - Option A Fixed and Variable

Rate Class	Service Charge % Revenue A	Distribution Volumetric Rate % Revenue kWh B	Distribution Volumetric Rate % Revenue kW C	Service Di Charge Revenue D = \$N * A	stribution Volumetric Dis Rate Revenue kWh E = \$N * B	stribution Volumetric Rate Revenue kW F = \$N * C	Total Revenue by Rate Class G = D + E + F	Billed Customers Connections H	or Billed kWh I	Billed kW J	Service Charge Rate Rider K = D / H / 12	Distribution Volumetric Rate kWh Rate Rider L = E / I	Distribution Volumetric Rate kW Rate Rider M = F / J
Residential	28.1%	32.5%	0.0%	\$47,336.21 \$	54,695.26 \$		\$ 102,031.47	2,	32,680,721	0	\$1.385558	\$0.001674	
General Service Less Than 50 kW	7.5%	13.7%	0.0%	\$12,663.56 \$	22,968.68 \$	-	\$ 35,632.23		425 11,265,899	0	\$2.483050	\$0.002039	
General Service 50 to 4,999 kW	3.7%	0.0%	9.8%	\$ 6,265.83 \$	- \$	16,456.72	\$ 22,722.55		27 17,442,772	44,045	\$19.338985	\$0.000000	\$0.373634
Unmetered Scattered Load	0.3%	0.2%	0.0%	\$ 463.50 \$	330.99 \$	-	\$ 794.49		32 213,280	0	\$1.207038	\$0.001552	
Sentinel Lighting	0.0%	0.0%	0.1%	\$ 65.83 \$	- \$	112.14	\$ 177.96		26 24,161	66	\$0.210978	\$0.000000	\$1.699064
Street Lighting	1.5%	0.0%	2.6%	\$ 2,473.67 \$	- \$	4,360.76	\$ 6,834.42	1,	053 623,166	1,766	\$0.195763	\$0.000000	\$2.469286
				\$69,268.59 \$	77,994.92 \$	20,929.61	\$ 168,193.13						

Enter the above rate riders onto "Sheet 11. Proposed Rates" in the 2013 OEB IRM3 Rate Generator as a "Rate Rider for Incremental Capital"



Calculation of Incremental Capital Rate Rider - Option B Variable

	Total Revenue \$	Total	Total Incremental	Dillad	Dillad	Volumetri c Rate	Distributio n Volumetric
Rate Class	Class	Rate Class B = A / \$H	Capital \$ by Rate Class C = \$I * B	kWh D	kW E	Rider F = C / D	Rate Rider G = C / E
Residential	\$1,005,912	60.66%	\$102,031	########	0	\$0.0031	
General Service Less Than 50 kW	\$351,293	21.19%	\$35,632	########	0	\$0.0032	
General Service 50 to 4,999 kW	\$224,018	13.51%	\$22,723	########	44,045		\$0.5159
Unmetered Scattered Load	\$7,833	0.47%	\$794	213,280	0	\$0.0037	
Sentinel Lighting	\$1,755	0.11%	\$178	24,161	66		\$2.6964
Street Lighting	\$67,380	4.06%	\$6,834	623,166	1,766		\$3.8700
	\$1,658,190	100.00%	\$168,193				
	Н					Enter the above	rate riders onto

Enter the above rate riders onto "Sheet 11. Proposed Rates" in the 2013 OEB IRM3 Rate Generator as a "Rate Rider for Incremental Capital"

Distributio

EXHIBIT 9

IndEco Strategic Consulting Report - LRAM



Espanola Regional Hydro LRAM



Third party review:

Espanola Regional Hydro LRAM claims



This document was prepared for Espanola Regional Hydro Inc. by IndEco Strategic Consulting Inc.

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IndEco report B1698

12 August 2011

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Executive summary

A third party review of the Conservation and Demand Management (CDM) programs run by Espanola Regional Hydro (ERH) was required as part of its application to the Ontario Energy Board (OEB) for collection of Lost Revenue Adjustment Mechanism (LRAM) claims.

IndEco Strategic Consulting Inc. (IndEco) acted as third party reviewer by examining the participant rates, equipment specifications, and calculations that enter into the energy savings associated with ERH's CDM portfolio. The review was completed as detailed in the OEB *Guidelines for Electricity Distributor Conservation and Demand Management*.

The third party review included ERH's CDM activities in 2006, 2007, 2008, 2009 and 2010 supported through Ontario Power Authority (OPA) funding for the period between January 1 2006 and April 30 2012.

Lost revenues are calculated using estimated energy savings or monthly peak demand savings using the best available and most current input assumptions. Energy savings are those from the results of OPA's program evaluations. In the span from January 2006 to April 2012, these savings totalled approximately 11 GWh in the residential rate class and 0.02 GWh in the GS < 50 kW rate class.

IndEco concludes that ERH's electricity rates should be adjusted to reflect an LRAM claim of \$160,541.

Introduction

What is the lost revenue adjustment mechanism (LRAM)

Lost Revenue Adjustment Mechanism claims can benefit a local distribution company (LDC) by removing the disincentive for energy conservation.

LRAM is designed to ensure that the LDC does not have a disincentive to promote energy efficiency and energy conservation by compensating the LDC for revenues lost as a result of its conservation initiatives. It requires the calculation of electricity savings over the period between the last rate application, and the time of the application. In turn, this calculation requires information on what the electricity use would have been in the absence of the LDC initiatives, and what it was with the LDC initiative. Some of the inputs to the calculation include: hours the equipment is used, wattage rating of the old and new equipment, and lifetime of the equipment if it is less than the period over which the LRAM is being claimed. Also required are the number of participants, or pieces of equipment installed, and an estimate of the free-rider rate, which is the fraction of the savings that would have occurred anyway, in the absence of the program. These savings are estimated for each rate class, and revenue losses are determined by multiplying those losses by the cost of distribution per unit for each rate class. Carrying charges are calculated using deferral and variance account interest rates prescribed by the OEB.¹

Sources of information

Although these input data requirements are sometimes measured, they sometimes are values from published sources, or assumptions provided by the Ontario Energy Board, or other reputable agencies. For some types of programs, such as large scale distribution of compact fluorescent bulbs, it would be impractical to measure the hours each bulb is used, for example, and therefore these published sources provide an average value that is typical for this equipment type.

In some cases, estimated values for a particular component of the calculation are available from multiple sources. In these cases, information is taken from the sources highest in the information hierarchy. The information hierarchy (from greatest to least confidence) for LRAM calculations is:

- 1 Information or results from an OPA conducted or sponsored evaluation of the specific program (e.g. OPA 2010)
- 2 Information or results from a third-party evaluation of the specific program

¹ For prescribed interest rates, see

http://www.oeb.gov.on.ca/OEB/Industry/Rules+and+Requirements/Rules+Codes+Guidelines+and+Forms/Prescr ibed+Interest+Rates

- 3 Information or results from a site-specific assessment of the application of the technology, including on-site measurement or survey of the specific customer
- 4 Manufacturer specifications for energy use/demand of the specific technology installed
- 5 Information from the OPA's most current measures and assumptions lists (OPA 2011a, OPA 2011b)
- 6 Information from earlier OPA measures and assumptions lists
- 7 Information from the OEB's TRC guide list of measures and assumptions (OEB 2008b).

In principal, we might have consulted values from the literature and adopted these if they could be shown to be more current, specific or otherwise suitable than the values from sources 4 through 7. However, this was not necessary in this case.

Between January 1 2006 and April 30 2012, ERH's involvement in 2006-2010 OPA programs led to savings of approximately 11 GWh in the residential rate class and 0.02 GWh in the GS < 50 kW rate class.

Scope

This review examines the measures, energy savings, and equipment specifications for programs run under contract to the Ontario Power Authority (OPA) in 2006, 2007, 2008, 2009 and 2010. Lost revenues associated with these programs are estimated through April 30 2012.

Since final 2010 OPA program results have yet to be provided by the OPA, the LRAM claim for the 2010 programs is based on savings estimates and is thus preliminary. The LRAM claim associated with 2010 OPA programs will be finalized once the OPA releases its final 2010 OPA program results.

Requested LRAM amounts

LRAM inputs

IndEco finds that appropriate measure specifications were used to calculate program energy savings and lost revenues. For the calculation of LRAM claims, the '2006-2009 Final OPA CDM results. Espanola Regional Hydro '² was used as a source of inputs for OPA funded CDM programs. These evaluated results have been adopted in accordance with Board recommendations that "The Board would consider an evaluation by the OPA or a third party designated by the OPA to be sufficient."³ OPA advises that these estimates are prepared in a manner consistent with OPA current practice, and are the same values used to report progress against provincial conservation targets.

A summary list of the assumption sources used for the calculation of the LRAM claim is provided in Table 1.

The measure inputs used to calculate LRAM claims can be found in Table 7 in Appendix A.

Table 2 and Table 3 show the net and gross energy savings or demand reductions of each program by rate class. OPA program energy savings in Table 2 and Table 3 were acquired directly from spreadsheets provided by the OPA. Note that the results of 2010 OPA programs are preliminary.

Energy savings were converted to LRAM values by using ERH distribution rates. Distribution rates are in Table 4.

The requested LRAM is presented in Table 5.

² OPA 2010. 2006-2009 Final OPA CDM results. Espanola Regional Hydro. E-mail from J. Yue (OPA) dated 1 December, 2010.

³ OEB 2008a. Guidelines for Electricity Distributor Conservation and Demand Management. p.28

Funding source	Rate class	Program	Source of LRAM inputs
OPA	Residential	2006 Secondary Refrigerator Retirement Pilot	OPA 2010
OPA	Residential	2006 Cool Savings Rebate	OPA 2010
OPA	Residential	2006 Every Kilowatt Counts	OPA 2010
OPA	Residential	2007 Great Refrigerator Roundup	OPA 2010
OPA	Residential	2007 Cool Savings Rebate	OPA 2010
OPA	Residential	2007 Every Kilowatt Counts	OPA 2010
OPA	Residential	2007 Summer Savings	OPA 2010
OPA	Residential	2007 Aboriginal	OPA 2010
OPA	Residential	2007 Social Housing Pilot	OPA 2010
OPA	Residential	2008 Great Refrigerator Roundup	OPA 2010
OPA	Residential	2008 Cool Savings Rebate	OPA 2010
OPA	Residential	2008 Every Kilowatt Counts Power Savings Event	OPA 2010
OPA	Residential	2008 Summer Sweepstakes	OPA 2010
OPA	GS < 50 kW	2008 High Performance New Construction	OPA 2010
OPA	Residential	2009 Great Refrigerator Roundup	OPA 2010
OPA	Residential	2009 Cool Savings Rebate	OPA 2010
OPA	Residential	2009 Every Kilowatt Counts Power Savings Event	OPA 2010
OPA	GS < 50 kW	2009 High Performance New Construction	OPA 2010
OPA	Residential	2010 Great Refrigerator Roundup	2010 estimates
OPA	Residential	2010 Cool Savings Rebate	2010 estimates
OPA	Residential	2010 Every Kilowatt Counts Power Savings Event	2010 estimates
OPA	GS < 50 kW	2010 High Performance New Construction	2010 estimates

Table 1 – Source of information used for the calculation of the LRAM claim

Funding source	Program	Program year	Residential (kWh)	GS < 50 kW (kWh)
OPA	Aboriginal	2007	7,941,600	
	Cool Savings Rebate	2006	69,563	
		2007	89,130	
		2008	79,139	
		2009	79,150	
		2010	11,942	
	Every Kilowatt Counts	2006	1,238,983	
		2007	529,332	
	Every Kilowatt Counts Power	2008	396,834	
	Savings Event	2009	133,713	
		2010	83,727	
	Great Refrigerator Roundup	2007	58,422	
		2008	67,555	
		2009	51,804	
		2010	41,782	
	High Performance New	2008		461
	Construction	2009		11,521
		2010		7,976
	Secondary Refrigerator Retirement Pilot	2006	27,052	
	Social Housing Pilot	2007	48,670	
	Summer Savings	2007	79,360	
	Summer Sweepstakes	2008	157,884	
Total savings			11,185,642	19,958

Table 2 – Cumulative net program energy savings and demand savings by rate class through April 30 2012

1. Results from the 2010 OPA programs are preliminary.

Funding source	Program	Program year	Residential (kWh)	GS < 50 kW (kWh)
OPA	Aboriginal	2007	7,941,600	
	Cool Savings Rebate	2006	88,124	
		2007	174,173	
		2008	137,767	
		2009	185,279	
		2010	29,115	
	Every Kilowatt Counts	2006	1,376,648	
		2007	718,951	
	Every Kilowatt Counts Power	2008	983,316	
	Savings Event	2009	350,370	
		2010	119,610	
	Great Refrigerator Roundup	2007	145,488	
		2008	124,661	
		2009	96,510	
		2010	59,689	
	High Performance New	2008		659
	Construction	2009		16,458
		2010		11,394
	Secondary Refrigerator Retirement Pilot	2006	30,058	
	Social Housing Pilot	2007	48,670	
	Summer Savings	2007	661,330	
	Summer Sweepstakes	2008	203,496	
Total savings			13,474,854	28,512

Table 3 – Cumulative gross program energy savings and peak demand savings by rate class through April 30 2012

Table 4 – Distribution rates per rate class

Rate Class	Units	2006	2007	2008	2009	2010	2011
Residential	\$/kWh	0.0131	0.0135	0.0146	0.0144	0.012	0.012
GS < 50 kW	\$/kWh	0.0198	0.0203	0.017	0.0168	0.0147	0.0147

Funding	Program	Year	Residential	GS < 50 kW	LRAM
OPA	Aboriginal	2007	\$114,455	\$0	\$114,455
	Cool Savings Rebate	2006	\$979	\$0	\$979
		2007	\$1,237	\$0	\$1,237
		2008	\$1,077	\$0	\$1,077
		2009	\$1,032	\$0	\$1,032
		2010	\$146	\$0	\$146
	Every Kilowatt Counts	2006	\$18,490	\$0	\$18,490
		2007	\$7,346	\$0	\$7,346
	Every Kilowatt Counts Power	2008	\$5,409	\$0	\$5,409
	Savings Event	2009	\$1,746	\$0	\$1,746
		2010	\$1,023	\$0	\$1,023
	Great Refrigerator Roundup	2007	\$811	\$0	\$811
		2008	\$920	\$0	\$920
		2009	\$675	\$0	\$675
		2010	\$510	\$0	\$510
	High Performance New	2008	\$0	\$7	\$7
	Construction	2009	\$0	\$181	\$181
		2010	\$0	\$119	\$119
	Secondary Refrigerator Retirement Pilot	2006	\$383	\$0	\$383
	Social Housing Pilot	2007	\$675	\$0	\$675
	Summer Savings	2007	\$1,170	\$0	\$1,170
	Summer Sweepstakes	2008	\$2,150	\$0	\$2,150
Total			\$160,233	\$308	\$160,541

Table 5 – Summary of requested LRAM amounts in 2012\$¹

1. LRAM amounts by program and program year, and program totals are for energy (or demand) reductions for the years 2006 through April 30 2012.

2. Results from the 2010 OPA programs are preliminary.

Findings

IndEco has reviewed the input values associated with 2006, 2007, 2008, 2009, and 2010 (estimated) OPA-funded programs.

IndEco has concluded that sufficient detail and documentation exists to recommend increasing Espanola Regional Hydro 's distribution rates in order to collect \$160,541 in LRAM, allocated by rate class as shown in Table 6.

Upon receipt of final 2010 OPA program results, the LRAM claim will be adjusted accordingly.

Rate class	LRAM
Residential	\$160,233
General Service < 50 kW	\$308
General Service 50 to 4,999 kW	\$ 0
Sentinel Lights	\$O
Street Lighting	\$ 0
Unmetered Scattered Load	\$0
Total	\$160,541

Table 6 – LRAM amounts by rate class in 2012\$

References

- Ontario Energy Board. (OEB) 2007. Report of the Board on the Regulatory Framework for Conservation and Demand Management by Ontario Electricity Distributors in 2007 and Beyond. (March 2)
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- Ontario Power Authority. (OPA) 2010. 2006-2009 Final OPA CDM results. Espanola Regional Hydro E-mail from J. Yue (OPA) dated 1 December 2010.
- Ontario Power Authority. (OPA) 2011a. 2011 prescriptive measures and assumptions. Toronto: OPA Release March 7, 2011. Source: http://powerauthority.on.ca/evaluation-measurement-andverification/measures-assumptions-lists
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Appendix A. Inputs used for TRC and energy savings calculations

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual peak	Contribution to LRAM	Assumption Source
				Ridership	savings (kWh/a)	demand savings (kW/a)	(2012\$)	
2006 Secondary Refrigerator Retirement Pilot	Refrigerator Retirement	4.0	6	10%	1,200	0.272	\$371	OPA 2010
2006 Secondary Refrigerator Retirement Pilot	Freezer Retirement	0.2	6	10%	900	0.204	\$12	OPA 2010
2006 Cool Savings Rebate	Energy Star® Central Air Conditioner - Cool Savings	11.6	6	10%	390	0.399	\$358	OPA 2010
2006 Cool Savings Rebate	Programmable Thermostat - Cool Savings	8.8	6	10%	177	0.181	\$124	OPA 2010
2006 Cool Savings Rebate	Central Air Conditioner Tune-ups - Cool Savings	7.9	6	10%	410	0.420	\$257	OPA 2010
2006 Cool Savings Rebate	Energy Star® Central Air Conditioner - Hot Savings	2.4	6	43%	155	0.169	\$18	OPA 2010
2006 Cool Savings Rebate	Efficient Furnace with ECM - Hot Savings	5.0	6	41%	837	0.496	\$216	OPA 2010
2006 Cool Savings Rebate	Programmable Thermostat - Hot Savings	4.6	6	73%	54	0.028	\$6	OPA 2010
2006 Every Kilowatt Counts	Energy Star® Compact Fluorescent Light Bulb - Spring Campaign	1,078.4	4	10%	104	0.000	\$6,128	OPA 2010
2006 Every Kilowatt Counts	Electric Timers - Spring Campaign	30.2	6	10%	183	0.000	\$438	OPA 2010
2006 Every Kilowatt Counts	Programmable Thermostats - Spring Campaign	13.2	6	10%	216	0.050	\$225	OPA 2010

Table 7 – LRAM inputs and contribution to the total LRAM for all measures.

Program	Energy Efficient Measure	Units	Measure	LRAM Eree	Annual	Annual	Contribution	Assumption
			me	Ridership	savings	demand	(2012\$)	Source
					(kWh/a)	savings (kW/a)		
2006 Every	Energy Star® Ceiling Fans - Spring	10.0	6	10%	141	0.014	\$112	OPA 2010
Kilowatt Counts	Campaign							
2006 Every	Energy Star® Compact Fluorescent Light	1,599.0	4	10%	104	0.000	\$9,086	OPA 2010
Kilowatt Counts	Bulb - Autumn Campaign							
2006 Every	Seasonal Light Emitting Diode Light String	384.9	6	10%	31	0.000	\$937	OPA 2010
Kilowatt Counts	- Autumn Campaign							
2006 Every	Programmable Thermostats - Autumn	25.4	6	10%	522	0.118	\$1,049	OPA 2010
Kilowatt Counts	Campaign							
2006 Every	Dimmers - Autumn Campaign	20.1	6	10%	139	0.000	\$221	OPA 2010
Kilowatt Counts								
2006 Every	Indoor Motion Sensors - Autumn	7.2	6	10%	209	0.000	\$119	OPA 2010
Kilowatt Counts	Campaign							
2006 Every	Programmable Baseboard Thermostats -	1.5	6	10%	1,466	0.000	\$175	OPA 2010
Kilowatt Counts	Autumn Campaign							
2007 Great	Bottom Freezer Fridge	0.3	5	27%	1,064	0.115	\$16	OPA 2010
Refrigerator								
Roundup								
2007 Great	Chest Freezer	4.9	5	54%	471	0.067	\$77	OPA 2010
Refrigerator								
Roundup								
2007 Great	Side by Side Fridge-Freezer	2.3	5	61%	900	0.097	\$60	OPA 2010
Refrigerator								
Roundup								
2007 Great	Single Door Fridge	6.5	5	61%	721	0.078	\$133	OPA 2010
Refrigerator								
Roundup								
2007 Great	Small Freezer (under 10 cubic feet)	0.2	5	70%	339	0.048	\$1	OPA 2010
Refrigerator								
Roundup								

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			life	Free Ridership	energy	peak demand	to LRAM (2012\$)	Source
				Ridership	(kWh/a)	savings	(2012\$)	
						(kW/a)		
2007 Great	Small Fridge (under 10 cubic feet)	0.5	5	70%	490	0.052	\$5	OPA 2010
Refrigerator								
Roundup								
2007 Great	Top Freezer Fridge	23.4	5	61%	732	0.079	\$489	OPA 2010
Refrigerator								
Roundup								
2007 Great	Upright Freezer	0.9	5	54%	743	0.106	\$23	OPA 2010
Refrigerator								
Roundup								
2007 Great	Window Air Conditioner	1.0	5	57%	240	0.562	\$7	OPA 2010
Refrigerator								
Roundup								
2007 Cool	Energy Star® Central Air Conditioner - Hot	2.3	5	43%	155	0.169	\$15	OPA 2010
Savings Rebate	Savings							
2007 Cool	Efficient Furnace with ECM - Hot Savings	4.8	5	41%	837	0.496	\$173	OPA 2010
Savings Rebate								
2007 Cool	Programmable Thermostat - Hot Savings	4.4	5	73%	54	0.028	\$5	OPA 2010
Savings Rebate								
2007 Cool	Energy Star® Central Air Conditioner, Tier	17.8	5	43%	155	0.169	\$115	OPA 2010
Savings Rebate	2 - Cool Savings							
2007 Cool	Medium Efficiency Furnace with ECM -	23.6	5	41%	837	0.496	\$850	OPA 2010
Savings Rebate	Cool Savings							
2007 Cool	Programmable Thermostat - Cool Savings	22.0	5	73%	54	0.028	\$24	OPA 2010
Savings Rebate								
2007 Cool	Central Air Conditioner Tune-ups - Cool	21.9	5	84%	235	0.257	\$56	OPA 2010
Savings Rebate	Savings							
2007 Every	15 W CFL	1,851.0	5	22%	43	0.001	\$4,522	OPA 2010
Kilowatt Counts								
2007 Every	20+ W CFL	301.3	5	22%	62	0.002	\$1,063	OPA 2010
Kilowatt Counts								

Image: constraint of the section of	Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
Ridershipsavings (kWh/a)demand savings (kWh/a)(2012\$)2007 Every Kilowatt CountsEnergy Star® Light Fixture7.2545%1230.006\$35OPA 20102007 Every Kilowatt CountsT8 Fluorescent Tube14.1523%370.001\$29OPA 20102007 Every Kilowatt CountsSeasonal LED Light String490.4551%140.000\$230OPA 20102007 Every Kilowatt CountsSeasonal LED Light String490.4551%140.000\$230OPA 20102007 Every Kilowatt CountsProject Porch light CFL389.5524%430.001\$927OPA 2010				life	Free	energy	peak	to LRAM	Source
Image: Constraint of the state of the sta					Ridership	savings	demand	(2012\$)	
2007 Every Kilowatt CountsEnergy Star® Light Fixture7.2545%1230.006\$35OPA 20102007 Every Kilowatt CountsT8 Fluorescent Tube14.1523%370.001\$29OPA 20102007 Every Kilowatt CountsSeasonal LED Light String490.4551%140.000\$230OPA 20102007 Every Kilowatt CountsProject Porch light CFL389.5524%430.001\$927OPA 2010						(KVVN/a)	(kW/a)		
Kilowatt CountsImage: Constraint of the c	2007 Every	Energy Star® Light Fixture	7.2	5	45%	123	0.006	\$35	OPA 2010
2007 Every Kilowatt CountsT8 Fluorescent Tube14.1523%370.001\$29OPA 20102007 Every Kilowatt CountsSeasonal LED Light String490.4551%140.000\$230OPA 20102007 Every Kilowatt CountsProject Porch light CFL389.5524%430.001\$927OPA 2010	Kilowatt Counts								
Kilowatt CountsSeasonal LED Light String490.4551%140.000\$230OPA 2010Kilowatt Counts2007 EveryProject Porch light CFL389.5524%430.001\$927OPA 2010	2007 Every	T8 Fluorescent Tube	14.1	5	23%	37	0.001	\$29	OPA 2010
2007 Every Kilowatt Counts Seasonal LED Light String 490.4 5 51% 14 0.000 \$230 OPA 2010 2007 Every Project Porch light CFL 389.5 5 24% 43 0.001 \$927 OPA 2010	Kilowatt Counts								
Kilowatt Counts Froject Porch light CFL 389.5 5 24% 43 0.001 \$927 OPA 2010	2007 Every	Seasonal LED Light String	490.4	5	51%	14	0.000	\$230	OPA 2010
2007 Every Project Porch light CFL 389.5 5 24% 43 0.001 \$927 OPA 2010	Kilowatt Counts								
	2007 Every	Project Porch light CFL	389.5	5	24%	43	0.001	\$927	OPA 2010
Kilowatt Counts	Kilowatt Counts								
2007 Every Solar Light 237.6 5 87% 5 0.000 \$10 OPA 2010	2007 Every	Solar Light	237.6	5	87%	5	0.000	\$10	OPA 2010
Kilowatt Counts	Kilowatt Counts								
2007 Every Energy Star® Ceiling Fan 14.9 5 45% 90 0.003 \$54 OPA 2010	2007 Every	Energy Star® Ceiling Fan	14.9	5	45%	90	0.003	\$54	OPA 2010
Kilowatt Counts	Kilowatt Counts								
2007 Every Furnace Filter 60.2 1 45% 38 0.011 \$19 OPA 2010	2007 Every	Furnace Filter	60.2	1	45%	38	0.011	\$19	OPA 2010
Kilowatt Counts	Kilowatt Counts								
2007 Every Power Bar with Timer 6.6 5 23% 72 0.006 \$27 OPA 2010	2007 Every	Power Bar with Timer	6.6	5	23%	72	0.006	\$27	OPA 2010
Kilowatt Counts	Kilowatt Counts			_					0.54.004.0
2007 Every Lighting Control Device 76.1 5 45% 72 0.019 \$220 OPA 2010	2007 Every	Lighting Control Device	76.1	5	45%	72	0.019	\$220	OPA 2010
	Kilowatt Counts			_	150/	1.60		¢150	0.0.1.0
2007 Every Outdoor Motion Sensor 23.8 5 45% 160 0.000 \$152 OPA 2010	2007 Every	Outdoor Motion Sensor	23.8	5	45%	160	0.000	\$152	OPA 2010
			1 - 1		450/	24	0.001	¢1.4	ODA 2010
200/ Every Dimmer Switch 15.1 5 45% 24 0.001 \$14 OPA 2010	2007 Every	Dimmer Switch	15.1	5	45%	24	0.001	\$14	OPA 2010
Nilowall Courts 14 E E 450/ 7E 0.000 \$44 ODA 2010	2007 Evenu	Drogrammable Thermostat	14 5	F	4 5 9/	75	0.000	¢ 1 1	OBA 2010
200/ Every Programmable mermostat 14.5 5 45% 75 0.000 \$44 OPA 2010 Kilowatt Counts 14.5 5 45% 75 0.000 \$44 OPA 2010	Z007 Every	Programmable mermostat	14.5	5	4370	/ 5	0.000	7777	OPA 2010
2007 Summer Households Change in Behaviour Only 30.3 1 88% 5.453 2.025 \$207 OPA 2010	2007 Summor	Households, Change in Behaviour Only	30.3	1	880/	5 453	2 0 2 5	\$207	OPA 2010
Savings Rehaviour Related	Savings	Behaviour Related	50.5		00 76	5,433	2.923	φ <i>291</i>	017 2010
2007 Summer Households Combination of Change in 30.3 1 88% 2.010 1.566 \$150 OPA 2010	2007 Summer	Households Combination of Change in	30.3	1	880/	2 010	1 566	\$150	OPA 2010
Savings Behaviour and "Pulled Forward"	Savings	Behaviour and "Pulled Forward"	50.5		0070	2,319	1.500	φ1 3 9	017/2010
Equipment - Behaviour Related	5441165	Equipment - Behaviour Related							

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual peak	Contribution to LRAM	Assumption Source
				Ridership	savings (kWh/a)	demand savings	(2012\$)	
				0.00/		(kW/a)		0.54.0.04.0
2007 Summer	Households, Combination of Change in	30.3	2	88%	1,662	1.374	\$184	OPA 2010
Savings	Behaviour and "Pulled Forward"							
2007.0	Equipment - Equipment Related	20.2		0.00/	4 7 4	0.005	<i>.</i>	004 0010
2007 Summer	Households, Combination of Change in	30.3	5	88%	171	0.005	\$45	OPA 2010
Savings	Behaviour and "Pulled Forward"							
	Equipment - Compact Fluorescent Light							
2007.0	Bulb Related			0.00/	1 0 0 0		* 2.52	0.04.001.0
2007 Summer	Households, Change in Behaviour and	30.3	- I	88%	4,822	1./44	\$262	OPA 2010
Savings	Incremental Equipment (With Full							
	Equipment Life) - Behaviour Related		_	0.00/				0.01.001.0
2007 Summer	Households, Change in Behaviour and	30.3	5	88%	643	1.264	\$170	OPA 2010
Savings	Incremental Equipment (With Full							
	Equipment Life) - Equipment Related		_	0.00/	100			0.01.001.0
2007 Summer	Households, Change in Behaviour and	30.3	5	88%	199	0.006	\$53	OPA 2010
Savings	Incremental Equipment (With Full							
	Equipment Life) - Compact Fluorescent							
2007 41		2 206 0		00/	000	0.042	¢114 455	004 2010
2007 Aboriginal	Conservation Kits	2,206.0	4	0%	900	0.043	\$114,455	OPA 2010
2007 Social	Custom Retrofit Projects	7.5	5	0%	1,229	0.145	\$675	OPA 2010
Housing Pilot								
2008 Great	Bottom Freezer Fridge	0.3	4	45%	775	0.079	\$6	OPA 2010
Refrigerator								
Roundup								
2008 Great	Chest Freezer	7.5	4	48%	740	0.085	\$166	OPA 2010
Refrigerator								
Roundup								
2008 Great	Side by Side Fridge-Freezer	2.4	4	45%	775	0.079	\$59	OPA 2010
Refrigerator								
Roundup								

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			life	Free	energy	peak	to LRAM	Source
				Kidersnip	savings (kWh/a)	demand savings	(2012\$)	
					(KIII/U)	(kW/a)		
2008 Great	Single Door Fridge	4.6	4	45%	775	0.079	\$114	OPA 2010
Refrigerator								
Roundup								
2008 Great	Small Freezer (under 10 cubic feet)	0.1	4	48%	740	0.085	\$2	OPA 2010
Refrigerator								
Roundup								
2008 Great	Small Fridge (under 10 cubic feet)	0.1	4	45%	775	0.079	\$3	OPA 2010
Refrigerator								
Roundup		0.1.6		450/			* =0.0	0.54.0010
2008 Great	Top Freezer Fridge	21.6	4	45%	//5	0.079	\$533	OPA 2010
Refrigerator								
Roundup		1 Г	4	4.0.0/	740	0.005	¢22	ODA 2010
2008 Great	Opright Freezer	1.5	4	48%	740	0.085	\$33	OPA 2010
Reingerator								
2008 Croat	Window Air Conditionar	1.0	1	6.1%	107	0 100	¢1	OPA 2010
Refrigerator		1.0	4	04 /0	197	0.199	φ 4	017 2010
Roundun								
2008 Cool	2007 Energy Star® Central Air	3.6	4	43%	155	0.170	\$18	OPA 2010
Savings Rebate	Conditioner, Tier 2	5.0		13 /0	155	0.170	φro	01/12010
2008 Cool	2007 Medium Efficiency Furnace with	7.5	4	41%	837	0.496	\$213	OPA 2010
Savings Rebate	ECM							
2008 Cool	2007 Programmable Thermostat	5.8	4	73%	54	0.028	\$5	OPA 2010
Savings Rebate								
2008 Cool	2008 Energy Star® Central Air	17.7	4	43%	125	0.137	\$73	OPA 2010
Savings Rebate	Conditioner, Tier 2							
2008 Cool	2008 Efficient Furnace with ECM	26.7	4	41%	819	0.485	\$748	OPA 2010
Savings Rebate								
2008 Cool	2008 Programmable Thermostat	22.7	4	73%	54	0.028	\$19	OPA 2010
Savings Rebate								

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			life	Free Ridership	energy savings	peak demand	to LKAM (2012\$)	Source
					(kWh/a)	savings (IAN/(a)		
2008 Every Kilowatt Counts Power Savings Event	Energy Star® Qualified Compact Fluorescent Light Bulbs	719.1	4	48%	53	0.002	\$1,152	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Energy Star® Qualified Dimmable CFLs	78.3	4	62%	98	0.003	\$167	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Energy Star® Qualified Decorative CFLs	1,214.8	4	61%	30	0.001	\$781	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Energy Star® Qualified Compact Fluorescent Floods (Indoor & Outdoor)	337.3	4	63%	88	0.003	\$641	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Energy Star® Qualified Light Fixtures	523.4	4	67%	133	0.004	\$1,349	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	T8 Fluorescent Fixtures	95.2	4	67%	37	0.001	\$67	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Lighting Control Devices	102.4	4	55%	102	0.003	\$275	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual	Annual neak	Contribution	Assumption
			inc	Ridership	savings	demand	(2012\$)	Source
					(kWh/a)	savings (kW/a)		
2008 Every Kilowatt Counts Power Savings Event	Power Bars with Timers	5.6	4	59%	53	0.004	\$7	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Heavy Duty Timers	11.8	4	67%	301	0.017	\$69	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Programmable Thermostats - Baseboard	33.0	4	53%	64	0.000	\$57	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Air Conditioner/Furnace Filters	31.1	1	65%	38	0.021	\$6	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Pipe Wrap	670.8	4	53%	38	0.003	\$691	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Keep Cool Pilot – Dehumidifier	0.2	4	65%	500	0.290	\$2	OPA 2010
2008 Every Kilowatt Counts Power Savings Event	Keep Cool Pilot – Room Air Conditioner	0.2	4	58%	141	0.142	\$1	OPA 2010
Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
-----------------	--	---------	---------	-----------	---------	---------	---------------	------------
			life	Free	energy	peak	to LRAM	Source
				Ridership	savings	demand	(2012\$)	
					(kWh/a)	savings		
2000 5.00	Powerde for Populing Deburgidifier	()	4		500	(KW/a)	¢ 9.0	OBA 2010
Z008 Every	Rewards for Recycling – Denumidiller	0.3	4	56%	500	0.290	\$80	OPA 2010
Power Savings								
Event								
2008 Every	Rewards for Recycling – Room Air	6.8	4	56%	141	0.142	\$24	OPA 2010
Kilowatt Counts	Conditioner						1	
Power Savings								
Event								
2008 Every	Rewards for Recycling – Halogen Lamp	5.4	4	52%	275	0.009	\$41	OPA 2010
Kilowatt Counts								
Power Savings								
Event								
2008 Summer	Registered qualified active households	20.8	4	22%	421	0.111	\$394	OPA 2010
Sweepstakes		21.2		222/	10.1	0.111	# =0.1	
2008 Summer	Registered unqualified active households	31.2	4	22%	421	0.111	\$591	OPA 2010
Sweepstakes	Desistant qualified in active households	2.1	4	220/	401	0 111	¢20	OBA 2010
2008 Summer	Registered qualified mactive nousenoids	2.1	4	22%	421	0.111	\$39	OPA 2010
2008 Summer	Registered unqualified inactive households	7.8	4	22%	421	0.111	\$148	OPA 2010
Sweepstakes	Registered unquanned mactive nousenolus	7.0	т	2270	721	0.111	ψT+U	01/12010
2008 Summer	Non-registered active households	1.014.9	4	22%	21	0.005	\$978	OPA 2010
Sweepstakes	0	.,					1	
2008 High	Custom	1.0	4	30%	155	0.200	\$7	OPA 2010
Performance								
New								
Construction								
2009 Great	Chest Freezer - Not Replaced - Running	0.2	3	48%	282	0.039	\$1	OPA 2010
Refrigerator	Part Time (26% of the time)							
Roundup								

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			life	Free Ridershin	energy	peak demand	to LRAM (2012\$)	Source
				Ridership	(kWh/a)	savings	(20124)	
						(kW/a)		
2009 Great	Chest Freezer - Standard Efficiency Unit	0.1	3	48%	247	0.034	\$0	OPA 2010
Refrigerator	Replacement - Running Part Time (26% of							
Roundup	the time)							
2009 Great	Chest Freezer - Energy Star Unit	0.3	3	48%	261	0.036	\$1	OPA 2010
Refrigerator	Replacement - Running Part Time (26% of							
Roundup	the time)	2.1	2	100/	1.000	0.150	¢=0	0.0.1.0
2009 Great	Chest Freezer - Not Replaced - Running	2.1	3	48%	1,096	0.153	\$50	OPA 2010
Refrigerator	All time (100% of time)							
2000 Croat	Chart Freezer Standard Efficiency Unit	0.6	2	/ 00/	050	0.122	¢10	OPA 2010
2009 Great Refrigerator	Replacement Running All Time (100% of	0.0	5	40 /0	939	0.155	⊅ 1∠	OFA 2010
Roundun	time)							
2009 Great	Chest Freezer - Energy Star Unit	2.6	3	48%	1 012	0 141	\$58	OPA 2010
Refrigerator	Replacement - Running All Time (100% of	2.0	5	10 /0	1,012	0.111	φ30	01/12010
Roundup	time)							
2009 Great	Side by Side Fridge-Freezer - Not Replaced	0.1	3	46%	507	0.071	\$1	OPA 2010
Refrigerator	- Running Part Time (38% of the time)							
Roundup								
2009 Great	Side by Side Fridge-Freezer - Standard	0.0	3	46%	260	0.036	\$0	OPA 2010
Refrigerator	Efficiency Unit Replacement - Running							
Roundup	Part Time (38% of the time)							
2009 Great	Side by Side Fridge-Freezer - Energy Star	0.1	3	46%	309	0.043	\$1	OPA 2010
Refrigerator	Unit Replacement - Running Part Time							
Roundup	(38% of the time)							
2009 Great	Side by Side Fridge-Freezer - Not Replaced	0.5	3	46%	1,331	0.185	\$16	OPA 2010
Refrigerator	- Running All Time (100% of time)							
Koundup	Cide has Cide Faiders Frances Charles 1	0.2	2	46.04	(0)	0.005	¢.2	ODA 2010
2009 Great	Side by Side Fridge-Freezer - Standard	0.2	3	46%	682	0.095	\$3	OPA 2010
Roundun	Time (100% of time)							
коипаир	Time (100% of time)							

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			life	Free Ridershin	energy savings	peak demand	to LRAM (2012\$)	Source
				Maciship	(kWh/a)	savings	(20124)	
						(kW/a)		
2009 Great	Side by Side Fridge-Freezer - Energy Star	1.0	3	46%	812	0.113	\$19	OPA 2010
Refrigerator	Unit Replacement - Running All Time							
Roundup	(100% of time)							
2009 Great	Single Door Fridge - Not Replaced -	0.1	3	46%	418	0.058	\$1	OPA 2010
Refrigerator	Running Part Time (38% of the time)							
Roundup								
2009 Great	Single Door Fridge - Standard Efficiency	0.0	3	46%	237	0.033	\$0	OPA 2010
Refrigerator	Unit Replacement - Running Part Time							
Roundup	(38% of the time)							-
2009 Great	Single Door Fridge - Energy Star Unit	0.2	3	46%	273	0.038	\$1	OPA 2010
Refrigerator	Replacement - Running Part Time (38% of							
Roundup	the time)							
2009 Great	Single Door Fridge - Not Replaced -	0.8	3	46%	1,097	0.153	\$19	OPA 2010
Refrigerator	Running All Time (100% of time)							
Roundup								0.54.004.0
2009 Great	Single Door Fridge - Standard Efficiency	0.3	3	46%	623	0.087	\$4	OPA 2010
Refrigerator	Unit Replacement - Running All Time							
Roundup	(100% of time)	1 -	2	160/	710	0.100	¢0 -	0.004.0010
2009 Great	Single Door Fridge - Energy Star Unit	1.5	3	46%	/18	0.100	\$25	OPA 2010
Refrigerator	Replacement - Running All Time (100% of							
Roundup	time)	0.0	2	46.0/	470	0.005	¢0	ODA 2010
2009 Great	Top Freezer Fridge - Not Replaced -	0.8	3	46%	470	0.065	\$9	OPA 2010
Reingerator	Kunning Part Time (36% of the time)							
2000 Croat	Ton Exports Fridge Standard Efficiency	0.2	2	46.0/	252	0.025	¢ ว	OBA 2010
2009 Great	Lipit Perlacement - Running Part Time	0.5	3	4070	252	0.055	\$Z	OPA 2010
Roundun	(3.8% of the time)							
2000 Croat	Top Froozer Fridge Epergy Star Unit	1.6	2	16.0/	205	0.041	¢11	OPA 2010
Refrigerator	Replacement Running Part Time (28% of	1.0	5	4070	295	0.041	٦١	OFA 2010
Roundun	the time)							
Roundup	uic unic)				l			

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			life	Free	energy	peak	to LRAM	Source
				Ridership	savings	demand	(2012\$)	
					(kWh/a)	savings		
2000 Croat	Ton Frazzar Fridge Not Poplaced	6.1	2	16%	1 224	(KVV/d)	¢174	OPA 2010
Refrigerator	Running All Time (100% of time)	0.1	5	4070	1,234	0.172	Φ174	017 2010
Roundup								
2009 Great	Top Freezer Fridge - Standard Efficiency	2.3	3	46%	661	0.092	\$35	OPA 2010
Refrigerator	Unit Replacement - Running All Time						400	
Roundup	(100% of time)							
2009 Great	Top Freezer Fridge - Energy Star Unit	11.9	3	46%	776	0.108	\$212	OPA 2010
Refrigerator	Replacement - Running All Time (100% of							
Roundup	time)							
2009 Great	Upright Freezer - Not Replaced - Running	0.0	3	48%	365	0.051	\$0	OPA 2010
Refrigerator	Part Time (26% of the time)							
Roundup								
2009 Great	Upright Freezer - Standard Efficiency Unit	0.0	3	48%	180	0.025	\$0	OPA 2010
Refrigerator	Replacement - Running Part Time (26% of							
Roundup	the time)				100			0.0.1.0.1.0
2009 Great	Upright Freezer - Energy Star Unit	0.0	3	48%	189	0.026	\$0	OPA 2010
Refrigerator	Replacement - Running Part Time (26% of							
Roundup	the time)	0.0	2	100/	1 41 6	0.107	<i>ф</i> .1.1	0.0.1.0
2009 Great	Upright Freezer - Not Replaced - Running	0.3	3	48%	1,416	0.197	\$11	OPA 2010
Reingerator	All time (100% of time)							
2000 Croat	Lipright Freezer Standard Efficiency Lipit	0.1	2	/ 00/	607	0.007	¢ 1	OPA 2010
2009 Gleat Pofrigorator	Poplacement Pupping All Time (100% of	0.1	5	40 /0	097	0.097	קו	OFA 2010
Roundun	time)							
2009 Great	Upright Freezer - Epergy Star Unit	0.4	3	48%	736	0 102	\$7	OPA 2010
Refrigerator	Replacement - Running All Time (100% of	0.4	5	-1070	/30	0.102	Ψ7	01/12010
Roundup	time)							
2009 Cool	Energy Star® 14.5 SEER (Tier 1) Central Air	8.3	3	42%	113	0.123	\$23	OPA 2010
Savings Rebate	Conditioner (CAC)							

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			life	Free	energy	peak	to LRAM	Source
				Ridership	savings	demand	(2012\$)	
					(KVVII/a)	(kW/a)		
2009 Cool Savings Rebate	Energy Star® 14.5 SEER (Tier 1) Central Air Conditioner (CAC) with change in behaviour	1.3	3	42%	317	0.346	\$10	OPA 2010
2009 Cool Savings Rebate	Energy Star® 15.0 SEER (Tier 2) Central Air Conditioner (CAC)	21.7	3	42%	177	0.193	\$94	OPA 2010
2009 Cool Savings Rebate	Energy Star® 15.0 SEER (Tier 2) Central Air Conditioner (CAC) with change in behaviour	3.4	3	42%	366	0.400	\$30	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, AHRI Matched CAC & Furnace, Continuous Fan, No change	1.8	3	60%	2,773	1.658	\$86	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, AHRI Matched CAC & Furnace, Non-continuous Fan, No change	7.6	3	60%	324	0.183	\$41	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, AHRI Matched CAC & Furnace, Continuous Fan, Change from non- continuous	0.6	3	60%	91	0.054	\$1	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Unmatched CAC & Furnace, Continuous Fan, No change	3.3	3	60%	2,823	1.687	\$155	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Unmatched CAC & Furnace, Non- continuous Fan, No change	13.4	3	60%	373	0.211	\$84	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free Ridership	Annual energy savings	Annual peak demand	Contribution to LRAM (2012\$)	Assumption Source
				-	(kWh/a)	savings (kW/a)		
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Unmatched CAC & Furnace, Continuous Fan, Change from non- continuous	1.1	3	60%	140	0.084	\$3	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Heating only, Continuous Fan, No change	0.5	3	60%	1,535	0.837	\$14	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Heating only, Non-continuous Fan, No change	2.2	3	60%	324	0.177	\$12	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed before 1980, Heating only, Continuous Fan, Change from non-continuous	0.2	3	60%	192	0.105	\$1	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, AHRI Matched CAC & Furnace, Continuous Fan, No change	2.2	3	60%	2,867	1.714	\$104	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, AHRI Matched CAC & Furnace, Non-continuous Fan, No change	8.9	3	60%	207	0.117	\$31	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, AHRI Matched CAC & Furnace, Continuous Fan, Change from non- continuous	0.7	3	60%	(49)	(0.029)	(\$1)	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual peak	Contribution to LRAM	Assumption Source
				Ridership	savings (kWh/a)	demand savings (kW/a)	(2012\$)	
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Unmatched CAC & Furnace, Continuous Fan, No change	3.8	3	60%	2,927	1.750	\$188	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Unmatched CAC & Furnace, Non- continuous Fan, No change	15.7	3	60%	267	0.151	\$71	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Unmatched CAC & Furnace, Continuous Fan, Change from non- continuous	1.2	3	60%	11	0.007	\$0	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Heating only, Continuous Fan, No change	0.6	3	60%	1,570	0.856	\$17	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Heating only, Non-continuous Fan, No change	2.6	3	60%	207	0.113	\$9	OPA 2010
2009 Cool Savings Rebate	Furnace with Electronically Commutated Motor (ECM), Home constructed after 1980, Heating only, Continuous Fan, Change from non-continuous	0.2	3	60%	76	0.041	\$0	OPA 2010
2009 Cool Savings Rebate	Programmable Thermostat - Central Air Conditioning (CAC) & Gas heating	17.3	3	61%	30	0.026	\$9	OPA 2010
2009 Cool Savings Rebate	Programmable Thermostat - Energy Star® Central Air Conditioning (CAC) & Gas Heating	23.1	3	61%	26	0.022	\$10	OPA 2010

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			me	Ridership	savings	demand	(2012\$)	Source
					(kWh/a)	savings (kW/a)		
2009 Cool Savings Rebate	Programmable Thermostat - Gas Heating	4.9	3	61%	9	0.000	\$1	OPA 2010
2009 Cool Savings Rebate	Participant Spillover - Lighting	2.4	3	0%	40	0.001	\$4	OPA 2010
2009 Cool Savings Rebate	Participant Spillover - Cooling or Heating	0.9	3	0%	100	0.087	\$3	OPA 2010
2009 Cool Savings Rebate	Participant Spillover - Water heating	1.2	3	0%	141	0.011	\$7	OPA 2010
2009 Cool Savings Rebate	Participant Spillover - Appliances	1.6	3	0%	76	0.008	\$5	OPA 2010
2009 Cool Savings Rebate	Participant Spillover - Insulation of other weatherization	2.4	3	0%	75	0.029	\$8	OPA 2010
2009 Cool Savings Rebate	Participant Spillover - Windows	1.9	3	0%	100	0.085	\$8	OPA 2010
2009 Cool Savings Rebate	Participant Spillover - Roof products	0.9	3	0%	50	0.004	\$2	OPA 2010
2009 Cool Savings Rebate	Participant Spillover - Other products	1.0	3	0%	50	0.004	\$2	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Compact Fluorescent - Spring Campaign - Participant Rebated	91.1	3	31%	23	0.001	\$61	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Decorative CFLs - Spring Campaign - Participant Rebated	216.1	3	23%	26	0.001	\$182	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Fixtures - Spring Campaign - Participant Rebated	17.6	3	47%	116	0.004	\$46	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual peak	Contribution to LRAM	Assumption Source
				Ridership	savings (kWh/a)	demand savings (kW/a)	(2012\$)	
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Ceiling Fans - Spring Campaign - Participant Rebated	7.6	3	24%	71	0.002	\$18	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Heavy Duty Pool and Spa Timers - Spring Campaign - Participant Rebated	2.9	3	24%	454	0.060	\$42	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Clotheslines - Spring Campaign - Participant Rebated	7.3	3	45%	77	0.009	\$13	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Pipe Wrap - Spring Campaign - Participant Rebated	6.0	3	22%	8	0.001	\$2	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Water Blanket - Spring Campaign - Participant Rebated	0.8	3	20%	52	0.004	\$1	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Window Air Conditioner - Spring Campaign - Participant Promoted	7.5	3	33%	96	0.098	\$21	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Dehumidifiers - Spring Campaign - Participant Promoted	7.1	3	32%	284	0.025	\$58	OPA 2010

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			life	Free Ridershin	energy	peak demand	to LRAM (2012\$)	Source
				Ridership	(kWh/a)	savings	(2012\$)	
					`	(kW/a)		
2009 Every	Programmable Thermostat - Spring	17.4	3	55%	138	0.050	\$46	OPA 2010
Kilowatt Counts	Campaign - Participant Promoted							
Power Savings								
2009 Every	Solar Power Products - Spring Campaign -	45.5	3	40%	5	0.000	\$6	OPA 2010
Kilowatt Counts	Participant Promoted						+ -	
Power Savings								
Event				1=0/				
2009 Every	Control Products - Spring Campaign -	22.6	3	47%	72	0.001	\$37	OPA 2010
Power Savings	Farticipant Fromoted							
Event								
2009 Every	Reduce power to electronics (Behavioural)	9.5	1	85%	21	0.002	\$0	OPA 2010
Kilowatt Counts	- Spring Campaign - Participant Spillover							
Power Savings								
2009 Every	Installed CELs - Spring Campaign -	83	3	87%	101	0.003	\$5	OPA 2010
Kilowatt Counts	Participant Spillover	0.5	5	07 /0	101	0.005	ψS	01/12010
Power Savings								
Event								
2009 Every	Washed in Cold Laundry (Behavioural) -	8.3	1	86%	30	0.002	\$1	OPA 2010
Kilowatt Counts	Spring Campaign - Participant Spillover							
Fvent								
2009 Every	Turned off/Reduced lights (Behavioural) -	7.7	1	88%	263	0.008	\$4	OPA 2010
Kilowatt Counts	Spring Campaign - Participant Spillover							
Power Savings								
Event								

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual peak	Contribution to LRAM	Assumption Source
				Ridership	savings (kWh/a)	demand savings (kW/a)	(2012\$)	
2009 Every Kilowatt Counts Power Savings Event	Dried clothes outside or on rack (Behavioural) - Spring Campaign - Participant Spillover	6.7	1	89%	74	0.008	\$1	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Installed a new energy efficient appliance - Refrigerator - Spring Campaign - Participant Spillover	6.0	3	86%	65	0.007	\$2	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Unplugged devices usually left plugged in (Behavioural) - Spring Campaign - Participant Spillover	5.8	1	80%	70	0.006	\$1	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Installed a new energy efficient appliance - Clothes washing machine - Spring Campaign - Participant Spillover	3.6	3	88%	122	0.014	\$2	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Added ceiling/attic/wall/basement insulation - Spring Campaign - Participant Spillover	3.6	3	88%	394	0.104	\$7	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Installed Programmable Thermostat - Spring Campaign - Participant Spillover	3.6	3	87%	308	0.022	\$6	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Compact Fluorescent - Spring Campaign - Non-Participant Rebated	69.4	3	65%	22	0.001	\$23	OPA 2010

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			me	rree Ridership	energy savings	реак demand	(2012\$)	Source
				-	(kWh/a)	savings (kW/a)		
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Decorative CFLs - Spring Campaign - Non-Participant Rebated	34.4	3	60%	26	0.001	\$15	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Fixtures - Spring Campaign - Non-Participant Rebated	32.4	3	59%	68	0.002	\$38	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Ceiling Fans - Spring Campaign - Non-Participant Rebated	9.5	3	86%	71	0.002	\$4	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Heavy Duty Pool and Spa Timers - Spring Campaign - Non-Participant Rebated	6.0	3	86%	454	0.060	\$16	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Clotheslines - Spring Campaign - Non- Participant Rebated	22.0	3	86%	77	0.009	\$10	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Pipe Wrap - Spring Campaign - Non- Participant Rebated	50.9	3	86%	8	0.001	\$2	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Water Blanket - Spring Campaign - Non- Participant Rebated	7.5	3	86%	52	0.004	\$2	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual	Annual neak	Contribution	Assumption
			inc	Ridership	savings	demand	(2012\$)	Source
					(kWh/a)	savings (kW/a)		
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Window Air Conditioner - Spring Campaign - Non- Participant Promoted	12.5	3	57%	96	0.098	\$22	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Dehumidifiers - Spring Campaign - Non-Participant Promoted	15.0	3	56%	284	0.025	\$79	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Programmable Thermostat - Spring Campaign - Non-Participant Promoted	23.5	3	71%	138	0.050	\$40	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Solar Power Products - Spring Campaign - Non-Participant Promoted	152.2	3	61%	5	0.000	\$12	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Control Products - Spring Campaign - Non-Participant Promoted	52.4	3	66%	72	0.001	\$55	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Compact Fluorescent - Autumn Campaign - Participant Rebated	412.3	3	31%	25	0.001	\$309	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Specialty CFLs - Autumn Campaign - Participant Rebated	166.7	3	29%	21	0.001	\$105	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual peak	Contribution to LRAM	Assumption Source
				Ridership	savings (kWh/a)	demand savings	(2012\$)	
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Fixtures - Autumn Campaign - Participant Rebated	19.9	3	30%	119	0.004	\$70	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Weather-stripping - adhesive foam or V- strip - Autumn Campaign - Participant Rebated	18.4	3	43%	15	0.001	\$7	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Weather-stripping - door frame kits - Autumn Campaign - Participant Rebated	12.1	3	47%	17	0.001	\$5	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Programmable Thermostat - Autumn Campaign - Participant Rebated	8.0	3	33%	32	0.000	\$7	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Pipe Wrap - Autumn Campaign - Participant Rebated	6.9	3	55%	7	0.001	\$1	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Water Blanket - Autumn Campaign - Participant Rebated	1.5	3	37%	56	0.004	\$2	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Lighting/Appliance Controls - Autumn Campaign - Participant Rebated	14.0	3	28%	21	0.001	\$9	OPA 2010

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			lite	Free Ridership	energy savings	реак demand	to LKAM (2012\$)	Source
				•	(kWh/a)	savings		
2009 Every	Energy Star Qualified Holiday LED Lights -	49.1	3	41%	14	0.000	\$17	OPA 2010
Kilowatt Counts	Autumn Campaign - Participant Promoted							
Event								
2009 Every	Dimmer Switches - Autumn Campaign -	20.7	3	50%	24	0.001	\$10	OPA 2010
Rilowatt Counts Power Savings	Participant Promoted							
Event								
2009 Every	Solar Powered Products - Autumn	40.1	3	48%	6	0.000	\$5	OPA 2010
Power Savings	Campaign - Participant Promoted							
Event								
2009 Every	Washed laundry with cold water - Autumn	14.6	1	83%	30	0.002	\$1	OPA 2010
Power Savings	Campaign - Participant Spinover							
Event								
2009 Every	Turned off / reduced use of power to	13.5	1	81%	21	0.002	\$1	OPA 2010
Power Savings	Participant Spillover							
Event								
2009 Every	Turned off / reduced use of lights - Autumn	12.6	1	83%	263	0.008	\$8	OPA 2010
Power Savings	Campaign - Farticipant Spinover							
Event								
2009 Every	Dried clothes outside or inside on a rack -	8.9	1	87%	74	0.008	\$1	OPA 2010
Power Savings	Autumn Campaign - Fatticipant Spillover							
Event								

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual peak	Contribution to LRAM	Assumption Source
				Ridership	savings (kWh/a)	demand savings (kW/a)	(2012\$)	
2009 Every Kilowatt Counts Power Savings Event	Turned down the thermostat setting on my furnace - Autumn Campaign - Participant Spillover	8.9	1	81%	270	0.000	\$7	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Unplugged devices usually plugged into outlet - Autumn Campaign - Participant Spillover	8.3	1	82%	70	0.006	\$2	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Installed a new energy efficient appliance – Refrigerator - Autumn Campaign - Participant Spillover	8.3	3	75%	65	0.007	\$6	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Added ceiling/attic/wall/basement insulation - Autumn Campaign - Participant Spillover	6.7	3	78%	394	0.000	\$25	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Replaced my old furnace with a high efficiency furnace - Autumn Campaign - Participant Spillover	6.0	3	80%	352	0.192	\$17	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Installed a new energy efficient appliance - Clothes washing machine - Autumn Campaign - Participant Spillover	5.5	3	81%	142	0.049	\$6	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Compact Fluorescent - Autumn Campaign - Non-Participant Rebated	375.6	3	86%	24	0.001	\$52	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual neak	Contribution	Assumption
			inc	Ridership	savings	demand	(2012\$)	Jource
					(kWh/a)	savings (kW/a)		
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Specialty CFLs - Autumn Campaign - Non-Participant Rebated	119.3	3	85%	30	0.001	\$23	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	ENERGY STAR Fixtures - Autumn Campaign - Non-Participant Rebated	33.3	3	76%	36	0.001	\$12	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Weather-stripping - adhesive foam or V- strip - Autumn Campaign - Non-Participant Rebated	129.5	3	93%	15	0.001	\$6	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Weather-stripping - door frame kits - Autumn Campaign - Non-Participant Rebated	98.7	3	94%	17	0.001	\$5	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Programmable Thermostat - Autumn Campaign - Non-Participant Rebated	19.5	3	83%	83	0.000	\$12	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Pipe Wrap - Autumn Campaign - Non- Participant Rebated	91.7	3	89%	6	0.000	\$3	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Water Blanket - Autumn Campaign - Non- Participant Rebated	11.4	3	78%	40	0.003	\$4	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free	Annual energy	Annual peak	Contribution to LRAM	Assumption Source
				Ridership	savings (kWh/a)	demand savings	(2012\$)	
					(RVVII/ u)	(kW/a)		
2009 Every Kilowatt Counts Power Savings Event	Lighting/Appliance Controls - Autumn Campaign - Non-Participant Rebated	97.9	3	90%	42	0.001	\$18	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Energy Star Qualified Holiday LED Lights - Autumn Campaign - Non-Participant Promoted	160.2	3	65%	14	0.000	\$33	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Dimmer Switches - Autumn Campaign - Non-Participant Promoted	50.5	3	73%	24	0.001	\$14	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Solar Powered Products - Autumn Campaign - Non-Participant Promoted	81.1	3	58%	5	0.000	\$7	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Working Room Air Conditioner Retirement - Rewards for Recycling Campaign - Incented	3.9	3	62%	32	0.032	\$2	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Working Room Dehumidifier Retirement - Rewards for Recycling Campaign - Incented	3.6	3	53%	300	0.304	\$21	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Working Halogen Torchiere Retirement - Rewards for Recycling Campaign - Incented	1.2	3	49%	58	0.002	\$1	OPA 2010

Program	Energy Efficient Measure	Units	Measure	LRAM	Annual	Annual	Contribution	Assumption
			inte	Free Ridership	energy savings	реак demand	(2012\$)	Source
					(kWh/a)	savings		
2009 Every Kilowatt Counts	Recycled Second Refrigerator - Rewards	0.8	3	64%	1,238	0.127	\$15	OPA 2010
Power Savings Event	for Recycling Campaign - Spinover							
2009 Every Kilowatt Counts Power Savings Event	Recycled Additional Room Air Conditioner - Rewards for Recycling Campaign - Spillover	0.7	3	64%	30	0.030	\$0	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Recycled Central Air Conditioner - Rewards for Recycling Campaign - Spillover	0.6	3	64%	72	0.079	\$1	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Recycled Additional Room Dehumidifier - Rewards for Recycling Campaign - Spillover	0.7	3	64%	309	0.313	\$3	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Installed Energy Star® Windows - Rewards for Recycling Campaign - Spillover	1.1	3	82%	1,530	0.087	\$13	OPA 2010
2009 Every Kilowatt Counts Power Savings Event	Installed Energy Star® CFL Bulbs - Rewards for Recycling Campaign - Spillover	3.8	3	82%	45	0.001	\$1	OPA 2010
2009 High Performance New Construction	Custom	1.0	3	30%	5,064	2.221	\$181	OPA 2010

Program	Energy Efficient Measure	Units	Measure life	LRAM Free Ridership	Annual energy savings	Annual peak demand	Contribution to LRAM (2012\$)	Assumption Source
					(kWh/a)	savings (kW/a)		
2010 Great	All measures	1.0	2	30%	26,528	0.000	\$510	2010
Refrigerator								estimate
Roundup								
2010 Cool	ECM furnaces	12.0	2	59%	1,055	0.000	\$143	2010
Savings Rebate								estimate
2010 Cool	Programmable thermostats	11.0	2	59%	26	0.000	\$3	2010
Savings Rebate								estimate
2010 Every	All measures	1.0	2	30%	53,160	0.000	\$1,023	2010
Kilowatt Counts								estimate
Power Savings								
Event								
2010 High	Custom	1.0	2	30%	5,064	2.221	\$119	2010
Performance								estimate
New								
Construction								
Total							\$160,541	

Table 8 – LRAM contributions and car	rying charges.

Funding	Program	Year	Pre-carrying charges	Carrying charges	Total LRAM
unding)PA A C E E	Aboriginal	2007	\$108,204	\$6,251	\$114,455
	Cool Savings Rebate	2006	\$919	\$60	\$979
		2007	\$1,180	\$57	\$1,237
		2008	\$1,043	\$35	\$1,077
		2009	\$1,008	\$23	\$1,032
		2010	\$143	\$3	\$146
	Every Kilowatt Counts	2006	\$17,063	\$1,427	\$18,490
		2007	\$7,009	\$337	\$7,346
	Every Kilowatt Counts Power Savings Event	2008	\$5,234	\$176	\$5,409
		2009	\$1,706	\$40	\$1,746
		2010	\$1,005	\$18	\$1,023
	Great Refrigerator Roundup	2007	\$773	\$37	\$811
		2008	\$890	\$30	\$920
		2009	\$660	\$15	\$675
		2010	\$501	\$9	\$510
	High Performance New Construction	2008	\$7	\$0	\$7
		2009	\$177	\$4	\$181
		2010	\$117	\$2	\$119
	Secondary Refrigerator Retirement Pilot	2006	\$359	\$24	\$383
	Social Housing Pilot	2007	\$644	\$31	\$675
	Summer Savings	2007	\$1,073	\$97	\$1,170
	Summer Sweepstakes	2008	\$2,080	\$69	\$2,150
Total			\$151,797	\$8,744	\$160,541

1. Carrying charges are calculated quarterly, at the measure (not program) level to capture different carrying charge interest rates by quarter, program ramp up, and measure life.



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EXHIBIT 10

Substation Condition Assessment – Costello Associates

Substation Condition Assessment

Espanola Regional Hydro Distribution

May 2008

Prepared by Costello Associates

Costello Associates

158 Pond Hollow Drive Sudbury, Ontario Canada P3E 6L2 Tel/Fax: (705) 522-0501 Cell: (705) 669-7859 www.costelloassociates.ca

June 9, 2008

PUC Distribution Inc. 765 Queen St East, PO Box 9000 Sault Ste. Marie, ON P6A 6P2

Att: Mr. Gary Filion, Manager of Line Operations

Re: Espanola Regional Hydro Distribution Corp. - Substation Condition Assessment

Dear Gary,

As per your request, I made a site visit to Espanola Hydro's three municipal substations on May 28th to perform a visual inspection of the properties, buildings, and equipment. Based on my inspection and discussions with operating staff, I make the following recommendations for maintenance and repairs:

- 1. Substation MS-3:
 - a. General Overview

MS-3 station is rated 44/4.16 kV, 3000 kVA, with two 4.16 kV feeders. The station is an outdoor-type, enclosed on three sides by cinder block walls. The incoming and outgoing feeders egress underground. Several high priority deficiencies exist that should be addressed as soon as possible. Other issues are minor, and can be addressed as schedule and budget permits.

There are major problems with a 44 kV pothead and the 44 kV load break switch (see item 1b below). The main power transformer and 5 kV metal clad switchgear appear to be in good condition, based on an external visual inspection only. Electrical testing should be performed on the station cables, transformer, and switchgear, in order to complete the assessment of their condition. Testing recommendations are listed in item 1d below.

A station single line diagram is provided in Appendix 1, inspection sheets in Appendix 2, and photos of deficiencies are provided in Appendix 3.

- b. High Priority Issues
 - i. Cinder block walls several rows of blocks along the top of the wall are failing, and pieces of the blocks are lying around the substation stairs and floor. I understand that a structural engineer has already submitted an assessment of this problem.

ii. 44 kV Load Break Switch – most of the stand-off insulators and bushings are covered with rust, and there is a risk of flash-over. The steel roof trusses are exposed to the weather, and have rusted over the years. This rust has dripped down from the trusses and covered the insulators.

This switch should be cleaned as best as possible during the next maintenance outage. In the long term, the switch should be relocated or the roof trusses should be replaced with galvanized steel trusses (suggest input from the structural engineer). If the insulators cannot be adequately cleaned, the switch should be replaced.

- iii. 44 kV porcelain pothead one of the 44 kV potheads inside the station is leaking. Many utilities are eliminating porcelain arrestors and potheads for safety reasons. If Espanola Hydro and PUC share this opinion, this is an opportunity to change out all three terminators.
- iv. Distribution Transformer there is a distribution transformer in a metal enclosure inside the station, and there is no indication if it has been tested for PCB's. This unit should be sampled during the next maintenance outage.
- v. Vegetation and soil 4 to 6 inches of crushed stone should be placed inside the substation area and at least 1.5m outside the swing of the station gates. All vegetation should be removed prior to the placement of the stone.
- c. Other Issues
 - i. Fence and Gate Grounding the gate and man-door on the building structure are not grounded in accordance with the Ontario Electric Safety Code (OESC). Rule 36-312 requires the main gate posts and door frames to be grounded at each end post by a 2/0 AWG (min.) copper conductor.

Also, this station has a large chain link fence around the perimeter of the storage yard which is not grounded. This fence is very close to the main substation ground grid, and there is a risk that voltage will be transferred during fault conditions. Rule 36-312(5) states that "when there is a metal boundary fence in proximity to the station fence, the touch voltages within 1m of all parts of the boundary fence shall not exceed the tolerable values as specified in Table 52".

Options for dealing with this concern include one or more of the following:

- 1. Grounding the fence;
- 2. Placing crushed stone at least 1.5m on each side of the fence;
- 3. Installing non-metallic isolation fences (minimum width of 3m) near the building walls;
- 4. Performing a detailed grounding study to determine the influence of the transfer potential from the substation ground grid.
- Warning Signs I recommend that more "Caution High Voltage" signs be installed. Typically, Hydro stations have signs every 10-15m around the perimeter.
- iii. Padlocks should be installed on the 44kV and 4 kV load break switches, switchgear doors, the off-load tap changer handle on the transformer, and the PCB storage shed.

- iv. Gradient Control Mats the 44 kV switch mat is buried in soil and grass, and may not be effective. Switch operators should be in contact with the mat or crushed stone on top of the mat. Also, gradient control mats are required for the 4 kV feeder load break switches.
- v. Transformer breather the transformer conservator is free-breathing, which will lead to moisture entering the insulating oil and paper insulation. An air-drying breather should be installed during the next maintenance outage.
- vi. 44 kV porcelain arrestors are located on the dip pole at the street. Recommend changing to polymer arrestors for public safety.
- vii. The 44 kV primary fuses appear to be slightly oversized for this transformer. Protection and coordination study should be performed.
- viii. The 4 kV fuses are rated at 300E, according to Pat. Again, I recommend a protection and coordination study be performed to determine if these fuses will clear end of line faults in a reasonable amount of time.
- ix. The perimeter fence at the rear of the property has been damaged. Also, material has been placed against the outside of the fence that would allow someone climb over top.
- x. Nomenclature the station nomenclature requires review and updating. Many devices are not labelled, and numbering from station to station is very similar (i.e. 1808-M1, B1808-M1, and C1808-M1). In some cases, two different numbers are applied to the same device.
- d. Recommendations for additional testing
 - i. Transformer Oil have a qualified service representative sample the oil and perform laboratory analysis for :
 - 1. Standard 5 part ASTM D-877 dielectric tests
 - 2. Water Content
 - 3. Dissolved Gas Analysis
 - 4. Furan Analysis (optional)
 - ii. Infrared Testing all line connectors, terminators, switches, arrestors, and outdoor/exposed apparatus associated with the station. I do not recommend removing energized metal clad switchgear panels due to safety concerns.
 - iii. Maintenance outage to determine the condition of the transformer, switchgear, and cables, and to make repairs on the 44 kV pothead and 44 kV load break switch:
 - 44 kV load break switch clean insulators and bushings. Clean switch lubricate switch and fuse assemblies. Check alignment of switch contacts. Check contact resistance of switches and power fuses. Check insulation resistance (meggar) after cleaning switch (isolate switch from transformer and cables). Remove soil and vegetation from gradient control mat.
 - 2. Transformer insulation resistance, capacitance & dissipation factor, ratio, and winding resistance. Install air breather.
 - 3. Switchgear vacuum and clean all cubicles. Lubricate switch and fuse assemblies. Check alignment of switch contacts. Check

contact resistance of switches and power fuses. Check grounding. Clean and inspect metering PT's, CT's, and meters.

- Cables test insulation resistance with meggar (test voltage to be determined by service contractor). Ensure that cables are not unduly stressed by excessive voltage.
- 5. Ground Resistance Test test the equivalent ground resistance using the "Fall of Potential" method.
- e. Summary

Prior to commencing structural repairs on the building walls, I recommend that a maintenance outage be scheduled and the work listed in section 1d be completed in order to determine if the electrical equipment is in good condition. If the electrical equipment condition is acceptable, building repairs may proceed. Options should be considered to prevent a recurrence of the 44 kV load break switch insulator contamination.

- 2. Substation MS-1:
 - a. General Overview

MS-1 station is rated 44/4.16 kV, 3 x 1667 kVA (5000 kVA), with four 4.16 kV feeders. The 44 kV and two 4.16 kV feeders are overhead, and two 4.16 kV feeders are underground.

No major deficiencies were observed for this station. There are numerous relatively minor issues that should be addressed as schedule and budget permit.

b. Deficiencies

- i. Vegetation and soil 4 to 6 inches of crushed stone should be placed inside the substation area and at least 1.5m outside the swing of the station gates. All vegetation should be removed prior to the placement of the stone. There is some round stone in the station now, which does not provide adequate cover in accordance with the OESC and IEEE standard 80.
- ii. Fence and Gate Grounding the gate and man-door on the building structure are not grounded in accordance with the Ontario Electric Safety Code (OESC). Rule 36-312 requires the main gate posts and door frames to be grounded at each end post by a 2/0 AWG (min.) copper conductor.
- iii. Boundary Fence Grounding similar to the MS-3 station, the public works yard boundary fence is very close to the substation ground grid, and voltage could be transferred during fault conditions. See the MS-3 recommendations.
- Warning Signs I recommend that more "Caution High Voltage" signs be installed. Typically, Hydro stations have signs every 10-15m around the perimeter.
- v. Padlocks should be installed on the 44kV and 4 kV load break switches, switchgear doors, and the off-load tap changer handle on the transformer.

- vi. Gradient Control Mats mats are required for the 44kV and 4.16 kV load break switches.
- vii. Transformer breathers the transformer conservators are free-breathing, which will lead to moisture entering the insulating oil and paper insulation. An air-drying breather should be installed on each transformer during the next maintenance outage.
- viii. 44 kV porcelain arrestors are located on the main structure. Recommend changing to polymer arrestors for staff and public safety.
- ix. 4kV Riser Pole Guard should be grounded.
- x. 5 kV Metal-clad switchgear the outside of the switchgear enclosure is rusting and should be painted. I recommend that this work be done during a maintenance outage.
- xi. Security a switch crate is located just outside the fence, and could be used to climb over the substation fence. The crate should be moved to a different location.
- xii. Housekeeping spare crossarms, Christmas lights, and other materials are stored inside the substation yard. This material should be moved out of the substation.
- xiii. Nomenclature the station nomenclature requires review and updating. Many devices are not labelled, and numbering from station to station is very similar (i.e. 1808-M1, B1808-M1, and C1808-M1). In some cases, two different numbers are applied to the same device.
- c. Summary

The MS-1 station appears to be in good working condition. According to staff, routine maintenance has not been performed on this station for about ten years. I recommend that a maintenance outage be scheduled every three or four years. In addition, transformer oil testing and infrared inspections should be performed annually.

- 3. Substation MS-2:
 - a. General Overview

MS-2 substation is rated 44/4.16 kV, 5000 kVA, with four 4.16 kV feeders. All incoming and outgoing feeders are underground. This station has a similar arrangement to MS-3, with a 44 kV air break switch mounted upside down on steel roof trusses.

- b. High Priority Issues
 - i. The 44 kV air break switch and porcelain potheads are mildly contaminated with the rust from the roof trusses, but not nearly to the same level as the MS-3 station. There is risk of flashover if the contamination gets worse.
 - ii. Vegetation and soil 4 to 6 inches of crushed stone should be placed inside the substation area and at least 1.5m outside the swing of the station gates. All vegetation should be removed prior to the placement of the stone.

- c. Other Issues
 - i. The 5000 kVA power transformer is a sealed-type design. Outside temperature changes will result in varying pressure inside the main tank. In the event that the tank is under negative pressure, a danger exists for maintenance personnel when taking oil samples in that air can be sucked into the tank. This can result in a catastrophic failure and even tank rupture. I recommend the placement of a warning label to caution against taking samples when the tank is under negative pressure. Operating staff should be trained on this risk, as apparently they have sampled this particular transformer without regard to the tank pressure.
 - ii. Fence and Gate Grounding the gate and man-door on the building structure are not grounded in accordance with the Ontario Electric Safety Code (OESC). Rule 36-312 requires the main gate posts and door frames to be grounded at each end post by a 2/0 AWG (min.) copper conductor.
 - iii. Boundary Fence Grounding similar to the MS-3 station, the boundary fence is very close to the substation ground grid, and voltage could be transferred during fault conditions. See the MS-3 recommendations.
 - Warning Signs I recommend that more "Caution High Voltage" signs be installed. Typically, Hydro stations have signs every 10-15m around the perimeter.
 - v. Padlocks should be installed on the 44kV and 4 kV load break switches, switchgear doors, and the off-load tap changer handle on the transformer.
 - vi. Gradient Control Mats mats are required for the 4.16 kV load break switches.
 - vii. Transformer breathers the transformer conservator is free-breathing, which will lead to moisture entering the insulating oil and paper insulation. An air-drying breather should be installed on each transformer during the next maintenance outage.
 - viii. 44 kV porcelain arrestors are located on the dip pole on the street. Recommend changing to polymer arrestors for public safety.
 - ix. 5 kV Metal-clad switchgear the outside of the switchgear enclosure is rusting and should be painted. I recommend that this work be done during a maintenance outage.
 - X. Oil Temperature Gauge Glass has been broken (pellet gun?). Recommend replacing glass with Plexiglas. Gauge appears to be working.
 - xi. Nomenclature the station nomenclature requires review and updating. Many devices are not labelled, and numbering from station to station is very similar (i.e. 1808-M1, B1808-M1, and C1808-M1). In some cases, two different numbers are applied to the same device.
- d. Summary

The MS-2 station appears to be in good working condition. According to staff, routine maintenance has not been performed on this station for about ten years. I recommend that a maintenance outage be scheduled every three or four years. In addition, transformer oil testing and infrared inspections should be performed annually.

4. Conclusion

The Espanola substations are in need of some attention, as it would appear that regular maintenance has not occurred for about ten years. I generally recommend that municipal substations be de-energized and maintained every three to four years, with IR and oil testing on an annual bases.

It would also be advisable to review the protection and coordination of the 4kV system. The 4kV feeders are apparently fused at 300 amps, which may not provide sensitive enough protection for end of line ground faults. The study could also review the operating configuration for the town, and recommend open points and system balancing for optimization and line loss reduction.

The MS-3 substation has the most serious concerns, with the structural condition of the block walls, and the risk of failure of the 44 kV incoming supply. I suggest that the electrical condition of the transformer, switchgear, and cables be assessed prior to tendering for the structural repairs.

I have prepared preliminary single line diagrams for your review. As mentioned, the nomenclature is incomplete and should be reviewed and updated. These single line diagrams should be updated with the final nomenclature.

I hope that this report is acceptable to you and your colleagues at Espanola Hydro. Should you have any questions or concerns, please contact me at your convenience.

Respectfully submitted,

Stephen Costello Costello Associates

Appendix 1

Single Line Diagrams







Appendix 2

Inspection Sheets
Costello Associate	S		MS Inspection Sheet		
Utility: <u>Espanole</u>	Hydro	Inspected by: <i>SCc</i>	ostello		
Station: <u>///S-/</u>		_ Date: <u>Mary</u> 28	108		
Transformer Make: Reli	3x auace Size: 1667 Imp.:	5,42 5.47 5.51 Pri.Volt: 44 KV	SecVolt: <u>2.4/4.1</u> 6		
S/N: ¥ЭГТХ Vector Diagram	<u>o ka je se iko sje se ka s</u> e oli C	: Aud Primary Fuses: And	KNOWN		
		Transformer	OK Concern Max		
Yard	OK Concern	Conservator Oil Level Winding Temperature Oil Temperature	28/60 28/60 25/70		
Fence Security Fence Grounding		Silica Gel LTC Oil Level LTC Operations Ctr	o o none e o na		
Fence Foundations Warning Signs Barbed Wire	&	LTC Min LTC Max LTC Reset	<u>па</u> _ <u>na</u> 0 0 ла		
Locks Crushed Stone: Snow		Bushing Oil Level Paint Condition Grounding	o ona o e		
Trees Vegitation/Weeds	S S S S	OLTC Padlock Bushing Condition Explosion Dianhram	o ona e o		
Building (Walls)		Neutral Connection	v ⊂ v ⊂		
Grounding Paint Roof	б б 0 па	Switchgear/Structures			
Windows Doors Structure	0 0 na 0 0 na	Grounding Structure Height Clearances	0 O Unknown 0 & Rust W		
Warning Signs Security Station Power	° ĕ∕ Ø °	Porcelain Arrestors Pin-type Insulators Load Break Switches	0 0 44KV 0 0		
Sump Pump Eye Wash	0 0 na 0 0 na 0 0 na	Gradient Control Mats Station Service Tx Becloser Op Counters	o de o ona		
Building Temperature	0 0 19	Recloser Target Reset	0 0 na		
Comments: No pad doors, Fence	locks on AB/LB Switc not grounded - High	hes. No padlocks on " Voltage Warning S	Huv sustchesear Igns regid		
around all s	ides of walls Spar	e switch crate ag	ainst ols of		
Control 11 He	Control with conclete Un How suitcher New charged				

control matts regol for 44 + 4 KV switches. More stone regid. Breathers should be installed on transformers.

STA		
Station <u>Espanola MS-1</u>	Common Concerns	Year Built
 Public Safety Children General Environmental Hazard Maintenance Issues Legal Non-Compliance (Municipal) Concern report filed? Attach to this shee 	Worker Safety Reliability Operational Issu Regulatory Non-	es Compliance (ESA / IESO)
	Site Concerns	
Proximity Residences Schools Bike paths Roads Laneways Explosion barrier Fencing Grounding Bonding Falling over Height Openings Vegetation on fence Inappropriate attachments Foundations Substandard design / construction	Encroachments Trees Neighbours Other Station Issues Housekeeping Spare equipment Yard Grounding Bonding Vegetation in yard Gravel Trees overhanging Switch / ground mat Trenches, ducts or conduits Lighting Signage Animals Birds /squirrels present Building Equipment Concern	Watercourses River / pond Ditch Storm sewer Building Grounding Bonding Paint Stairs Roof Windows Doors Slippery floor Floor drain present Accessible to children Security Water damage potential
 Control equipment (RTU, fire & security) Switchgear Parat 	AC/DC supplies (panels, batteries, chargers)	 Metering (kWH, SCADA, transducers) Protection control systems
No. of underground cables installed Age of working cables Guarding and grounding <i>Riser</i> Leaking potheads Cable support	Cable Concerns No. of working Termination Oil-filled cables	cables Cable condition Lead sheath cables
5. Costello MAY 28/08	Page 1	

Costello Associates			MS Inspection Sheet	
Utility: <u>Espanola Hydro</u> Station: <u>MS-2</u>		Inspected by: <u>5. Costello</u> Date: <u>May 28/08</u>		
Transformer Make: 5/N: Vector Diagram	? size: <u>5mua</u> ? te worn-Unread	Imp.: <u>5.48 %</u> Pri.Volt: <u>44 kv</u> OLTC: <u>Tap 4</u> Primary Fuses: <u>S+C</u> able	Sec Volt: 2.4/4.16 SMD - 2C	
		Transformer	OK Concern	
Yard Fence Security Fence Grounding Fence Foundations Warning Signs Barbed Wire Locks Crushed Stone: Snow Trees Vegitation/Weeds Building (Walls)	OK Concern	Conservator Oil Level Winding Temperature Oil Temperature Silica Gel LTC Oil Level LTC Operations Ctr LTC Min LTC Max LTC Reset Bushing Oil Level Paint Condition Grounding OLTC Padlock Bushing Condition Explosion Diaphram Neutral Connection	 o sealed. o 38/60 o na o na na na o na o n	
Grounding Paint Roof Windows Doors Structure Warning Signs Security Station Power Sump Pump Eye Wash Lights Building Temperature	$ \begin{array}{c} $	Switchgear/Structures Grounding Structure Height Clearances Porcelain Arrestors Pin-type Insulators Load Break Switches Gradient Control Mats Station Service Tx Recloser Op Counters Recloser Target Reset	 Ø Ø<	

comments: Rust on 44 KV AB switch insulators and terminators. Lock regid on 44+4 KV Switches and Switchgeer doors, and OLTC handle. Suggest warning sign on sample ports re: Vacuum. Need more signage on fences. No grounding on perimeter fience. Stone required, vegitation removal.

STATION CONCERNS				
Station Espanola MS-	2	Year Built		
	Common Concerns			
 Public Safety Children General Environmental Hazard Maintenance Issues Legal Non-Compliance (Municipal) Concern report filed? Attach to this sheet 	 Worker Safety Reliability Operational Issu Regulatory Non- 	ves -Compliance (ESA / IESO)		
	Site Concerns			
Proximity Residences Schools Bike paths Roads Laneways Explosion barrier Fencing Grounding Bonding Rust Falling over Height Openings Vegetation on fence Inappropriate attachments Foundations Substandard design / construction	Encroachments Trees Neighbours Other Station Issues Housekeeping Spare equipment Yard Grounding Bonding Vegetation in yard Gravel Trees overhanging Switch / ground mat Trenches, ducts or conduits Lighting Signage Animals Birds /squirrels present	Watercourses River / pond Ditch Storm sewer Building Grounding Bonding Paint Stairs Roof Windows Doors Slippery floor Floor drain present Accessible to children Security Water damage potential		
<u>Control</u>	Building Equipment Concer	<u>ns</u>		
 Control equipment (RTU, fire & security) Switchgear locks, ground magnet 	AC/DC supplies (panels, batteries, chargers) <i>wHs</i>	 Metering (kWH, SCADA, transducers) Protection control systems 		
	Cable Concerns			
No. of underground cables installed Age of working cables	No. of working	cables		
 Guarding and grounding Leaking potheads Cable support 	 Termination Oil-filled cables 	 Cable condition Lead sheath cables 		

Costello Associates	MS Inspection Sheet
Utility: <u>Espanola Hydro</u> Station: <u>MS-3</u>	Inspected by: <u>S.Costello</u> Date: <u>May 28/08</u>
Transformer Make: West. Size: 3.44 S/N: 290828 Vector H2 X2	伯 Imp.: <u>6-3 /-</u> Pri.Volt: <u>44 Kv</u> Sec Volt: <u>2-4/4-16</u> OLTC: <u>またち</u> Primary Fuses: S <u>+C Si4D 多のE</u>
Diagram $X_{2} \times X_{3}$	Transformer OK Concern
Yard OK Concern Fence Security \bigcirc \checkmark Fence Grounding \bigcirc \checkmark Fence Foundations \checkmark \bigcirc Warning Signs \bigcirc \checkmark Barbed Wire \checkmark \bigcirc Locks \bigcirc \checkmark Crushed Stone: \bigcirc \checkmark Snow \bigcirc \land \land Mathematical Stope: \bigcirc \checkmark Mathematical Stope: \bigcirc \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc \bigcirc \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc \bigcirc \bigcirc \bigcirc Mathematical Stope: \bigcirc	Conservator Oil Level Winding Temperature Oil Temperature Silica Gel LTC Oil Level LTC Operations Ctr LTC Min LTC Max LTC Reset Bushing Oil Level Paint Condition Grounding OLTC Padlock Bushing Condition Substance Conservation Substance Conservation Subst
GroundingImage: Construct of the second	Switchgear/StructuresGroundingImage: ConstructureStructureImage: ConstructureHeight ClearancesImage: ConstructurePorcelain ArrestorsImage: ConstructurePin-type InsulatorsImage: ConstructureLoad Break SwitchesImage: ConstructureGradient Control MatsImage: ConstructureStation Service TxImage: ConstructureRecloser Op CountersImage: ConstructureConstructureImage: Constr
attract of the state	

Comments: 44 KV Switch in poor condition- visk of failure. Padlocks recid on 44+4 KV 4B Switches and OLTC handle. Gradient control malts read for 4KV Swgr. Porcelain 44 KV arrestors. Fence not grounded. Stone regid, Vegitation removed. 44 KV pothead leaking. Dist. transformer needs PCB test + Sticker.



Appendix 3

Photos















































EXHIBIT 11

Station Contingency Review – Costello Associates

Espanola Regional Hydro - Station Contingency Review

Prepared by: Stephen Costello December 2010

1. System Description:

The purpose of this report is to provide a high level review the capacity of the Espanola Regional Hydro (ERH) substations in the Town of Espanola.

ERH owns and operates three municipal substations in the Town of Espanola. MS-1 and MS-2 stations are rated at 5000 kVA each, and MS-3 is rated at 3000 kVA. The total Town capacity is 13,000 kVA, the sum of all three stations.

2. Historical Loading:

ERH is a winter-peaking utility, and set a record peak demand in January 2009 during a stretch of cold weather of just over 13,100 MVA (12.6 MW). Figure 1 shows the daily peak demand between January 2008 and June 2010.



Espanola 44 kV Peak Demand

Figure 1

4. Available Capacity

The winter 2009 peak matched the available capacity of the existing municipal substations. There is no additional capacity available for future growth. Further, it is common utility practice is to provide additional station capacity to allow for the unplanned failure of any single substation without prolonged interruptions to customers. Given that the peak operating conditions occur in the winter, there would be serious consequences to prolonged outages (several days) should there be a major failure at an existing station.

Based on the failure of one of the two 5000 kVA substations, there is presently a shortfall of at least 5000 kVA (which does not provide for any growth). ERH should consider the addition of a new substation, rated at least 5000 kVA (7500 kVA is recommended to allow for growth).

We also note that through our analysis of the metering records of general service accounts, the majority of retail/commercial customers are summer peaking. This presumably is due to air conditioning and refrigeration load. The limited historical data provided by ERH seems to indicate that there is load growth in the summer months. This further supports the need for additional station capacity, as it may become difficult to remove one of the three existing substations for planned maintenance during summer months.

5. Off-Peak Loading

ERH must have enough capacity to supply the worst case peak loading conditions. Peak conditions for utilities often occur at times of the day when there is high demand for heating, cooking, and appliance use (air conditioning, laundry, dish washers). At other times of the day, when electric demand is reduced, the loading on substations may be substantially reduced.

The off-peak minimum demand for the day that the 2009 winter peak of 13.1 MVA was reached was 9.9 MVA. This equates to a load factor of 76%. Detailed contingency analysis should consider the minimum and maximum loading conditions.



Min & Max 44 kV Demand

Figure 2

6. Typical Substation Loading:

ERH has provided over two years of system-wide historical loading for the Town of Espanola (see Figure 1 above). Individual station loading records were only provided for 2007, as follows:

Month	MS-1	Percentage	MS-2	Percentage	MS-3	Percentage	Total **
Jan	3798	40%	3684	38%	2103	22%	9585
Feb	3951	41%	3713	38%	2077	21%	9741
Mar	3717	40%	3492	38%	2014	22%	9223
Apr							
May	3021	39%	2934	38%	1830	24%	7785
Jun	2151	33%	2505	38%	1905	29%	6561
Jul	2613	35%	2808	37%	2075	28%	7496
Aug	2517	35%	2638	37%	2009	28%	7164
Sep	2715	35%	2804	36%	2164	28%	7683
Oct	2172	33%	2487	38%	1840	28%	6499
Nov	2334	36%	2525	38%	1711	26%	6570
Dec	6364	60%	2487	23%	1840	17%	10691
* all readings are peak monthly KW, from Hydro One invoices							
** assumes coincident peaks - rough estimate only							

Under peak load conditions, MS-1 consumes about 40% of the utility demand. MS-2 consumes about 38% on average, and MS-3 consumes about 22%. These percentages are the basis for rough contingency analysis below. We have extrapolated the load requirements for each station based on a similar division of loads between stations throughout the year.

During the winter 2009 system peak demand of 12.6 MW (13.1 MVA at 96% power factor), the stations were loaded as follows based on this pro rating:

Station	Rating	Load	Feeders	Load/Feeder
MS-1	5 MVA	5.2 MVA	4	1.30 MVA 180 amps
MS-2	5 MVA	5.0 MVA	4	1.25 MVA 174 amps
MS-3	3 MVA	2.9 MVA	2	1.45 MVA 201 amps

Note that this assumes that the total station is divided equally over all of the station feeders, which may not actually be the case. Operating flexibility may be enhanced by attempting to load feeders uniformly where possible.

Detailed monthly station metering records should be consulted as part of the creation of detailed contingency plans.

7. Typical Conductor/Cable Ratings – based on Aluminum Company of America / Westinghouse T&D Text Book

The following conductor ampacity table provides typical ratings for the overhead circuits in Espanola.

Туре	Material	Amperage	kVA	kW @ 96% pf
1/0 ACSR	Aluminum	230	1650	1580
2/0 ACSR	Aluminum	270	1900	1820
3/0 ACSR	Aluminum	300	2160	2070
336 AAC	Aluminum	405	2910	2790
250 MCM XLPE	Copper	265	1910	1830

8. ERH Overhead Line Capacity

The majority of the ERH overhead distribution system's main three phase sections are 336 AAC. In some cases however, main three phase sections are sized as low as 1/0 ACSR. In considering various contingency scenarios, care must be taken to ensure both the capacity of the remaining substations *and* the overhead conductors. Further, it must be ensured that all line components such as jumpers, switches, and openers have at least the same current rating as the circuit conductors.

I. MS-1 Station:

- a. The lines immediately outside station appear to be 336 AAC.
- b. The lines along Second Ave heading towards MS-2 are 336 AAC.
- c. The lines heading south along Mead (backlot) appear to be 336 AAC.
- d. The circuit on the west side of the town on Barber St. is only 1/0 ACSR. This circuit has a limited ability to provide backup to the MS-3 station.

II. MS-2 Station:

- a. The lines immediately outside station appear to be 336 AAC.
- b. The lines along Second Ave heading towards MS-1 are 336 AAC.
- c. The lines along Barrie St. are 336 AAC.
- d. The lines along Avery Drive are 336 AAC.
- e. The lines along Centre St (Hwy 6) appear to be 1/0 ACSR. This circuit has a limited ability to provide backup to MS-3 station.

III. MS-3 Station:

- a. The lines immediately outside the station are 336 AAC.
- b. The lines along Mead St heading to MS-1 are 336 AAC.
- c. The lines along Queensway are 336 AAC.
- d. Care must be taken not to overload conductors in immediate vicinity of station as the normal per feeder loading is higher for MS-3 than MS-1 or MS-2.

9. Contingency Analysis

As this is a high-level analysis of contingency options, it is assumed that equipment will not be overloaded as a result of any unplanned failure. Station transformers are considered to be loaded only to their nameplate rating and no further. In reality this will not likely be the case, as it may be possible to load transformers in winter ambient temperatures beyond their nameplate rating.

The following cases are based on the winter 2009 peak of 13.1 MVA.

I. Case 1: Loss of 5 MVA station (either MS-1 or MS-2):

Remaining capacity is 13 MVA - 5 MVA = 8 MVA.

Considering the daily peak load profile in Figure 1, it can be seen that the system demand is greater than 8 MVA between November and March. Should such a failure occur in these cold months, customers would be subjected to rotational blackouts.

At peak loading conditions, 5 MVA of load would have to be shed (almost 40% of ERH Town load).

For a total system demand of 8 MVA, the three substations would normally be loaded to the following levels prior to the station fault. Presume that the MS-1 station fails:

Station	Percentage Loading	Load	Capacity Remaining
MS-1	40%	3.2 MVA	-
MS-2	38%	3.0 MVA	2.0 MVA
MS-3	22%	1.8 MVA	1.2 MVA
Available Capacity from	3.2 MVA		
Load already on MS-2	4.8 MVA		
Total load that can be s	8 MVA		

In this case, MS-2 must pick up an additional 2 MVA (280A). Based on the per-feeder loading shown in item 6 above, this load would have to be picked up by three feeders if we are attempting to keep the feeder loading less than 300A (the recommended fuse size for all feeders).

For MS-3, the two feeders must take on an additional 1.2 MVA (170A). This load can be taken on by the MS-3 feeders without exceeding the 300A feeder loading.

II. Case 2: Loss of 3 MVA station (MS-3):

Remaining capacity is 13 MVA - 3 MVA = 10 MVA

Considering the daily peak load profile in Figure 1, it can be seen that the system demand is greater than 10 MVA between mid-December and mid-March. Should such a failure occur in these cold months, customers would be subjected to rotational blackouts.

At peak loading conditions, 3 MVA of load would have to be shed (almost 25% of ERH Town load).

For a total system demand of 10 MVA, the three substations would normally be loaded to the following levels prior to the station fault. Presume that the MS-1 station fails:

Station	Percentage Loading	Load	Capacity Remaining
MS-1	40%	4.0 MVA	1 MVA
MS-2	38%	3.8 MVA	1.2 MVA
MS-3	22%	2.2 MVA	-
Available Capacity from		2.2 MVA	
Load already on MS-1	7.8 MVA		
Total load that can be s	10 MVA		
In this case, MS-1 and MS-2 must pick up an additional 2.2 MVA (310A) across the eight feeders at MS-1 and MS-2. Based on the per-feeder loading shown in item 6 above, this could be accommodated while keeping the per-feeder loading less than 300A.

III. Summary

With the present substation capacity, a winter-time failure of any substation could result in the need for rotational blackouts that would impact most ERH customers in the Town of Espanola. Should one of the substation transformers fail, ERH could expect that a replacement unit or mobile substation would take at least several days to be sourced and installed.

The load factor on peak days is about 76% based on all customers being supplied with power throughout the day. Although it might seem that since the typical demand is lower at off-peak conditions, in the event of rotating blackouts, the typical daily load profile would likely not apply as customers that have been without power will use more power than usual to reheat their houses and cool meals. To be conservative, we suggest that ERH use the daily peak loading as the constant load requirement during rotational blackouts.

10. Additional Substation Capacity

As mentioned above, standard utility practice is to have enough supply and routing capacity to accommodate at least one contingency failure of any system component. ERH's present substation capacity matches almost exactly the loading requirements, and there is no allowance for any failure of one of the existing substations. Such a failure, should it occur in cold weather, would most likely result in prolonged lengthy outages and rotating blackouts that would last at least several days. Most or all ERH customers in the Town of Espanola would be affected.

We recommend that ERH consider adding new substation capacity to allow for the unplanned failure of an existing station and also to allow for system growth. It appears as though there is some winter growth, but it is clear that there is definitely summer growth occurring.

The new substation should be rated at least 5 MVA, and it is recommended to consider a station with a rating of 7.5 MVA. This increased rating would allow for system growth as well as backup to the existing stations.

A new substation, which we will call MS-4, could be located in the south-east portion of the Town of Espanola. Geographically, this would provide station capacity in each corner of the town, and integrate with the existing overhead distribution system. There is a parcel of vacant land which we understand is owned by the Town of Espanola, at the intersection of Barrie St. and Queensway Ave.

We have provided a preliminary budget for a new 7.5 MVA substation, which is based on a padmount low profile design which is aesthetically pleasing and compatible with placement in residential areas. The budget also allows for 15 kV class reclosers and SCADA control. This is a modern design, typical of substations being constructed by other Ontario LDC's.



Figure 3

EXHIBIT 12

New Municipal Substation Report - Costello Associates

1 INTRODUCTION

Costello Associates Inc. has been retained by Espanola Regional Hydro (ERH) to provide supporting technical information and budgetary estimates for the addition of a new municipal substation to provide necessary capacity to the Town of Espanola.

As part of ERH's ongoing Asset Management Program, Costello Associates Inc. performed a Substation Condition Assessment of three (3) municipal substations in 2008. We also provided a Substation Contingency Report in 2010 that identified a shortfall in substation capacity, and have recommended that ERH design and construct a new substation to provide backup to the three existing stations and to facilitate new load growth.

1.1 Summary of Station Capacity and Load

ERH owns and operates three municipal substations in the Town of Espanola. MS-1 and MS-2 stations are rated at 5000 kVA each, and MS-3 is rated at 3000 kVA. The total Town capacity is 13,000 kVA, the sum of all three stations.

ERH is a winter-peaking utility, and set a record peak demand in January 2009 during a stretch of cold weather of just over 13,100 MVA (12.6 MW). Figure 1 shows the daily peak demand between January 2008 and June 2010.



Espanola 44 kV Peak Demand

Figure 1

1.2 Risk of Station Failures

The Town of Espanola load presently matches the available station capacity during peak winter conditions. There is no remaining capacity available for any significant load growth. More concerning is that in the event of a major failure at one of the existing stations, there would not be sufficient capacity in the remaining two stations to supply the Town under moderate to heavy load conditions.

The Substation Condition Assessment study performed in 2008 indicated that all three of the existing stations are approaching the end of their useful life within about 10 years. As the existing stations age, the risk of an unplanned failure increases. There is concern that the lack of backup station capacity may result in long-duration unplanned outages. During extreme winter weather conditions, long duration outages would have a substantial negative impact on the community.

1.3 Requirement for SCADA

Supervisory Control and Data Acquisition (SCADA) systems provide the ability to continuously monitor and control the electric distribution system to improve reliability, reduce system losses, improve public and worker safety, and make efficient use of operating staff. SCADA systems have been commonplace in Canadian utilities for more than 25 years.

The existing ERH substations are of a very basic design, typical of northern LDC practices 30-40 years ago. This design is incompatible with any level of automation or SCADA.

While ERH does not presently own a SCADA system, it is anticipated that a small SCADA system will either be purchased in the future or provided as a shared-service by a nearby LDC. New substations should be designed to be compatible with modern SCADA systems.

1.4 Enabling Stations for DG and Smart Grid

All three of the ERH existing substations are designed with fuses which inherently do not provide any functionality for SCADA, automatic restoration, transfer trips for distributed generation, or other abilities often associated with anticipated Smart Grid (SG) applications.

The existing station feeder fuses are required to provide overcurrent protection for abnormal system conditions such as short circuit faults and overloads. Based on our brief station survey, it would appear that there is insufficient feeder protection for many ERH circuits. In addition, the use of single phase protective devices (fuses and reclosers) in urban environments is non-standard and may cause single-phasing problems for three-phase customers.

Modern utility substations are typically constructed using metalclad switchgear or reclosers with sophisticated protective relaying. This type of equipment provides superior protection and coordination with downstream devices, and can be used with SCADA systems and other SG applications described above.

1.5 Typical Ontario LDC Practice

It is common practice for Ontario LDC's to provide enough redundancy in the distribution system such that a single contingency failure does not result in widespread prolonged power interruptions. It is also common practice to provide some spare station capacity for the connection of new customers.

Ideally, there should be enough substation capacity available at all times such that the loss of a single station does not result in long-term power interruptions. Typical LDC planning practices require that once the load exceeds the capacity of the minimum operating contingency (in this case, two substations), additional capacity should be brought onto the system.

2 ALTERNATIVES FOR ADDITIONAL CAPACITY

2.1 Expand Existing Station(s)

Additional capacity could be obtained by expanding or rebuilding one or more of the existing substations. Stations MS-1 and MS-2 are rated 5000 kVA each, which is typically considered to be the maximum design capacity for 4 kV substations. The installation of a larger power transformer will result in higher short circuit levels on the 4 kV system, likely exceeding the interrupting capacity of distribution fuses.

The MS-3 station is rated 3000 kVA, and from a short circuit perspective, it's capacity could be increased up to 5000 kVA.

The addition of up to 2000 kVA does not provide enough incremental capacity to supply the entire Town load in the event of the failure of one of the other 5000 kVA substations. In addition, the expansion of the MS-3 site would require substantial work which would be costly (at least \$800k), and require a lengthy outage during construction. The remaining two stations could not handle the peak Town load during the construction period. In the event of the failure of MS-1 or MS-2 during construction, there would only be 5000 kVA of station capacity to serve up to 13 MVA of peak load.

This alternative is not feasible in our opinion.

2.2 Purchase Spare Transformer

A spare transformer could be purchased and kept on hand in Espanola to be used as an emergency replacement in the event of the failure of one of the existing station transformers.

The three existing substations are physically quite different from each other. The MS-1 station has three single phase transformers, each rated 1667 kVA. The MS-2 station has one three-phase 5000 kVA transformer. The MS-3 station has one smaller 3000 kVA transformer. The electrical connections are also different on the three station transformers.

It would be difficult to have a spare transformer that would easily be installed at any of the substations. The replacement of a failed transformer with an identical unit is time-consuming, in the order of at least 3 days work. To replace a transformer with a unit that is physically quite different, it could take much more time. This would result in a lengthy unplanned outage and rolling blackouts.

This alternative is not feasible in our opinion.

2.3 Build a New Substation

A new 5000 kVA substation could be constructed in the south-west area of Espanola. This area is ideal, as it can utilize existing distribution tie circuits with minimal line construction/enhancements. The timeline for the design, construction, and commissioning of similar stations is in the order of eight to nine months.

2.3.1 Preferred Alternative

The proposed MS-4 substation will be located in a mature residential neighborhood, and must be designed to be compatible with the local area in terms of visual and acoustic impact. We recommend that ERH consider a low-profile padmount-type substation, with underground incoming and outgoing cables. The power transformer should be of low-noise transformer, designed to exceed the basic industry acoustic standards and to meet Provincial noise emission regulations.

The proposed design includes the use of modern three-phase electronic reclosers with sophisticated protection and control relays that are compatible with SCADA systems, embedded distributed generation, and potential future smart grid applications. This design has been utilized by several northern LDC's in recent years.

The recommended design single line diagram (SLD) and budget is shown in Section 3. Including a reasonable contingency factor, the budget for this alternative is \$1.8M.

2.3.2 Lowest Cost Solution

ERH could elect to install a new substation with essentially the same design as the existing substations in Espanola. This design would include only fuse protection on the three 4.16 kV feeders. This design would include no provisions for SCADA, embedded distributed generation, or smart grid applications. This would be a design typical of 1950 – 1970 technology, and would not be consistent with current Ontario LDC practices.

The budget for this design is approximately \$1.45M.

2.3.3 Highest Cost Solution

The most expensive solution considered is based on a design that requires the construction of a substation building, indoor metalclad switchgear, stand-alone protection and control racks, and a SCADA/P&C/Communication rack.

The budget cost for this alternative is approximately \$2.75M. This design is typical of southern Ontario LDC's where the use of outdoor-style apparatus is less common than in northern Ontario.

This design does not offer any significant operational benefits over the preferred arrangement. Some might consider this indoor-type design to me more aesthetically-pleasing, which could possibly be beneficial in a residential neighborhood.

2.4 Sub-transmission Line Extension

The addition of the proposed MS-4 substation requires that a 44 kV sub-transmission circuit be extended to the new station location. This line extension is required regardless of the design of the MS-4 station.

The cost of a 44 kV line extension from the MS-2 station to the MS-4 site is estimated at approximately \$275k.

ESPANOLA REGIONAL HYDRO 2014 IRM Supporting Information New Municipal Substation

It is recommended that Espanola Hydro consider further sub-transmission work, so that the 44 kV system can be looped from the new MS-4 station to the existing MS-3 station. The existing sub-transmission feeder is radial, and any single failure can potentially interrupt the entire Town load. This loop will permit routine maintenance on the sub-transmission system without customer interruptions, and will allow fast restoration in the event of a failure on the sub-transmission system.

ESPANOLA REGIONAL HYDRO 2014 IRM Supporting Information New Municipal Substation

3 PREFERRED ALTERNATIVE

- 3.1 Single Line Diagram (SLD) Page 8
- 3.2 Project Detailed Budget Page 9



	Initial	Date	Revision	No.
FEEDER F11				
Le 500 MCM Cu, 15k Le 250 MCM Cu NEU JCRETE ENCASED 100	3 X X CON			

	Design	Outdoor 44 kV Padmounted Swit	chgear, Undergr	ound Construct	ion	515
		Padmounted Reclosers and Isolating Switches Underground 4.16kV Risers x 3				
	Voltage	44 - 4.16/2.4 kV				
	Installed Capacity	6/8 MVA				
	Switchgear Type	Padmount				
	Main Breaker	none 15 kV 6304 Solid Diologeric Book	sere			
	Schedule	N/A	sers			23-Sep-13
	Component		Cost Detail		Summary	
1)	Property Costs					
	1.1) Sale price		\$	50,000		
	1.2) Legal costs		\$	4,000	\$	54,000
2)	Engineering & Design					
	2.1) Preliminary enginee	ring	\$	7,000		
	2.2) Environmental Scre	ening	\$	15,000		
	2.3) Geolectinical invest 2.4) Grounding	igation	э \$	35,000		
	2.5) Detailed engineering	g & Design	\$	50,000		
	2.6) Site Meetings		\$	3,000		
	2.7) Site Supervision & F	Project Management	\$	55,000		
	2.8) Protection Study		\$	7,500	\$	182,500
3)	Major equipment					
	3.1) Power Transformer	6/8 MVA	\$	170,000		
	3.2) Station Reclosers (3	3)	\$	120,000		
	3.3) 44 KV Switches/Fus 3.4) Switchgear	es	ъ \$	75,000 98,000		
	3.5) Prefab. Control Sha	ck w/pad	\$	30,000		
	3.6) Station Service	·	\$	7,500		
	3.7) 44 kV Cables/Termi	nators est. 120m	\$	20,000		
	3.8) 15 kV 350 MCM Ca 3.0) Solid Blado Bisor Si	bles/lerminators est. 550m	\$ ¢	125,000		
	3.10) Scada RTU	witches (12)	\$	15,000		
	·				\$	667,500
4)	Civil Construction		\$	7 500		
	4.2) Clearing, Grubbing.	Grading, compacting, fill	\$	200.000		
	4.3) Road entrance/pavi	ng	\$	10,000		
	4.4) Oil Containment		\$	100,000		
	4.5) Duct Banks	P.C.	\$	120,000		
	4.7) Fence & Stone	10	\$	100,000	÷	EE7 E00
E)	Flootrigal				÷	557,500
J	5.1) Grounding		\$	30,000		
	5.2) 44 KV DID POIE 5.3) 12 47 kV Riser Pole	s	¢	∠,500 7 500		
	5.4) Installation of Trans	former	\$	5,000		
	5.5) Installation of Reclo	sers	\$	6,000		
	5.6) Power & Control Ca	bling	\$	7,500		
	5.7) Station Service Pan 5.8) Commissioning	ei	\$ ¢	3,000		
	5.6/ Commissioning		<u>.</u>	22,000	\$	83,500
6)	Miscellaneous					
	6.1) Mobilization, Bondin	g, Insurance	\$	50,000		
	6.2) Fees & Permits		\$	5,000	\$	55,000
7)	ERH Staff Costs					
	7.1) Lines		\$	10,000		
	7.2) Stations		\$	10,000		
	7.3) Engineering		\$	5,000	\$	25,000
	Sub-Total				\$	1,625,000
	Contingency 10%				\$	162,500

4 DO NOTHING ALTERNATIVE

Should ERH elect not to provide additional substation capacity, there are two potential immediate impacts:

First, in the event of a failure of one of the existing stations, there could be prolonged power interruptions. Since ERH is a winter-peaking utility, prolonged power interruptions in the winter months have the potential to be dangerous to residents of Espanola. Such an outage would likely trigger a municipal emergency state, and may require evacuation of vulnerable residents. Rotating blackouts or long-duration outages would exist for at least several days until such time as a replacement transformer or other major component could be sourced, purchased, delivered, and installed.

The second serious impact is that there is no significant amount of spare capacity available for any planned load growth. This may have an adverse impact on economic development opportunities for the Town of Espanola.

5 CONCLUSION

We recommend that ERH design and construct a new municipal substation to provide additional capacity for system growth and to provide necessary system security for an unplanned station failure at one of the existing substations. In our opinion, this is consistent with current Ontario LDC planning practices.