



October 21, 2009

Ms. Kirsten Walli  
Board Secretary  
Ontario Energy Board  
P.O. Box 2319, 27<sup>th</sup> Floor  
2300 Yonge Street  
Toronto, Ontario  
M4P 1E4

Dear Kirsten:

**Re: Norfolk Power Distribution Inc - Application for 2010 Electricity Distribution Rates EB-2009-0238**

Norfolk Power Distribution Inc. ("NPDI") is pleased to submit to the Ontario Energy Board (the "Board") its 2010 electricity distribution rate application. In compliance with the OEB letter dated July 3<sup>rd</sup>, 2009 NPDI is filing its rate application as a 3<sup>rd</sup> Generation Incentive Rate (IRM) application which includes the continuation of a directive from a previous Board Decision for a Revenue Cost Ratio Adjustment. This application also includes an application for LRAM/SSM recovery and a Z Factor. NPDI regrets it was not able to file the application for the Z Factor by September 30<sup>th</sup>, as directed, due to anomalies discovered in its deferral and variance accounts. After consultation with Board Staff at that time, it was thought best to complete the application after the deferral and variance accounts were correctly completed. However, as directed by the Board's letter dated October 15<sup>th</sup> 2009, NPDI is submitting the application now and will update it as soon as the deferral and variance accounts are completed.

The filing requirements indicate that each application should include:

- A Manager's Summary documenting and explaining all rate adjustments applied for.
- A completed Rate Generator model with supplemental filing modules or work forms, provided by the Board, both in electronic (i.e. Excel) and PDF form.
- A copy of the current Tariff Sheet.
- A PDF copy of the facsimile tariff sheet generated by the Rate Generator.
- A PDF copy of the bill impacts generated by the Rate Generator.

The completed 2010 IRM3 models are attached along with the requested tariff sheet and bill impact information. The Manager's Summary for NPDI's 2010 rate application is attached to this letter. The information that is provided in the IRM3 models will not be repeated in the Manager's Summary in order to focus the Manager's Summary on the relevant items.

NPDI's 2010 electricity distribution rate application will be sent to you in the following form:

- (a) Electronic filing through the Board's web portal at [www.errr.oeb.gov.on.ca](http://www.errr.oeb.gov.on.ca), consisting of one (1) electronic copy of the application in searchable /unrestricted PDF format and one (1) electronic copy in Microsoft Excel format of the completed IRM3 models and one (1) electronic copy of the Manager's summary;
- (b) Two (2) paper copies of the application, the Manager's Summary and the IRM Model, along with a CD of the above (item (a)).

We would be pleased to provide any further information or details that you may require relative to this application.

Yours truly,

A handwritten signature in black ink that reads "Brad Randall". The signature is written in a cursive style with a large, stylized initial "B".

Brad Randall, P.Eng.  
President and CEO  
Norfolk Power Distribution Inc.  
Phone: 519-426-4574  
Fax: 519-426-9934  
Email: [brandall@norfolkpower.on.ca](mailto:brandall@norfolkpower.on.ca)

**Norfolk Power Distribution Inc.**

**EB-2009-0238**

**MANAGER'S SUMMARY**

**October 21, 2009**

Norfolk Power Distribution Inc ("NPDI") is a licensed electricity distributor (ED-2002-0521) that owns and operates electricity distribution systems that provide service to the County of Norfolk. NPDI charges its customers distribution rates and other charges as authorized by the Ontario Energy Board ("Board"). In this application NPDI is applying for rates and other charges effective May 1, 2010.

NPDI has adhered to the Board's directions in completing the Board approved IRM3 rate models and incorporated the necessary adjustment. This Manager's Summary will address the following items:

- Revenue to Coat Ratio Adjustment
- Smart Meter Adder
- Price Cap Adjustment
- K – Factor Adjustment
- Deferral and Variance Account Rider
- Retail Transmission Service Rates
- Current and Proposed Rates – Appendix A
- Customer Impacts – Appendix B
- LRAM/SSM – Exhibit 1
- Z Factor – Exhibit 2

### **Revenue to Cost Ratio**

In order to implement the next phase of the directive from the Board's Decision for NPDI's 2008 cost of service application in regards to revenue to cost ratios, NPDI proposes the following Revenue to Cost ratios as determined by the Supplemental Model.

Rate Class	2009 Approved Revenue Cost Ratio	2010 Proposed Revenue Cost Ratio
Residential	103.4%	103.0%
General Service Less Than 50 kW	101.2%	101.2%
General Service 50 to 4,999 kW	92.4%	92.4%
Unmetered Scattered Load	100.7%	100.7%
Sentinel Lighting	58.5%	70.0%
Street Lighting	62.6%	70.0%

For 2010, NPDI proposed to increase the revenue to cost ratios for Street Lighting and Sentinel Lighting classes to reach the bottom of the Board's target range. As directed in the Board's Decision, the changes were made with an offsetting amount being applied to residential rates.

### **Smart Meter Adder**

For 2010 rates, NPDI proposes to maintain the \$1.00 per meter per month as approved in its current rates.

### **Price Cap Adjustment**

Under the 3rd Generation IRM plan, NPDI's electricity distribution rates for 2010 have been adjusted for three factors: a price escalator, a productivity factor and a

stretch factor. For the purposes of preparing the 2010 application, the Board expects NPDI to use a proxy for the price cap adjustment. The proxy is 1.18%. NPDI understands that when the final price adjustment factor is determined the Board will adjust the price cap adjustment assumed in the 2010 final rates.

### **K – Factor Adjustment**

In the Report of the Board on Cost of Capital and 2nd Generation Incentive Regulation for Ontario's Electricity Distributors, the Board determined that a common deemed capital structure of 40% equity and 60% debt would be used for rate-setting purpose. In 2010, the last year of transition, it is assumed NPDI's deemed capital structure will move from 43.3% equity and 56.7% debt to 40% equity and 60% debt. An adjustment factor of -0.35% is applied to the 2009 rates to address the change in deemed capital structure.

### **Deferral and Variance Account Rider**

While completing the Deferral and Variance Account Workform, NPDI became aware of a number of inconsistencies in its record keeping regarding these amounts. A recent change in management has further exacerbated attempts to account for these inconsistencies. In order to rectify the situation NPDI has engaged Ian McKenzie Business Services Inc to reconstruct the deferral and variance account balances from January 1<sup>st</sup> 2005 to December 31<sup>st</sup> 2008. In the meantime NPDI has submitted the workform with this application but has not applied the rate riders calculated in the worksheet to the IRM3 Rate Generator Model as these amounts are expected to change. NPDI will update this application with the corrected workform as soon as possible. NPDI also wishes to note that on October 13<sup>th</sup> the Board's Regulatory Audit and Accounting Group notified NPDI that they will be conducting an audit review of its deferral and

variance accounts. Any changes that arise as a result of this audit will also be incorporated in an updated application and submitted to the Board.

### **Retail Transmission Rates**

The Board's Revision to Guideline G-2008-0001 - Electricity Distribution Retail Transmission Service Rates ("RTSR's) were issued July 22, 2009. Based on the Decision and Rate Order of the Board (EB-2008-072), new Uniform Transmission Rates (UTR's) are effective July 1, 2009. The Guideline instructs distributors to adjust RTSR's in the same manner as the UTR's have been changed. An increase of 3.5% has been applied to the 2009 Network Service Rate and a decrease of 2.2% has been applied to the 2008 Line Transformation Connection Service Rate.

### **LRAM / SSM Recovery**

NPDI has applied for implementation of an LRAM/SSM rate rider to recover amounts totaling \$210,957, including carrying charges of \$9,600. NPDI requests to recover the amounts by a volumetric rate rider over the period of one year beginning May 1 2010. The full LRAM/SSM application is submitted as Exhibit 1. The rate riders have been included in the Rate Generator Model and have been included in the attached customer impact analysis provided in Appendix A of this summary.

### **Z Factor**

As part of this application NPDI has applied for the recovery of amounts recorded in Account 1572 related to severe storm damage which occurred in January 2007. NPDI requests the amounts be recovered by a volumetric rate rider over the period of one year, beginning May 1 2010. The rate riders have been included in the Rate Generator Model and have been included in the attached

customer impact analysis provided in Appendix A of this summary. The full Z Factor application is submitted as Exhibit 2.

### **Conclusion**

A copy of the current tariff sheet, the proposed tariff sheet and the customer impacts are provided in Appendix A. In summary, the bill impact for a Residential customer in Norfolk County, with a monthly electricity consumption of 800 kWh, will be 1.9% or \$2.11 per month after GST. The bill impact for a General Service Less Than 50 kW customer with a monthly electricity consumption of 2,000 kWh, will be 1.0% or \$2.80 per month after GST.



## Norfolk Power Distribution Inc. CURRENT TARIFF OF RATES AND CHARGES

### CURRENT MONTHLY RATES AND CHARGES

#### Residential

Service Charge	\$	22.02
Service Charge Tax Change Rate Rider – effective until April 30, 2010	\$	(0.02000)
Distribution Volumetric Rate	\$/kWh	0.0199
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0049
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0049
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

#### General Service Less Than 50 kW

Service Charge	\$	50.74
Service Charge Tax Change Rate Rider – effective until April 30, 2010	\$	(0.04000)
Distribution Volumetric Rate	\$/kWh	0.0146
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0045
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0043
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

#### General Service 50 to 4,999 kW

Service Charge	\$	245.37
Service Charge Tax Change Rate Rider – effective until April 30, 2010	\$	(0.21000)
Distribution Volumetric Rate	\$/kW	3.9228
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2010	\$/kW	(0.00340)
Retail Transmission Rate – Network Service Rate	\$/kW	1.8322
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.7109
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

#### Street Lighting

Service Charge (per connection)	\$	1.85
Distribution Volumetric Rate	\$/kW	6.4893
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2010	\$/kW	(0.00500)
Retail Transmission Rate – Network Service Rate	\$/kW	1.3819
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.3227
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

#### Sentinel Lighting

Service Charge (per connection)	\$	6.15
Distribution Volumetric Rate	\$/kW	15.4239
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2010	\$/kW	(0.01090)
Retail Transmission Rate – Network Service Rate	\$/kW	1.3888
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.3503
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

#### Unmetered Scattered Load

Service Charge (per connection)	\$	26.55
Service Charge Tax Change Rate Rider – effective until April 30, 2010	\$	(0.02000)
Distribution Volumetric Rate	\$/kWh	0.0156
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0045
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0043
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

**EB-2009-0238**  
**Manager's Summary**  
**Appendix A**

**CURRENT SPECIFIC SERVICE CHARGES**

**Customer Administration**

Arrears certificate	\$	15.00
Statement of account	\$	15.00
Pulling post dated cheques	\$	15.00
Duplicate invoices for previous billing	\$	15.00
Request for other billing information	\$	15.00
Easement letter	\$	15.00
Income tax letter	\$	15.00
Notification charge	\$	15.00
Account history	\$	15.00
Credit reference/credit check (plus credit agency costs)	\$	15.00
Returned cheque charge (plus bank charges)	\$	15.00
Charge to certify cheque	\$	15.00
Legal letter charge	\$	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
Collection of account charge - no disconnection - after regular hours	\$	165.00
Disconnect/Reconnect at meter - during regular hours	\$	65.00
Disconnect/Reconnect at meter - after regular hours	\$	185.00
Disconnect/Reconnect at pole - during regular hours	\$	185.00
Disconnect/Reconnect at pole - after regular hours	\$	415.00

**Other**

Install/Remove load control device - during regular hours	\$	65.00
Install/Remove load control device - after regular hours	\$	185.00
Service call - customer-owned equipment	\$	30.00
Service call - after regular hours	\$	165.00
Specific Charge for Access to the Power Poles \$/pole/year	\$	22.35

**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)
	\$/kW	

**Current Retail Service Charges (if applicable)**

**Retail Service Charges (if applicable)**

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 charge, per customer, per retailer	\$/cust.	0.30
Retailer-consolidated billing 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**

Total Loss Factor - Secondary Metered Customer < 5,000 kW	1.0560
Total Loss Factor - Secondary Metered Customer > 5,000 kW	0.00
Total Loss Factor - Primary Metered Customer < 5,000 kW	1.0454
Total Loss Factor - Primary Metered Customer > 5,000 kW	0.00

**Norfolk Power Distribution Inc.**  
**TARIFF OF RATES AND CHARGES**  
**Effective May 1, 2010**

EB-2009-0238

MONTHLY RATES AND CHARGES

**Applied For Monthly Rates and Charges General**

**Residential**

Service Charge	\$	20.94
Service Charge Smart Meter Funding Adder	\$	1.00
Distribution Volumetric Rate	\$/kWh	0.0199
Low Voltage Volumetric Rate	\$/kWh	0.0007
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2011	\$/kWh	(0.00020)
Distribution Volumetric Lost Revenue Adjustment Mechanism (LRAM) Recovery/Shared Savings Mechanism (SSM) Recovery Rate Rider – effective until April 30, 2011	\$/kWh	0.00120
Distribution Volumetric Z-Factor Request – effective until April 30, 2011	\$/kWh	0.0008
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0051
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0048
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

**General Service Less Than 50 kW**

Service Charge	\$	50.15
Service Charge Smart Meter Funding Adder	\$	1.00
Distribution Volumetric Rate	\$/kWh	0.0146
Low Voltage Volumetric Rate	\$/kWh	0.0006
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2011	\$/kWh	(0.00020)
Distribution Volumetric Lost Revenue Adjustment Mechanism (LRAM) Recovery/Shared Savings Mechanism (SSM) Recovery Rate Rider – effective until April 30, 2011	\$/kWh	0.00000
Distribution Volumetric Z-Factor Request – effective until April 30, 2011	\$/kWh	0.0005
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0047
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0042
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

**General Service 50 to 4,999 kW**

Service Charge	\$	246.39
Service Charge Smart Meter Funding Adder	\$	1.00
Distribution Volumetric Rate	\$/kW	3.9236
Low Voltage Volumetric Rate	\$/kW	0.2622
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2011	\$/kW	(0.02440)
Distribution Volumetric Lost Revenue Adjustment Mechanism (LRAM) Recovery/Shared Savings Mechanism (SSM) Recovery Rate Rider – effective until April 30, 2011	\$/kW	0.10510
Distribution Volumetric Z-Factor Request – effective until April 30, 2011	\$/kW	0.0891
Retail Transmission Rate – Network Service Rate	\$/kW	1.8963
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.6733
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

**Street Lighting**

Service Charge (per connection)	\$	1.87
Distribution Volumetric Rate	\$/kW	7.3081
Low Voltage Volumetric Rate	\$/kW	0.1999
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2011	\$/kW	(0.07340)
Distribution Volumetric Z-Factor Request – effective until April 30, 2011	\$/kW	0.2453
Retail Transmission Rate – Network Service Rate	\$/kW	1.4303
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.2936
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

**Sentinel Lighting**

Service Charge (per connection)	\$	6.20
Distribution Volumetric Rate	\$/kW	18.7510
Low Voltage Volumetric Rate	\$/kW	0.2024
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2011	\$/kW	(0.58320)
Distribution Volumetric Z-Factor Request – effective until April 30, 2011	\$/kW	0.8049
Retail Transmission Rate – Network Service Rate	\$/kW	1.4374
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.3206
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

**Unmetered Scattered Load**

Service Charge (per connection)	\$	26.77
Distribution Volumetric Rate	\$/kWh	0.0156
Low Voltage Volumetric Rate	\$/kWh	0.0006
Distribution Volumetric Tax Change Rate Rider – effective until April 30, 2011	\$/kWh	(0.00030)
Distribution Volumetric Z-Factor Request – effective until April 30, 2011	\$/kWh	0.0010
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0047
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0042
Wholesale Market Service Rate	\$/kWh	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013
Standard Supply Service – Administrative Charge (if applicable)	\$	0.25

**EB-2009-0238  
Manager's Summary  
Appendix A**

**Specific Service Charges**

**Customer Administration**

Arrears certificate	\$	15.00
Statement of account	\$	15.00
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Easement letter	\$	15.00
Income tax letter	\$	15.00
Notification charge	\$	15.00
Account history	\$	15.00
Credit reference/credit check (plus credit agency costs)	\$	15.00
Returned cheque charge (plus bank charges)	\$	15.00
Charge to certify cheque	\$	15.00
Legal letter charge	\$	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
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Disconnect/Reconnect at pole - after regular hours	\$	415.00

**Other**

Install/Remove load control device - during regular hours	\$	65.00
Install/Remove load control device - after regular hours	\$	185.00
Service call - customer-owned equipment	\$	30.00
Service call - after regular hours	\$	165.00
Specific Charge for Access to the Power Poles \$/pole/year	\$	22.35

**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)

**Retail Service Charges (if applicable)**

**Retail Service Charges (if applicable)**

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 charge, per customer, per retailer	\$/cust.	0.30
Retailer-consolidated billing 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**

Total Loss Factor - Secondary Metered Customer < 5,000 kW	1.0560
Total Loss Factor - Secondary Metered Customer > 5,000 kW	0.00
Total Loss Factor - Primary Metered Customer < 5,000 kW	1.0454
Total Loss Factor - Primary Metered Customer > 5,000 kW	0.00

**Manager's Summary  
Appendix B  
Customer Impact**

**Name of LDC:** Norfolk Power Distribution Inc.  
**File Number:** EB-2009-0238  
**Effective Date:** May 1, 2010

**Residential**

Monthly Rates and Charges	Metric	Current Rate	Applied For Rate
Service Charge	\$	22.02	20.94
Service Charge Rate Adder(s)	\$	-	1.00
Service Charge Rate Rider(s)	\$	0.02	-
Distribution Volumetric Rate	\$/kWh	0.0199	0.0199
Distribution Volumetric Rate Adder(s)	\$/kWh	-	-
Low Voltage Volumetric Rate	\$/kWh	-	0.0007
Distribution Volumetric Rate Rider(s)	\$/kWh	-	0.0018
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0049	0.0051
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0049	0.0048
Retail Transmission Rate – Low Voltage Service Rate	\$/kWh	-	-
Wholesale Market Service Rate	\$/kWh	0.0052	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013	0.0013
Standard Supply Service – Administration Charge (if applicable)	\$/kWh	0.25	0.25

<b>Consumption</b>	<b>800</b>	<b>kWh</b>	<b>-</b>	<b>kW</b>
<b>RPP Tier One</b>	<b>600</b>	<b>kWh</b>	<b>Load Factor</b>	

**Loss Factor 1.0560**

Residential	Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Energy First Tier (kWh)	600	0.0570	34.20	600	0.0570	34.20	0.00	0.0%	29.63%
Energy Second Tier (kWh)	245	0.0660	16.17	245	0.0660	16.17	0.00	0.0%	14.01%
<b>Sub-Total: Energy</b>			<b>50.37</b>			<b>50.37</b>	<b>0.00</b>	<b>0.0%</b>	<b>43.63%</b>
Service Charge	1	22.02	22.02	1	20.94	20.94	-1.08	(4.9)%	18.14%
Service Charge Rate Adder(s)	1	0.00	0.00	1	1.00	1.00	1.00	0.0%	0.87%
Distribution Volumetric Rate	800	0.0199	15.92	800	0.0199	15.92	0.00	0.0%	13.79%
Distribution Volumetric Rate Adder(s)	800	0.0000	0.00	800	0.0000	0.00	0.00	0.0%	0.00%
Low Voltage Volumetric Rate	800	0.0000	0.00	800	0.0007	0.56	0.56	0.0%	0.49%
Distribution Volumetric Rate Rider(s)	800	0.0000	0.00	800	0.0018	1.44	1.44	0.0%	1.25%
<b>Total: Distribution</b>			<b>37.92</b>			<b>39.86</b>	<b>1.94</b>	<b>5.1%</b>	<b>34.53%</b>
Retail Transmission Rate – Network Service Rate	845	0.0049	4.14	845	0.0051	4.31	0.17	4.1%	3.73%
Retail Transmission Rate – Line and Transformation Connection Service Rate	845	0.0049	4.14	845	0.0048	4.06	-0.08	(1.9)%	3.52%
Retail Transmission Rate – Low Voltage Volumetric Rate	845	0.0000	0.00	845	0.0000	0.00	0.00	0.0%	0.00%
<b>Total: Retail Transmission</b>			<b>8.28</b>			<b>8.37</b>	<b>0.09</b>	<b>1.1%</b>	<b>7.25%</b>
<b>Sub-Total: Delivery (Distribution and Retail Transmission)</b>			<b>46.20</b>			<b>48.23</b>	<b>2.03</b>	<b>4.4%</b>	<b>41.78%</b>
Wholesale Market Service Rate	845	0.0052	4.39	845	0.0052	4.39	0.00	0.0%	3.80%
Rural Rate Protection Charge	845	0.0013	1.10	845	0.0013	1.10	0.00	0.0%	0.95%
Standard Supply Service – Administration Charge (if applicable)	1	0.25	0.25	1	0.25	0.25	0.00	0.0%	0.22%
<b>Sub-Total: Regulatory</b>			<b>5.74</b>			<b>5.74</b>	<b>0.00</b>	<b>0.0%</b>	<b>4.97%</b>
Debt Retirement Charge (DRC)	800	0.00700	5.60	800	0.00700	5.60	0.00	0.0%	4.85%
<b>Total Bill before Taxes</b>			<b>107.91</b>			<b>109.94</b>	<b>2.03</b>	<b>1.9%</b>	<b>95.24%</b>
GST	107.91	5%	5.40	109.94	5%	5.50	0.10	1.9%	4.76%
<b>Total Bill</b>			<b>113.31</b>			<b>115.44</b>	<b>2.13</b>	<b>1.9%</b>	<b>100.00%</b>

**Manager's Summary  
Appendix B  
Customer Impact**

**Residential**

	kWh	250	600	800	1,400	2,250
Loss Factor Adjusted kWh		264	634	845	1,479	2,376
kW						
Load Factor						

**Energy**

Applied For Bill	\$ 15.05	\$ 36.44	\$ 50.37	\$ 92.21	\$ 151.42
Current Bill	\$ 15.05	\$ 36.44	\$ 50.37	\$ 92.21	\$ 151.42
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	29.3%	40.1%	43.6%	48.9%	51.8%

**Distribution**

Applied For Bill	\$ 27.52	\$ 35.36	\$ 39.84	\$ 53.26	\$ 72.27
Current Bill	\$ 26.97	\$ 33.94	\$ 37.92	\$ 49.86	\$ 66.77
\$ Impact	\$ 0.55	\$ 1.42	\$ 1.92	\$ 3.40	\$ 5.50
% Impact	2.0%	4.2%	5.1%	6.8%	8.2%
% of Total Bill	53.6%	38.9%	34.5%	28.2%	24.7%

**Retail Transmission**

Applied For Bill	\$ 2.62	\$ 6.27	\$ 8.37	\$ 14.64	\$ 23.52
Current Bill	\$ 2.58	\$ 6.22	\$ 8.28	\$ 14.50	\$ 23.28
\$ Impact	\$ 0.04	\$ 0.05	\$ 0.09	\$ 0.14	\$ 0.24
% Impact	1.6%	0.8%	1.1%	1.0%	1.0%
% of Total Bill	5.1%	6.9%	7.3%	7.8%	8.0%

**Delivery (Distribution and Retail Transmission)**

Applied For Bill	\$ 30.14	\$ 41.63	\$ 48.21	\$ 67.90	\$ 95.79
Current Bill	\$ 29.55	\$ 40.16	\$ 46.20	\$ 64.36	\$ 90.05
\$ Impact	\$ 0.59	\$ 1.47	\$ 2.01	\$ 3.54	\$ 5.74
% Impact	2.0%	3.7%	4.4%	5.5%	6.4%
% of Total Bill	58.7%	45.8%	41.8%	36.0%	32.7%

**Regulatory**

Applied For Bill	\$ 1.96	\$ 4.37	\$ 5.74	\$ 9.86	\$ 15.70
Current Bill	\$ 1.96	\$ 4.37	\$ 5.74	\$ 9.86	\$ 15.70
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	3.8%	4.8%	5.0%	5.2%	5.4%

**Debt Retirement Charge**

Applied For Bill	\$ 1.75	\$ 4.20	\$ 5.60	\$ 9.80	\$ 15.75
Current Bill	\$ 1.75	\$ 4.20	\$ 5.60	\$ 9.80	\$ 15.75
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	3.4%	4.6%	4.9%	5.2%	5.4%

**GST**

Applied For Bill	\$ 2.45	\$ 4.33	\$ 5.50	\$ 8.99	\$ 13.93
Current Bill	\$ 2.42	\$ 4.26	\$ 5.40	\$ 8.81	\$ 13.65
\$ Impact	\$ 0.03	\$ 0.07	\$ 0.10	\$ 0.18	\$ 0.28
% Impact	1.2%	1.6%	1.9%	2.0%	2.1%
% of Total Bill	4.8%	4.8%	4.8%	4.8%	4.8%

**Total Bill**

Applied For Bill	\$ 51.35	\$ 90.97	\$ 115.42	\$ 188.76	\$ 292.59
Current Bill	\$ 50.73	\$ 89.43	\$ 113.31	\$ 185.04	\$ 286.57
\$ Impact	\$ 0.62	\$ 1.54	\$ 2.11	\$ 3.72	\$ 6.02
% Impact	1.2%	1.7%	1.9%	2.0%	2.1%

**Manager's Summary  
Appendix B  
Customer Impact**

**Name of LDC:** Norfolk Power Distribution Inc.  
**File Number:** EB-2009-0238  
**Effective Date:** May 1, 2010

**General Service Less Than 50 kW**

Monthly Rates and Charges	Metric	Current Rate	Applied For Rate
Service Charge	\$	50.74	50.15
Service Charge Rate Adder(s)	\$	-	1.00
Service Charge Rate Rider(s)	\$	0.04	-
Distribution Volumetric Rate	\$/kWh	0.0146	0.0146
Distribution Volumetric Rate Adder(s)	\$/kWh	-	-
Low Voltage Volumetric Rate	\$/kWh	-	0.0006
Distribution Volumetric Rate Rider(s)	\$/kWh	-	0.0004
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0045	0.0047
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0043	0.0042
Retail Transmission Rate – Low Voltage Service Rate	\$/kWh	-	-
Wholesale Market Service Rate	\$/kWh	0.0052	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013	0.0013
Standard Supply Service – Administration Charge (if applicable)	\$/kWh	0.25	0.25

<b>Consumption</b>	<b>2,000</b>	<b>kWh</b>	<b>-</b>	<b>kW</b>
<b>RPP Tier One</b>	<b>750</b>	<b>kWh</b>	<b>Load Factor</b>	

**Loss Factor 1.0560**

General Service Less Than 50 kW	Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Energy First Tier (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.0%	15.55%
Energy Second Tier (kWh)	1,362	0.0660	89.89	1,362	0.0660	89.89	0.00	0.0%	32.70%
<b>Sub-Total: Energy</b>			<b>132.64</b>			<b>132.64</b>	<b>0.00</b>	<b>0.0%</b>	<b>48.26%</b>
Service Charge	1	50.74	50.74	1	50.15	50.15	-0.59	(1.2)%	18.25%
Service Charge Rate Adder(s)	1	0.00	0.00	1	1.00	1.00	1.00	0.0%	0.36%
Distribution Volumetric Rate	2,000	0.0146	29.20	2,000	0.0146	29.20	0.00	0.0%	10.62%
Distribution Volumetric Rate Adder(s)	2,000	0.0000	0.00	2,000	0.0000	0.00	0.00	0.0%	0.00%
Low Voltage Volumetric Rate	2,000	0.0000	0.00	2,000	0.0006	1.20	1.20	0.0%	0.44%
Distribution Volumetric Rate Rider(s)	2,000	0.0000	0.00	2,000	0.0004	0.80	0.80	0.0%	0.29%
<b>Total: Distribution</b>			<b>79.90</b>			<b>82.35</b>	<b>2.45</b>	<b>3.1%</b>	<b>29.96%</b>
Retail Transmission Rate – Network Service Rate	2,112	0.0045	9.50	2,112	0.0047	9.93	0.43	4.5%	3.61%
Retail Transmission Rate – Line and Transformation Connection Service Rate	2,112	0.0043	9.08	2,112	0.0042	8.87	-0.21	(2.3)%	3.23%
Retail Transmission Rate – Low Voltage Volumetric Rate	2,112	0.0000	0.00	2,112	0.0000	0.00	0.00	0.0%	0.00%
<b>Total: Retail Transmission</b>			<b>18.58</b>			<b>18.80</b>	<b>0.22</b>	<b>1.2%</b>	<b>6.84%</b>
<b>Sub-Total: Delivery (Distribution and Retail Transmission)</b>			<b>98.48</b>			<b>101.15</b>	<b>2.67</b>	<b>2.7%</b>	<b>36.80%</b>
Wholesale Market Service Rate	2,112	0.0052	10.98	2,112	0.0052	10.98	0.00	0.0%	3.99%
Rural Rate Protection Charge	2,112	0.0013	2.75	2,112	0.0013	2.75	0.00	0.0%	1.00%
Standard Supply Service – Administration Charge (if applicable)	1	0.25	0.25	1	0.25	0.25	0.00	0.0%	0.09%
<b>Sub-Total: Regulatory</b>			<b>13.98</b>			<b>13.98</b>	<b>0.00</b>	<b>0.0%</b>	<b>5.09%</b>
Debt Retirement Charge (DRC)	2,000	0.00700	14.00	2,000	0.00700	14.00	0.00	0.0%	5.09%
<b>Total Bill before Taxes</b>			<b>259.10</b>			<b>261.77</b>	<b>2.67</b>	<b>1.0%</b>	<b>95.24%</b>
<b>GST</b>	259.10	5%	<b>12.96</b>	261.77	5%	<b>13.09</b>	<b>0.13</b>	<b>1.0%</b>	<b>4.76%</b>
<b>Total Bill</b>			<b>272.06</b>			<b>274.86</b>	<b>2.80</b>	<b>1.0%</b>	<b>100.00%</b>

**Manager's Summary  
Appendix B  
Customer Impact**

**General Service Less Than 50 kW**

	kWh	1,000	2,000	7,500	15,000	20,000
Loss Factor Adjusted kWh		1,056	2,112	7,920	15,840	21,120
kW						
Load Factor						

**Energy**

Applied For Bill	\$ 62.95	\$ 132.64	\$ 515.97	\$ 1,038.69	\$ 1,387.17
Current Bill	\$ 62.95	\$ 132.64	\$ 515.97	\$ 1,038.69	\$ 1,387.17
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	39.1%	48.3%	57.2%	59.1%	59.6%

**Distribution**

Applied For Bill	\$ 66.75	\$ 82.35	\$ 168.14	\$ 285.14	\$ 363.13
Current Bill	\$ 65.30	\$ 79.90	\$ 160.20	\$ 269.70	\$ 342.70
\$ Impact	\$ 1.45	\$ 2.45	\$ 7.94	\$ 15.44	\$ 20.43
% Impact	2.2%	3.1%	5.0%	5.7%	6.0%
% of Total Bill	41.5%	30.0%	18.6%	16.2%	15.6%

**Retail Transmission**

Applied For Bill	\$ 9.40	\$ 18.80	\$ 70.48	\$ 140.98	\$ 187.96
Current Bill	\$ 9.29	\$ 18.58	\$ 69.70	\$ 139.39	\$ 185.86
\$ Impact	\$ 0.11	\$ 0.22	\$ 0.78	\$ 1.59	\$ 2.10
% Impact	1.2%	1.2%	1.1%	1.1%	1.1%
% of Total Bill	5.8%	6.8%	7.8%	8.0%	8.1%

**Delivery (Distribution and Retail Transmission)**

Applied For Bill	\$ 76.15	\$ 101.15	\$ 238.62	\$ 426.12	\$ 551.09
Current Bill	\$ 74.59	\$ 98.48	\$ 229.90	\$ 409.09	\$ 528.56
\$ Impact	\$ 1.56	\$ 2.67	\$ 8.72	\$ 17.03	\$ 22.53
% Impact	2.1%	2.7%	3.8%	4.2%	4.3%
% of Total Bill	47.3%	36.8%	26.5%	24.3%	23.7%

**Regulatory**

Applied For Bill	\$ 7.11	\$ 13.98	\$ 51.73	\$ 103.21	\$ 137.53
Current Bill	\$ 7.11	\$ 13.98	\$ 51.73	\$ 103.21	\$ 137.53
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	4.4%	5.1%	5.7%	5.9%	5.9%

**Debt Retirement Charge**

Applied For Bill	\$ 7.00	\$ 14.00	\$ 52.50	\$ 105.00	\$ 140.00
Current Bill	\$ 7.00	\$ 14.00	\$ 52.50	\$ 105.00	\$ 140.00
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	4.4%	5.1%	5.8%	6.0%	6.0%

**GST**

Applied For Bill	\$ 7.66	\$ 13.09	\$ 42.94	\$ 83.65	\$ 110.79
Current Bill	\$ 7.58	\$ 12.96	\$ 42.51	\$ 82.80	\$ 109.66
\$ Impact	\$ 0.08	\$ 0.13	\$ 0.43	\$ 0.85	\$ 1.13
% Impact	1.1%	1.0%	1.0%	1.0%	1.0%
% of Total Bill	4.8%	4.8%	4.8%	4.8%	4.8%

**Total Bill**

Applied For Bill	\$ 160.87	\$ 274.86	\$ 901.76	\$ 1,756.67	\$ 2,326.58
Current Bill	\$ 159.23	\$ 272.06	\$ 892.61	\$ 1,738.79	\$ 2,302.92
\$ Impact	\$ 1.64	\$ 2.80	\$ 9.15	\$ 17.88	\$ 23.66
% Impact	1.0%	1.0%	1.0%	1.0%	1.0%



Manager's Summary  
Appendix B  
Customer Impact

Name of LDC: Norfolk Power Distribution Inc.  
File Number: EB-2009-0238  
Effective Date: May 1, 2010

**General Service 50 to 4,999 kW**

Monthly Rates and Charges	Metric	Current Rate	Applied For Rate
Service Charge	\$	245.37	246.39
Service Charge Rate Adder(s)	\$	-	1.00
Service Charge Rate Rider(s)	\$	0.21	-
Distribution Volumetric Rate	\$/kW	3.9228	3.9236
Distribution Volumetric Rate Adder(s)	\$/kW	-	-
Low Voltage Volumetric Rate	\$/kW	-	0.2622
Distribution Volumetric Rate Rider(s)	\$/kW	0.0034	0.1698
Retail Transmission Rate – Network Service Rate	\$/kW	1.8322	1.8963
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.7109	1.6733
Retail Transmission Rate – Low Voltage Service Rate	\$/kW	-	-
Wholesale Market Service Rate	\$/kWh	0.0052	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013	0.0013
Standard Supply Service – Administration Charge (if applicable)	\$/kWh	0.25	0.25

<b>Consumption</b>	<b>995,000</b>	<b>kWh</b>	<b>2,480</b>	<b>kW</b>
<b>RPP Tier One</b>	<b>750</b>	<b>kWh</b>	<b>Load Factor</b>	<b>55.0%</b>

**Loss Factor 1.0560**

General Service 50 to 4,999 kW	Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Energy First Tier (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.0%	0.04%
Energy Second Tier (kWh)	1,049,970	0.0660	69,298.02	1,049,970	0.0660	69,298.02	0.00	0.0%	64.05%
<b>Sub-Total: Energy</b>			<b>69,340.77</b>			<b>69,340.77</b>	<b>0.00</b>	<b>0.0%</b>	<b>64.09%</b>
Service Charge	1	245.37	245.37	1	246.39	246.39	1.02	0.4%	0.23%
Service Charge Rate Adder(s)	1	0.00	0.00	1	1.00	1.00	1.00	0.0%	0.00%
Distribution Volumetric Rate	2,480	3.9228	9,728.54	2,480	3.9236	9,730.53	1.99	0.0%	8.99%
Distribution Volumetric Rate Adder(s)	2,480	0.0000	0.00	2,480	0.0000	0.00	0.00	0.0%	0.00%
Low Voltage Volumetric Rate	2,480	0.0000	0.00	2,480	0.2622	650.26	650.26	0.0%	0.60%
Distribution Volumetric Rate Rider(s)	2,480	-0.0034	-8.43	2,480	0.1698	421.10	429.53	(5095.3)%	0.39%
<b>Total: Distribution</b>			<b>9,965.27</b>			<b>11,049.28</b>	<b>1,084.01</b>	<b>10.9%</b>	<b>10.21%</b>
Retail Transmission Rate – Network Service Rate	2,480	1.8322	4,543.86	2,480	1.8963	4,702.82	158.96	3.5%	4.35%
Retail Transmission Rate – Line and Transformation Connection Service Rate	2,480	1.7109	4,243.03	2,480	1.6733	4,149.78	-93.25	(2.2)%	3.84%
Retail Transmission Rate – Low Voltage Volumetric Rate	2,480	0.0000	0.00	2,480	0.0000	0.00	0.00	0.0%	0.00%
<b>Total: Retail Transmission</b>			<b>8,786.89</b>			<b>8,852.60</b>	<b>65.71</b>	<b>0.7%</b>	<b>8.18%</b>
<b>Sub-Total: Delivery (Distribution and Retail Transmission)</b>			<b>18,752.16</b>			<b>19,901.88</b>	<b>1,149.72</b>	<b>6.1%</b>	<b>18.40%</b>
Wholesale Market Service Rate	1,050,720	0.0052	5,463.74	1,050,720	0.0052	5,463.74	0.00	0.0%	5.05%
Rural Rate Protection Charge	1,050,720	0.0013	1,365.94	1,050,720	0.0013	1,365.94	0.00	0.0%	1.26%
Standard Supply Service – Administration Charge (if applicable)	1	0.25	0.25	1	0.25	0.25	0.00	0.0%	0.00%
<b>Sub-Total: Regulatory</b>			<b>6,829.93</b>			<b>6,829.93</b>	<b>0.00</b>	<b>0.0%</b>	<b>6.31%</b>
Debt Retirement Charge (DRC)	995,000	0.00700	6,965.00	995,000	0.00700	6,965.00	0.00	0.0%	6.44%
<b>Total Bill before Taxes</b>			<b>101,887.86</b>			<b>103,037.58</b>	<b>1,149.72</b>	<b>1.1%</b>	<b>95.24%</b>
GST	101,887.86	5%	5,094.39	103,037.58	5%	5,151.88	57.49	1.1%	4.76%
<b>Total Bill</b>			<b>106,982.25</b>			<b>108,189.46</b>	<b>1,207.21</b>	<b>1.1%</b>	<b>100.00%</b>

**Manager's Summary  
Appendix B  
Customer Impact**

**General Service 50 to 4,999 kW**

	kWh	20,000	510,000	995,000	1,501,000	2,006,000
Loss Factor Adjusted kWh		21,120	538,560	1,050,720	1,585,056	2,118,336
	kW	50	1,270	2,480	3,740	5,000
Load Factor		54.8%	55.0%	55.0%	55.0%	55.0%

**Energy**

Applied For Bill	\$ 1,387.17	\$ 35,538.21	\$ 69,340.77	\$ 104,606.95	\$ 139,803.43
Current Bill	\$ 1,387.17	\$ 35,538.21	\$ 69,340.77	\$ 104,606.95	\$ 139,803.43
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	57.2%	64.0%	64.1%	64.1%	64.2%

**Distribution**

Applied For Bill	\$ 465.17	\$ 5,779.02	\$ 11,049.33	\$ 16,537.40	\$ 22,025.48
Current Bill	\$ 441.13	\$ 5,222.80	\$ 9,965.27	\$ 14,903.71	\$ 19,842.16
\$ Impact	\$ 24.04	\$ 556.22	\$ 1,084.06	\$ 1,633.69	\$ 2,183.32
% Impact	5.4%	10.6%	10.9%	11.0%	11.0%
% of Total Bill	19.2%	10.4%	10.2%	10.1%	10.1%

**Retail Transmission**

Applied For Bill	\$ 178.48	\$ 4,533.39	\$ 8,852.60	\$ 13,350.30	\$ 17,848.00
Current Bill	\$ 177.15	\$ 4,499.73	\$ 8,786.89	\$ 13,251.20	\$ 17,715.50
\$ Impact	\$ 1.33	\$ 33.66	\$ 65.71	\$ 99.10	\$ 132.50
% Impact	0.8%	0.7%	0.7%	0.7%	0.7%
% of Total Bill	7.4%	8.2%	8.2%	8.2%	8.2%

**Delivery (Distribution and Retail Transmission)**

Applied For Bill	\$ 643.65	\$ 10,312.41	\$ 19,901.93	\$ 29,887.70	\$ 39,873.48
Current Bill	\$ 618.49	\$ 9,722.74	\$ 18,752.37	\$ 28,155.12	\$ 37,557.87
\$ Impact	\$ 25.16	\$ 589.67	\$ 1,149.56	\$ 1,732.58	\$ 2,315.61
% Impact	4.1%	6.1%	6.1%	6.2%	6.2%
% of Total Bill	26.6%	18.6%	18.4%	18.3%	18.3%

**Regulatory**

Applied For Bill	\$ 137.53	\$ 3,500.89	\$ 6,829.93	\$ 10,303.11	\$ 13,769.44
Current Bill	\$ 137.53	\$ 3,500.89	\$ 6,829.93	\$ 10,303.11	\$ 13,769.44
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	5.7%	6.3%	6.3%	6.3%	6.3%

**Debt Retirement Charge**

Applied For Bill	\$ 140.00	\$ 3,570.00	\$ 6,965.00	\$ 10,507.00	\$ 14,042.00
Current Bill	\$ 140.00	\$ 3,570.00	\$ 6,965.00	\$ 10,507.00	\$ 14,042.00
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	5.8%	6.4%	6.4%	6.4%	6.4%

**GST**

Applied For Bill	\$ 115.42	\$ 2,646.08	\$ 5,151.88	\$ 7,765.24	\$ 10,374.42
Current Bill	\$ 114.16	\$ 2,616.59	\$ 5,094.40	\$ 7,678.61	\$ 10,258.64
\$ Impact	\$ 1.26	\$ 29.49	\$ 57.48	\$ 86.63	\$ 115.78
% Impact	1.1%	1.1%	1.1%	1.1%	1.1%
% of Total Bill	4.8%	4.8%	4.8%	4.8%	4.8%

**Total Bill**

Applied For Bill	\$ 2,423.77	\$ 55,567.59	\$ 108,189.51	\$ 163,070.00	\$ 217,862.77
Current Bill	\$ 2,397.35	\$ 54,948.43	\$ 106,982.47	\$ 161,250.79	\$ 215,431.38
\$ Impact	\$ 26.42	\$ 619.16	\$ 1,207.04	\$ 1,819.21	\$ 2,431.39
% Impact	1.1%	1.1%	1.1%	1.1%	1.1%

Manager's Summary  
Appendix B  
Customer Impact

Name of LDC: Norfolk Power Distribution Inc.  
File Number: EB-2009-0238  
Effective Date: May 1, 2010

**Street Lighting**

Monthly Rates and Charges	Metric	Current Rate	Applied For Rate
Service Charge	\$	1.85	1.87
Service Charge Rate Adder(s)	\$	-	-
Service Charge Rate Rider(s)	\$	-	-
Distribution Volumetric Rate	\$/kW	6.4893	7.3081
Distribution Volumetric Rate Adder(s)	\$/kW	-	-
Low Voltage Volumetric Rate	\$/kW	-	0.1999
Distribution Volumetric Rate Rider(s)	\$/kW	- 0.0050	0.1719
Retail Transmission Rate – Network Service Rate	\$/kW	1.3819	1.4303
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.3227	1.2936
Retail Transmission Rate – Low Voltage Service Rate	\$/kW	-	-
Wholesale Market Service Rate	\$/kWh	0.0052	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013	0.0013
Standard Supply Service – Administration Charge (if applicable)	\$/kWh	0.25	0.25

<b>Consumption</b>	<b>37</b>	<b>kWh</b>	<b>0.10</b>	<b>kW</b>
<b>RPP Tier One</b>	<b>750</b>	<b>kWh</b>	<b>Load Factor</b>	<b>50.7%</b>

**Loss Factor 1.0560**

Street Lighting	Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Energy First Tier (kWh)	40	0.0570	2.28	40	0.0570	2.28	0.00	0.0%	36.42%
Energy Second Tier (kWh)	0	0.0660	0.00	0	0.0660	0.00	0.00	0.0%	0.00%
<b>Sub-Total: Energy</b>			<b>2.28</b>			<b>2.28</b>	<b>0.00</b>	<b>0.0%</b>	<b>36.42%</b>
Service Charge	1	1.85	1.85	1	1.87	1.87	0.02	1.1%	29.87%
Service Charge Rate Adder(s)	1	0.00	0.00	1	0.00	0.00	0.00	0.0%	0.00%
Distribution Volumetric Rate	0.10	6.4893	0.65	0.10	7.3081	0.73	0.08	12.3%	11.66%
Distribution Volumetric Rate Adder(s)	0.10	0.0000	0.00	0.10	0.0000	0.00	0.00	0.0%	0.00%
Low Voltage Volumetric Rate	0.10	0.0000	0.00	0.10	0.1999	0.02	0.02	0.0%	0.32%
Distribution Volumetric Rate Rider(s)	0.10	-0.0050	0.00	0.10	0.1719	0.02	0.02	0.0%	0.32%
<b>Total: Distribution</b>			<b>2.50</b>			<b>2.64</b>	<b>0.14</b>	<b>5.6%</b>	<b>42.17%</b>
Retail Transmission Rate – Network Service Rate	0.10	1.3819	0.14	0.10	1.4303	0.14	0.00	0.0%	2.24%
Retail Transmission Rate – Line and Transformation Connection Service Rate	0.10	1.3227	0.13	0.10	1.2936	0.13	0.00	0.0%	2.08%
Retail Transmission Rate – Low Voltage Volumetric Rate	0.10	0.0000	0.00	0.10	0.0000	0.00	0.00	0.0%	0.00%
<b>Total: Retail Transmission</b>			<b>0.27</b>			<b>0.27</b>	<b>0.00</b>	<b>0.0%</b>	<b>4.31%</b>
<b>Sub-Total: Delivery (Distribution and Retail Transmission)</b>			<b>2.77</b>			<b>2.91</b>	<b>0.14</b>	<b>5.1%</b>	<b>46.49%</b>
Wholesale Market Service Rate	40	0.0052	0.21	40	0.0052	0.21	0.00	0.0%	3.35%
Rural Rate Protection Charge	40	0.0013	0.05	40	0.0013	0.05	0.00	0.0%	0.80%
Standard Supply Service – Administration Charge (if applicable)	1	0.25	0.25	1	0.25	0.25	0.00	0.0%	3.99%
<b>Sub-Total: Regulatory</b>			<b>0.51</b>			<b>0.51</b>	<b>0.00</b>	<b>0.0%</b>	<b>8.15%</b>
<b>Debt Retirement Charge (DRC)</b>	<b>37</b>	<b>0.00700</b>	<b>0.26</b>	<b>37</b>	<b>0.00700</b>	<b>0.26</b>	<b>0.00</b>	<b>0.0%</b>	<b>4.15%</b>
<b>Total Bill before Taxes</b>			<b>5.82</b>			<b>5.96</b>	<b>0.14</b>	<b>2.4%</b>	<b>95.21%</b>
<b>GST</b>	<b>5.82</b>	<b>5%</b>	<b>0.29</b>	<b>5.96</b>	<b>5%</b>	<b>0.30</b>	<b>0.01</b>	<b>3.4%</b>	<b>4.79%</b>
<b>Total Bill</b>			<b>6.11</b>			<b>6.26</b>	<b>0.15</b>	<b>2.5%</b>	<b>100.00%</b>

**Manager's Summary  
Appendix B  
Customer Impact**

**Street Lighting**

kWh	37	73	110	146	183
Loss Factor Adjusted kWh	40	78	117	155	194
kW	0.10	0.20	0.30	0.40	0.50
Load Factor	50.7%	50.0%	50.3%	50.0%	50.2%

**Energy**

Applied For Bill	\$ 2.28	\$ 4.45	\$ 6.67	\$ 8.84	\$ 11.06
Current Bill	\$ 2.28	\$ 4.45	\$ 6.67	\$ 8.84	\$ 11.06
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	36.4%	43.8%	47.3%	49.1%	50.3%

**Distribution**

Applied For Bill	\$ 2.64	\$ 3.40	\$ 4.17	\$ 4.94	\$ 5.71
Current Bill	\$ 2.50	\$ 3.15	\$ 3.80	\$ 4.45	\$ 5.09
\$ Impact	\$ 0.14	\$ 0.25	\$ 0.37	\$ 0.49	\$ 0.62
% Impact	5.6%	7.9%	9.7%	11.0%	12.2%
% of Total Bill	42.2%	33.5%	29.6%	27.4%	26.0%

**Retail Transmission**

Applied For Bill	\$ 0.27	\$ 0.55	\$ 0.82	\$ 1.09	\$ 1.37
Current Bill	\$ 0.27	\$ 0.54	\$ 0.81	\$ 1.08	\$ 1.35
\$ Impact	\$ -	\$ 0.01	\$ 0.01	\$ 0.01	\$ 0.02
% Impact	0.0%	1.9%	1.2%	0.9%	1.5%
% of Total Bill	4.3%	5.4%	5.8%	6.1%	6.2%

**Delivery (Distribution and Retail Transmission)**

Applied For Bill	\$ 2.91	\$ 3.95	\$ 4.99	\$ 6.03	\$ 7.08
Current Bill	\$ 2.77	\$ 3.69	\$ 4.61	\$ 5.53	\$ 6.44
\$ Impact	\$ 0.14	\$ 0.26	\$ 0.38	\$ 0.50	\$ 0.64
% Impact	5.1%	7.0%	8.2%	9.0%	9.9%
% of Total Bill	46.5%	38.9%	35.4%	33.5%	32.2%

**Regulatory**

Applied For Bill	\$ 0.51	\$ 0.76	\$ 1.01	\$ 1.26	\$ 1.51
Current Bill	\$ 0.51	\$ 0.76	\$ 1.01	\$ 1.26	\$ 1.51
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	8.1%	7.5%	7.2%	7.0%	6.9%

**Debt Retirement Charge**

Applied For Bill	\$ 0.26	\$ 0.51	\$ 0.77	\$ 1.02	\$ 1.28
Current Bill	\$ 0.26	\$ 0.51	\$ 0.77	\$ 1.02	\$ 1.28
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	4.2%	5.0%	5.5%	5.7%	5.8%

**GST**

Applied For Bill	\$ 0.30	\$ 0.48	\$ 0.67	\$ 0.86	\$ 1.05
Current Bill	\$ 0.29	\$ 0.47	\$ 0.65	\$ 0.83	\$ 1.01
\$ Impact	\$ 0.01	\$ 0.01	\$ 0.02	\$ 0.03	\$ 0.04
% Impact	3.4%	2.1%	3.1%	3.6%	4.0%
% of Total Bill	4.8%	4.7%	4.7%	4.8%	4.8%

**Total Bill**

Applied For Bill	\$ 6.26	\$ 10.15	\$ 14.11	\$ 18.01	\$ 21.98
Current Bill	\$ 6.11	\$ 9.88	\$ 13.71	\$ 17.48	\$ 21.30
\$ Impact	\$ 0.15	\$ 0.27	\$ 0.40	\$ 0.53	\$ 0.68
% Impact	2.5%	2.7%	2.9%	3.0%	3.2%

**Manager's Summary  
Appendix B  
Customer Impact**

**Name of LDC:** Norfolk Power Distribution Inc.  
**File Number:** EB-2009-0238  
**Effective Date:** May 1, 2010

**Sentinel Lighting**

Monthly Rates and Charges	Metric	Current Rate	Applied For Rate
Service Charge	\$	6.15	6.20
Service Charge Rate Adder(s)	\$	-	-
Service Charge Rate Rider(s)	\$	-	-
Distribution Volumetric Rate	\$/kW	15.4239	18.7510
Distribution Volumetric Rate Adder(s)	\$/kW	-	-
Low Voltage Volumetric Rate	\$/kW	-	0.2024
Distribution Volumetric Rate Rider(s)	\$/kW	0.0109	0.2217
Retail Transmission Rate – Network Service Rate	\$/kW	1.3888	1.4374
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kW	1.3503	1.3206
Retail Transmission Rate – Low Voltage Service Rate	\$/kW	-	-
Wholesale Market Service Rate	\$/kWh	0.0052	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013	0.0013
Standard Supply Service – Administration Charge (if applicable)	\$/kWh	0.25	0.25

<b>Consumption</b>	<b>180</b>	<b>kWh</b>	<b>0.50</b>	<b>kW</b>
<b>RPP Tier One</b>	<b>750</b>	<b>kWh</b>	<b>Load Factor</b>	<b>49.3%</b>

**Loss Factor 1.0560**

Sentinel Lighting	Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Energy First Tier (kWh)	191	0.0570	10.89	191	0.0570	10.89	0.00	0.0%	33.66%
Energy Second Tier (kWh)	0	0.0660	0.00	0	0.0660	0.00	0.00	0.0%	0.00%
<b>Sub-Total: Energy</b>			<b>10.89</b>			<b>10.89</b>	<b>0.00</b>	<b>0.0%</b>	<b>33.66%</b>
Service Charge	1	6.15	6.15	1	6.20	6.20	0.05	0.8%	19.17%
Service Charge Rate Adder(s)	1	0.00	0.00	1	0.00	0.00	0.00	0.0%	0.00%
Distribution Volumetric Rate	0.50	15.4239	7.71	0.50	18.7510	9.38	1.67	21.7%	29.00%
Distribution Volumetric Rate Adder(s)	0.50	0.0000	0.00	0.50	0.0000	0.00	0.00	0.0%	0.00%
Low Voltage Volumetric Rate	0.50	0.0000	0.00	0.50	0.2024	0.10	0.10	0.0%	0.31%
Distribution Volumetric Rate Rider(s)	0.50	-0.0109	-0.01	0.50	0.2217	0.11	0.12	(1200.0)%	0.34%
<b>Total: Distribution</b>			<b>13.85</b>			<b>15.79</b>	<b>1.94</b>	<b>14.0%</b>	<b>48.81%</b>
Retail Transmission Rate – Network Service Rate	0.50	1.3888	0.69	0.50	1.4374	0.72	0.03	4.3%	2.23%
Retail Transmission Rate – Line and Transformation Connection Service Rate	0.50	1.3503	0.68	0.50	1.3206	0.66	-0.02	(2.9)%	2.04%
Retail Transmission Rate – Low Voltage Volumetric Rate	0.50	0.0000	0.00	0.50	0.0000	0.00	0.00	0.0%	0.00%
<b>Total: Retail Transmission</b>			<b>1.37</b>			<b>1.38</b>	<b>0.01</b>	<b>0.7%</b>	<b>4.27%</b>
<b>Sub-Total: Delivery (Distribution and Retail Transmission)</b>			<b>15.22</b>			<b>17.17</b>	<b>1.95</b>	<b>12.8%</b>	<b>53.08%</b>
Wholesale Market Service Rate	191	0.0052	0.99	191	0.0052	0.99	0.00	0.0%	3.06%
Rural Rate Protection Charge	191	0.0013	0.25	191	0.0013	0.25	0.00	0.0%	0.77%
Standard Supply Service – Administration Charge (if applicable)	1	0.25	0.25	1	0.25	0.25	0.00	0.0%	0.77%
<b>Sub-Total: Regulatory</b>			<b>1.49</b>			<b>1.49</b>	<b>0.00</b>	<b>0.0%</b>	<b>4.61%</b>
Debt Retirement Charge (DRC)	180	0.00700	1.26	180	0.00700	1.26	0.00	0.0%	3.89%
<b>Total Bill before Taxes</b>			<b>28.86</b>			<b>30.81</b>	<b>1.95</b>	<b>6.8%</b>	<b>95.24%</b>
GST	28.86	5%	1.44	30.81	5%	1.54	0.10	6.9%	4.76%
<b>Total Bill</b>			<b>30.30</b>			<b>32.35</b>	<b>2.05</b>	<b>6.8%</b>	<b>100.00%</b>

**Manager's Summary  
Appendix B  
Customer Impact**

**Sentinel Lighting**

	kWh	70	130	180	270	360
Loss Factor Adjusted kWh		74	138	191	286	381
	kW	0.20	0.35	0.50	0.75	1.00
Load Factor		48.0%	50.9%	49.3%	49.3%	49.3%

**Energy**

Applied For Bill	\$ 4.22	\$ 7.87	\$ 10.89	\$ 16.30	\$ 21.72
Current Bill	\$ 4.22	\$ 7.87	\$ 10.89	\$ 16.30	\$ 21.72
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	25.1%	31.5%	33.7%	36.1%	37.5%

**Distribution**

Applied For Bill	\$ 10.03	\$ 12.91	\$ 15.79	\$ 20.58	\$ 25.37
Current Bill	\$ 9.23	\$ 11.55	\$ 13.85	\$ 17.71	\$ 21.56
\$ Impact	\$ 0.80	\$ 1.36	\$ 1.94	\$ 2.87	\$ 3.81
% Impact	8.7%	11.8%	14.0%	16.2%	17.7%
% of Total Bill	59.6%	51.7%	48.8%	45.6%	43.8%

**Retail Transmission**

Applied For Bill	\$ 0.55	\$ 0.96	\$ 1.38	\$ 2.07	\$ 2.76
Current Bill	\$ 0.55	\$ 0.96	\$ 1.37	\$ 2.05	\$ 2.74
\$ Impact	\$ -	\$ -	\$ 0.01	\$ 0.02	\$ 0.02
% Impact	0.0%	0.0%	0.7%	1.0%	0.7%
% of Total Bill	3.3%	3.8%	4.3%	4.6%	4.8%

**Delivery (Distribution and Retail Transmission)**

Applied For Bill	\$ 10.58	\$ 13.87	\$ 17.17	\$ 22.65	\$ 28.13
Current Bill	\$ 9.78	\$ 12.51	\$ 15.22	\$ 19.76	\$ 24.30
\$ Impact	\$ 0.80	\$ 1.36	\$ 1.95	\$ 2.89	\$ 3.83
% Impact	8.2%	10.9%	12.8%	14.6%	15.8%
% of Total Bill	62.9%	55.5%	53.1%	50.2%	48.6%

**Regulatory**

Applied For Bill	\$ 0.73	\$ 1.15	\$ 1.49	\$ 2.11	\$ 2.73
Current Bill	\$ 0.73	\$ 1.15	\$ 1.49	\$ 2.11	\$ 2.73
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	4.3%	4.6%	4.6%	4.7%	4.7%

**Debt Retirement Charge**

Applied For Bill	\$ 0.49	\$ 0.91	\$ 1.26	\$ 1.89	\$ 2.52
Current Bill	\$ 0.49	\$ 0.91	\$ 1.26	\$ 1.89	\$ 2.52
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	2.9%	3.6%	3.9%	4.2%	4.4%

**GST**

Applied For Bill	\$ 0.80	\$ 1.19	\$ 1.54	\$ 2.15	\$ 2.76
Current Bill	\$ 0.76	\$ 1.12	\$ 1.44	\$ 2.00	\$ 2.56
\$ Impact	\$ 0.04	\$ 0.07	\$ 0.10	\$ 0.15	\$ 0.20
% Impact	5.3%	6.2%	6.9%	7.5%	7.8%
% of Total Bill	4.8%	4.8%	4.8%	4.8%	4.8%

**Total Bill**

Applied For Bill	\$ 16.82	\$ 24.99	\$ 32.35	\$ 45.10	\$ 57.86
Current Bill	\$ 15.98	\$ 23.56	\$ 30.30	\$ 42.06	\$ 53.83
\$ Impact	\$ 0.84	\$ 1.43	\$ 2.05	\$ 3.04	\$ 4.03
% Impact	5.3%	6.1%	6.8%	7.2%	7.5%

**Manager's Summary  
Appendix B  
Customer Impact**

**Name of LDC:** Norfolk Power Distribution Inc.  
**File Number:** EB-2009-0238  
**Effective Date:** May 1, 2010

**Unmetered Scattered Load**

Monthly Rates and Charges	Metric	Current Rate	Applied For Rate
Service Charge	\$	26.55	26.77
Service Charge Rate Adder(s)	\$	-	-
Service Charge Rate Rider(s)	\$	0.02	-
Distribution Volumetric Rate	\$/kWh	0.0156	0.0156
Distribution Volumetric Rate Adder(s)	\$/kWh	-	-
Low Voltage Volumetric Rate	\$/kWh	-	0.0006
Distribution Volumetric Rate Rider(s)	\$/kWh	-	0.0007
Retail Transmission Rate – Network Service Rate	\$/kWh	0.0045	0.0047
Retail Transmission Rate – Line and Transformation Connection Service Rate	\$/kWh	0.0043	0.0042
Retail Transmission Rate – Low Voltage Service Rate	\$/kWh	-	-
Wholesale Market Service Rate	\$/kWh	0.0052	0.0052
Rural Rate Protection Charge	\$/kWh	0.0013	0.0013
Standard Supply Service – Administration Charge (if applicable)	\$/kWh	0.25	0.25

<b>Consumption</b>	<b>2,000</b>	<b>kWh</b>	<b>-</b>	<b>kW</b>
<b>RPP Tier One</b>	<b>750</b>	<b>kWh</b>	<b>Load Factor</b>	

**Loss Factor 1.0560**

Unmetered Scattered Load	Volume	RATE \$	CHARGE \$	Volume	RATE \$	CHARGE \$	\$	%	% of Total Bill
Energy First Tier (kWh)	750	0.0570	42.75	750	0.0570	42.75	0.00	0.0%	16.96%
Energy Second Tier (kWh)	1,362	0.0660	89.89	1,362	0.0660	89.89	0.00	0.0%	35.67%
<b>Sub-Total: Energy</b>			<b>132.64</b>			<b>132.64</b>	<b>0.00</b>	<b>0.0%</b>	<b>52.64%</b>
Service Charge	1	26.55	26.55	1	26.77	26.77	0.22	0.8%	10.62%
Service Charge Rate Adder(s)	1	0.00	0.00	1	0.00	0.00	0.00	0.0%	0.00%
Distribution Volumetric Rate	2,000	0.0156	31.20	2,000	0.0156	31.20	0.00	0.0%	12.38%
Distribution Volumetric Rate Adder(s)	2,000	0.0000	0.00	2,000	0.0000	0.00	0.00	0.0%	0.00%
Low Voltage Volumetric Rate	2,000	0.0000	0.00	2,000	0.0006	1.20	1.20	0.0%	0.48%
Distribution Volumetric Rate Rider(s)	2,000	0.0000	0.00	2,000	0.0007	1.40	1.40	0.0%	0.56%
<b>Total: Distribution</b>			<b>57.73</b>			<b>60.57</b>	<b>2.84</b>	<b>4.9%</b>	<b>24.04%</b>
Retail Transmission Rate – Network Service Rate	2,112	0.0045	9.50	2,112	0.0047	9.93	0.43	4.5%	3.94%
Retail Transmission Rate – Line and Transformation Connection Service Rate	2,112	0.0043	9.08	2,112	0.0042	8.87	-0.21	(2.3)%	3.52%
Retail Transmission Rate – Low Voltage Volumetric Rate	2,112	0.0000	0.00	2,112	0.0000	0.00	0.00	0.0%	0.00%
<b>Total: Retail Transmission</b>			<b>18.58</b>			<b>18.80</b>	<b>0.22</b>	<b>1.2%</b>	<b>7.46%</b>
<b>Sub-Total: Delivery (Distribution and Retail Transmission)</b>			<b>76.31</b>			<b>79.37</b>	<b>3.06</b>	<b>4.0%</b>	<b>31.50%</b>
Wholesale Market Service Rate	2,112	0.0052	10.98	2,112	0.0052	10.98	0.00	0.0%	4.36%
Rural Rate Protection Charge	2,112	0.0013	2.75	2,112	0.0013	2.75	0.00	0.0%	1.09%
Standard Supply Service – Administration Charge (if applicable)	1	0.25	0.25	1	0.25	0.25	0.00	0.0%	0.10%
<b>Sub-Total: Regulatory</b>			<b>13.98</b>			<b>13.98</b>	<b>0.00</b>	<b>0.0%</b>	<b>5.55%</b>
Debt Retirement Charge (DRC)	2,000	0.00700	14.00	2,000	0.00700	14.00	0.00	0.0%	5.56%
<b>Total Bill before Taxes</b>			<b>236.93</b>			<b>239.99</b>	<b>3.06</b>	<b>1.3%</b>	<b>95.24%</b>
<b>GST</b>	236.93	5%	<b>11.85</b>	239.99	5%	<b>12.00</b>	<b>0.15</b>	<b>1.3%</b>	<b>4.76%</b>
<b>Total Bill</b>			<b>248.78</b>			<b>251.99</b>	<b>3.21</b>	<b>1.3%</b>	<b>100.00%</b>

**Manager's Summary  
Appendix B  
Customer Impact**

**Unmetered Scattered Load**

	kWh	500	2,000	7,500	15,000	20,000
Loss Factor Adjusted kWh		528	2,112	7,920	15,840	21,120
kW						
Load Factor						

**Energy**

Applied For Bill	\$ 30.10	\$ 132.64	\$ 515.97	\$ 1,038.69	\$ 1,387.17
Current Bill	\$ 30.10	\$ 132.64	\$ 515.97	\$ 1,038.69	\$ 1,387.17
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	37.1%	52.6%	58.2%	59.3%	59.6%

**Distribution**

Applied For Bill	\$ 35.22	\$ 60.59	\$ 153.58	\$ 280.39	\$ 364.93
Current Bill	\$ 34.33	\$ 57.73	\$ 143.53	\$ 260.53	\$ 338.53
\$ Impact	\$ 0.89	\$ 2.86	\$ 10.05	\$ 19.86	\$ 26.40
% Impact	2.6%	5.0%	7.0%	7.6%	7.8%
% of Total Bill	43.4%	24.0%	17.3%	16.0%	15.7%

**Retail Transmission**

Applied For Bill	\$ 4.70	\$ 18.80	\$ 70.48	\$ 140.98	\$ 187.96
Current Bill	\$ 4.65	\$ 18.58	\$ 69.70	\$ 139.39	\$ 185.86
\$ Impact	\$ 0.05	\$ 0.22	\$ 0.78	\$ 1.59	\$ 2.10
% Impact	1.1%	1.2%	1.1%	1.1%	1.1%
% of Total Bill	5.8%	7.5%	8.0%	8.0%	8.1%

**Delivery (Distribution and Retail Transmission)**

Applied For Bill	\$ 39.92	\$ 79.39	\$ 224.06	\$ 421.37	\$ 552.89
Current Bill	\$ 38.98	\$ 76.31	\$ 213.23	\$ 399.92	\$ 524.39
\$ Impact	\$ 0.94	\$ 3.08	\$ 10.83	\$ 21.45	\$ 28.50
% Impact	2.4%	4.0%	5.1%	5.4%	5.4%
% of Total Bill	49.2%	31.5%	25.3%	24.1%	23.7%

**Regulatory**

Applied For Bill	\$ 3.69	\$ 13.98	\$ 51.73	\$ 103.21	\$ 137.53
Current Bill	\$ 3.69	\$ 13.98	\$ 51.73	\$ 103.21	\$ 137.53
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	4.6%	5.5%	5.8%	5.9%	5.9%

**Debt Retirement Charge**

Applied For Bill	\$ 3.50	\$ 14.00	\$ 52.50	\$ 105.00	\$ 140.00
Current Bill	\$ 3.50	\$ 14.00	\$ 52.50	\$ 105.00	\$ 140.00
\$ Impact	\$ -	\$ -	\$ -	\$ -	\$ -
% Impact	0.0%	0.0%	0.0%	0.0%	0.0%
% of Total Bill	4.3%	5.6%	5.9%	6.0%	6.0%

**GST**

Applied For Bill	\$ 3.86	\$ 12.00	\$ 42.21	\$ 83.41	\$ 110.88
Current Bill	\$ 3.81	\$ 11.85	\$ 41.67	\$ 82.34	\$ 109.45
\$ Impact	\$ 0.05	\$ 0.15	\$ 0.54	\$ 1.07	\$ 1.43
% Impact	1.3%	1.3%	1.3%	1.3%	1.3%
% of Total Bill	4.8%	4.8%	4.8%	4.8%	4.8%

**Total Bill**

Applied For Bill	\$ 81.07	\$ 252.01	\$ 886.47	\$ 1,751.68	\$ 2,328.47
Current Bill	\$ 80.08	\$ 248.78	\$ 875.10	\$ 1,729.16	\$ 2,298.54
\$ Impact	\$ 0.99	\$ 3.23	\$ 11.37	\$ 22.52	\$ 29.93
% Impact	1.2%	1.3%	1.3%	1.3%	1.3%



**Exhibit 1: LRAM and SSM Application**

**LOST REVENUE ADJUSTMENT MECHANISM AND SHARED SAVINGS MECHANISM**

**Summary**

Norfolk Power Distribution Inc (NPDI) herewith submits an application to the Ontario Energy Board (OEB) for the approval and recovery of historical Lost Revenue Mechanism (LRAM) and Shared Savings Mechanism (SSM) amounts related to new and ongoing Conservation and Demand Management (CDM) activities in 2006, 2007 and 2008. It is requested these amounts be recovered through a rate rider over a one year period, commencing May 1 2010. Total amount for recovery is \$210,957, including carrying charges of \$9,600. Amounts for SSM and LRAM recovery are summarized in Table 1.

**Table 1: Summary of Requested LRAM and SSM Amounts**

Customer Class	LRAM	Carrying Charges	SSM	Total
Residential	\$145,235	\$8,769	\$17,255	\$171,259
GS < 50 kW	1,293	78	374	1,745
GS > 50 kW	12,467	753	24,734	37,954
Total	\$158,995	\$9,600	\$42,362	\$210,957

**SSM Amounts**

All CDM programs for which SSM amounts are sought were undertaken in connection with NPDI's Third Tranche CMD spending obligations in 2006 and 2007. No SSM amount is sought in relation to activities of other parties.

The total SSM sought for recovery is \$42,362, which is based on the results of the Total Resource Cost test (TRC test) which NPDI used to evaluate the results of their CDM programs. The TRC test examines the benefits of a program (avoided electricity costs) with program costs which include the LDC's costs and the participant's costs over the life of the program. The stream of future net benefits is evaluated using net present value (NPV). In accordance with CDM guidelines NPDI is requesting recovery of 5% of the NPV of the CDM programs.

Table 2 on the following page provides the SSM amounts by program and customer rate class.

**Table 2: SSM Amounts by Program and Rate Class**

<b>Class</b> Program	<b>Total Costs</b> \$	<b>Total</b> <b>Benefits</b> \$	<b>Net</b> <b>Benefits</b> \$ NPV	<b>Benefits/</b> <b>Cost Ratio</b>	<b>SSM</b> <b>Amount</b>
<b><u>RESIDENTIAL</u></b>					
Cold Water Wash	\$1,385	\$2,741	\$1,356	1.98	\$68
Energy Star Windows	9,899	8,262	-1,637	0.83	-82
Lighten Your Electricity Bill	19,487	74,807	55,320	3.84	2,766
CFL Education & Giveaway	7,535	21,302	13,767	2.83	688
LED Seasonal Light Exchange Program	20,941	199,057	178,115	9.51	8,906
Water Heater Replacement	18,183	24,385	6,202	1.34	310
Applicant Rebate Program	39,128	46,741	7,613	1.19	381
Environmental Action Kits	6,020	225,632	219,612	37.48	10,981
Conserver Family	28,869		-28,869		-1,443
Residential Customer Education Program	106,386		-106,386		-5,319
<b><u>GENERAL SERVICE &lt; 50kW</u></b>					
Norfolk Power Facility	25,538	33,012	7,474	1.29	374
Lighting Retrofit Program					
<b><u>GENERAL SERVICE &gt; 50kW</u></b>					
Energy Audits for Major Customers	79,498	574,168	494,670	7.22	24,734
<b>Total</b>	<b>\$362,868</b>	<b>\$1,210,107</b>	<b>\$847,238</b>		<b>\$42,362</b>

## **LRAM Amounts**

The LRAM adjusts for volumetric variances between actual CDM results and the corresponding quantities used in rate setting. The requested LRAM recovery amount is derived from savings composed of:

1. Third Tranche CDM programs implemented in 2005, 2006, and 2007.
2. Ontario Power Authority (OPA) CDM programs implemented in 2007 and 2008.

None of the load reductions produced were factored in to the load forecast underpinning 2006, 2007 or 2008 rates. Therefore, NPDI proposes recovery of LRAM amounts related to the entire load reductions, net of free rider quantities. The calculation of the load reduction is based on the energy and demand savings and the lifespan of the technology by rate class.

The total LRAM amount sought for recovery is \$168,596, of which \$28,659 is related to Third Tranche programs, \$130,336 is a result of OPA programs and \$9,600 is carrying charges. A summary of CDM load impacts by program and customer class is listed in Appendix 1. The foregone revenue is calculated on the load reductions using the applicable rates from each rate class. The foregone revenue by program and rate class is available in Appendix 2.

Carrying charges have been calculated using OEB approved rates. As monthly balances are not available for the purpose of carrying charge calculation, annual amounts have been assumed to be earned evenly throughout the year. Appendix 3 outlines the monthly carrying charge calculations until May 1 2010.

## **Verification and Evaluation of Results**

NPDI engaged EnerSpectrum Group to review its CDM program results and TRC calculations and aid in the calculation of recovery amounts in light of OEB guidelines. EnerSpectrum reported that the values provided in this application are considered valid. The full report prepared by EnerSpectrum is available in Appendix 4.

## Recovery

NPDI requests recovery of the LRAM and SSM amounts by way of volumetric rate riders over a 12 month period, effective May 1 2010, with the foregone revenue from each customer class allocated to that class for recovery. Table 1 sets out the corresponding amounts by class, as well as the corresponding rate rider based on 2008 actual volume.

Impact on customer bills has been included in the OEB 2010 IRM3 Rate Generator Model and summarized in the applicant's Manager's Summary.

**Table 3: LRAM / SSM Amounts and Rate Riders by Class**

Customer Class	LRAM	LRAM Carrying Charges	SSM	Total	Unit	2008 Billed kWh / kW	Rate Rider \$ / unit (kWh or kW)
Residential	\$145,235	\$8,769	\$17,255	\$171,259	kWh	140,646,761	0.001218
GS < 50 kW	1,293	78	374	1,745	kWh	63,223,253	0.000028
GS > 50 kW	12,467	753	24,734	37,954	kW	361,081	0.105110
Total	\$158,995	\$9,600	\$42,362	\$210,957			

Appendix 1  
 CDM Load Impacts by Program and Rate Class

Class	Year Implemented	NET 2006		GROSS 2006		NET 2007		GROSS 2007		NET 2008		GROSS 2008		NET		GROSS		
		kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW	kWh	kW	Total kWh	Total kW	Total kWh	Total kW	
<b>Third Tranche</b>																		
<b>RESIDENTIAL</b>																		
Energy Star Window Program	2005	5,543	5.00	7,919	7.14	5,543	5.00	7,919	7.14	5,543	5.00	7,919	7.14	16,629	15.00	23,756	21.43	
Water Heater Replacement Program	2007									27,137	3.00	38,767	4.29	27,137	3.00	38,767	4.29	
Lighten Your Electricity Bill	2005	124,462	10.05	136,257	11.17	124,462	10.05	136,257	11.17	124,462	10.05	136,257	11.17	373,385	30.16	408,771	33.52	
Cold Water Wash	2005	42,987	1.44	57,316	1.91									42,987	1.44	57,316	1.91	
CFL Education & Giveaway	2006					35,692	0.83	39,658	0.92	35,692	0.83	39,658	0.92	71,384	1.65	79,315	1.84	
LED Seasonal Light Exchange Program	2006, 2007					197,648	0.00	208,050	85.53	468,398	0.00	493,050	0.00	666,045	0.00	701,100	85.53	
Enviornmental Action Kits	2007, 2008									311,040	7.20	345,600	8.00	311,040	7.20	345,600	8.00	
Energy Star Appliance Rebate Program	2007, 2008									2,896	0.12	3,218	0.13	2,896	0.12	3,218	0.13	
<b>GENERAL SERVICE &lt;50KW</b>																		
Norfolk Power Facility Lighting Retrofit Program	2007									132,631	17.45	165,789	21.81	132,631	17.45	165,789	21.81	
<b>GENERAL SERVICE &gt;50KW</b>																		
Energy Audits for Major Customers	2005 - 2006	830,647	147.00	1,186,639	210.00	1,709,320	409.00	2,441,886	584.29	1,709,320	409.00	2,441,886	584.29	4,249,287	965.00	6,070,410	1378.57	
<b>OPA Programs</b>																		
<b>RESIDENTIAL</b>																		
Every Kilowatt Counts (spring)	2006	475,095	3.10	527,884	3.44	475,095	3.10	527,884	3.44	475,095	3.10	527,884	3.44	1,425,286	9.29	1,583,651	10.32	
Cool Savings Rebate Program	2006, 2007, 2008	36,211	37.09	40,235	41.21	140,922	105.83	239,555	179.02	202,884	155.87	347,513	266.29	380,018	298.79	627,303	486.51	
Secondary Fridge Retirement Pilot	2006	19,450	4.41	21,611	4.90	19,450	4.41	21,611	4.90	19,450	4.41	21,611	4.90	58,350	13.23	64,833	14.70	
Every Kilowatt Counts (fall)	2006	770,749	11.60	856,387	12.89	770,749	11.60	856,387	12.89	770,749	11.60	856,387	12.89	2,312,246	34.79	2,569,162	38.66	
Great Refrigerator Roundup	2007, 2008					75,039	8.06	186,730	19.85	205,432	20.79	471,553	47.66	280,471	28.85	658,283	67.51	
Aboriginal – Pilot	2007					0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
Every Kilowatt Counts peaksaver®	2007, 2008					457,961	17.58	649,141	25.46	452,407	15.93	639,044	22.46	910,368	33.52	1,288,185	47.92	
Summer Savings	2007					0	1.70	0	1.89	0	91.12	0	101.24	0	92.82	0	103.13	
Affordable Housing – Pilot	2007					630,583	350.32	5,254,862	2919.37	630,583	350.32	5,254,862	2919.37	1,261,167	700.65	10,509,724	5838.74	
Social Housing – Pilot	2007					0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
Energy Efficiency Assistance for Houses – Pilot	2007					41,273	4.86	41,273	4.86	41,273	4.86	41,273	4.86	82,546	9.71	82,546	9.71	
Aboriginal	2008					0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
Summer Sweepstakes	2008									0	0.61	0	1.74	0	0.61	0	1.74	
Every Kilowatt Counts Power Savings Event	2008									154,949	10.36	216,776	20.95	154,949	10.36	216,776	20.95	
<b>GENERAL SERVICE &lt;50KW</b>																		
Toronto Comprehensive	2007, 2008					0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
High Performance New Construction	2008									824	0.36	1,177	0.52	824	0.36	1,177	0.52	
Power Savings Blitz	2008									0	0.00	0	0.00	0	0.00	0	0.00	
Chiller Plant Re-Commissioning	2008									0	0.00	0	0.00	0	0.00	0	0.00	
<b>GENERAL SERVICE &gt;50KW</b>																		
Demand Response 1	2006, 2007, 2008	0	552.73	0	807.83	0	910.78	0	910.78	0	910.87	0	910.91	0	2374.38	0	2629.52	
Electricity Retrofit Incentive Program	2007, 2008					68,875	24.79	76,527	27.55	69,290	24.98	77,120	27.81	138,164	49.77	153,647	55.36	
Other Demand Response	2007, 2008					0	75.76	0	75.76	0	83.82	0	83.82	0	159.57	0	159.57	
Demand Response 3	2008									0	229.10	0	229.10	0	229.10	0	229.10	
<b>UNMETERED SCATTERED LOAD</b>																		
Renewable Energy Standard Offer	2007, 2008					0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	
LDC Custom	2008									0	0.00	0	0.00	0	0.00	0	0.00	
Other Customer Based Generation	2008									0	0.00	0	0.00	0	0.00	0	0.00	
		2,305,144	772	2,834,247	1,100	4,752,611	1,944	10,687,740	4,875	5,840,054	2,371	12,127,341	5,296	12,897,808	5,087	25,649,329	11,271	

Appendix 2  
Foregone Revenue by Program and Rate Class

**Table 3: Foregone Revenue by Class and Program**

Class Program	Year Implemented	2005					2006					2007					2008					Total Revenue
		Rate per Unit	Load Unit	kWh or kW	Rate per Unit	Revenue	Load Unit	kWh or kW	Rate per Unit	Revenue	Load Unit	kWh or kW	Rate per Unit	Revenue	Load Unit	kWh or kW	Rate per Unit	Revenue				
<b>Third Tranche</b>																						
<b>RESIDENTIAL</b>																						
Energy Star Window Program	2005	0.0180	5,543	kWh	0.0167	\$94.37	5,543	kWh	0.0169	\$93.31	5,543	kWh	0.0198	\$104.39	\$292.07							
Water Heater Replacement Program	2007	0.0180								27,137	kWh	0.0198	\$358.21	\$358.21								
Lighten Your Electricity Bill	2005	0.0180	124,462	kWh	0.0167	\$2,118.96	124,462	kWh	0.0169	\$2,095.10	124,462	kWh	0.0198	\$2,344.03	\$6,558.09							
Cold Water Wash	2005	0.0180	42,987	kWh	0.0167	\$731.85	0	kWh	0.0169	\$0.00	0	kWh	0.0198	\$0.00	\$731.85							
CFL Education & Giveaway	2006	0.0180					35,692	kWh	0.0169	\$402.13	35,692	kWh	0.0198	\$672.20	\$1,074.32							
LED Seasonal Light Exchange Program	2006, 2007	0.0180					197,648	kWh	0.0169	\$2,226.83	468,398	kWh	0.0198	\$8,821.49	\$11,048.31							
Enviornmental Action Kits	2007, 2008	0.0180								311,040	kWh	0.0198	\$4,105.73	\$4,105.73								
Energy Star Appliance Rebate Program	2007, 2008	0.0180								2,896	kWh	0.0198	\$38.23	\$38.23								
																			<b>\$24,206.81</b>			
<b>GENERAL SERVICE &lt;50KW</b>																						
Norfolk Power Facility Lighting Retrofit Program	2007	0.0134									132,631	kWh	0.0145	\$1,282.10	\$1,282.10							
<b>GENERAL SERVICE &gt;50KW</b>																						
Energy Audits for Major Customers	2005 - 2006	3.7577	147.00	kW	2.9906	\$467.81	409.00	kW	3.0175	\$1,230.49	409.00	kW	3.8907	\$1,472.25	\$3,170.55							
<b>OPA Programs</b>																						
<b>RESIDENTIAL</b>																						
Every Kilowatt Counts (spring)	2006	0.0180	475,095	kWh	0.0167	\$8,088.50	475,095	kWh	0.0169	\$7,997.44	475,095	kWh	0.0198	\$8,947.63	\$25,033.56							
Cool Savings Rebate Program	2006, 2007, 2008	0.0180	36,211	kWh	0.0167	\$616.50	140,922	kWh	0.0169	\$2,372.18	202,884	kWh	0.0198	\$3,820.99	\$6,809.67							
Secondary Fridge Retirement Pilot	2006	0.0180	19,450	kWh	0.0167	\$331.14	19,450	kWh	0.0169	\$327.41	19,450	kWh	0.0198	\$366.31	\$1,024.85							
Every Kilowatt Counts (fall)	2006	0.0180	770,749	kWh	0.0167	\$13,121.99	770,749	kWh	0.0169	\$12,974.27	770,749	kWh	0.0198	\$14,515.76	\$40,612.02							
Great Refrigerator Roundup	2007, 2008	0.0180					75,039	kWh	0.0169	\$1,263.16	205,432	kWh	0.0198	\$3,868.96	\$5,132.12							
Aboriginal – Pilot	2007	0.0180					0	kWh	0.0169	\$0.00	0	kWh	0.0198	\$0.00	\$0.00							
Every Kilowatt Counts	2007	0.0180					457,961	kWh	0.0169	\$7,709.01	452,407	kWh	0.0198	\$8,520.34	\$16,229.35							
peaksaver®	2007, 2008	0.0180					0	kWh	0.0169	\$0.00	0	kWh	0.0198	\$0.00	\$0.00							
Summer Savings	2007	0.0180					630,583	kWh	0.0169	\$10,614.82	630,583	kWh	0.0198	\$11,875.99	\$22,490.81							
Affordable Housing – Pilot	2007	0.0180					0	kWh	0.0169	\$0.00	0	kWh	0.0198	\$0.00	\$0.00							
Social Housing – Pilot	2007	0.0180					5	kWh	0.0169	\$0.08	41,273	kWh	0.0198	\$777.31	\$777.39							
Energy Efficiency Assistance for Houses – Pilot	2007	0.0180					0	kWh	0.0169	\$0.00	0	kWh	0.0198	\$0.00	\$0.00							
Aboriginal	2008	0.0180					0	kWh	0.0198	\$0.00	0	kWh	0.0198	\$0.00	\$0.00							
Summer Sweepstakes	2008	0.0180					0	kWh	0.0198	\$0.00	0	kWh	0.0198	\$0.00	\$0.00							
Every Kilowatt Counts Power Savings Event	2008	0.0180								154,949	kWh	0.0198	\$2,918.21	\$2,918.21								
																			<b>\$121,027.99</b>			
<b>GENERAL SERVICE &gt;50KW</b>																						
Demand Response 1	2006, 2007, 2008	3.7577	553	kW	2.9906	\$1,758.98	910.78	kW	3.0175	\$2,740.13	910.87	kW	3.8907	\$3,278.80	\$7,777.91							
Electricity Retrofit Incentive Program	2007, 2008	3.7577					24.79	kW	3.0175	\$74.60	24.98	kW	3.8907	\$89.91	\$164.52							
Other Demand Response	2007, 2008	3.7577					75.76	kW	3.0175	\$227.91	83.82	kW	3.8907	\$301.72	\$529.64							
Demand Response 3	2008	3.7577								229.10	kW	3.8907	\$824.68	\$824.70								
<b>UNMETERED SCATTERED LOAD</b>																						
Renewable Energy Standard Offer	2007, 2008	0.0134					0	kWh	0.0117	\$0.00	0	kWh	0.0155	\$0.00	\$0.00							
LDC Custom	2008	0.0134								0.00	kWh	0.0155	\$0.00	\$0.00								
Other Customer Based Generation	2008	0.0134								0.00	kWh	0.0155	\$0.00	\$0.00								
																			<b>\$9,296.76</b>			
																			<b>\$158,995.39</b>			

Appendix 3  
LRAM Carrying Charges

Norfolk Power Distribution Inc

EB-2009-0238

Exhibit 1

Appendix 3

Month	Annual Principal	Opening Monthly Balance	Carrying Charge Rate	Carrying Charge (\$)
01-Jan-06		0	0.60%	0.00
01-Feb-06		2,278	0.60%	13.76
01-Mar-06		4,555	0.60%	27.52
01-Apr-06		6,833	0.35%	23.57
01-May-06		9,110	0.35%	31.43
01-Jun-06		11,388	0.35%	39.29
01-Jul-06		13,665	0.38%	52.27
01-Aug-06		15,943	0.38%	60.98
01-Sep-06		18,220	0.38%	69.69
01-Oct-06		20,498	0.38%	78.40
01-Nov-06		22,775	0.38%	87.11
01-Dec-06	27,330	25,053	0.38%	95.83
01-Jan-07		27,330	0.38%	104.54
01-Feb-07		31,693	0.38%	121.22
01-Mar-07		36,055	0.38%	137.91
01-Apr-07		40,417	0.38%	154.60
01-May-07		44,780	0.38%	171.28
01-Jun-07		49,142	0.38%	187.97
01-Jul-07		53,505	0.38%	204.65
01-Aug-07		57,867	0.38%	221.34
01-Sep-07		62,229	0.38%	238.03
01-Oct-07		66,592	0.43%	285.23
01-Nov-07		70,954	0.43%	303.92
01-Dec-07	79,679	75,317	0.43%	322.61
01-Jan-08		79,679	0.43%	341.29
01-Feb-08		86,289	0.43%	369.60
01-Mar-08		92,898	0.43%	397.91
01-Apr-08		99,508	0.34%	338.33
01-May-08		106,118	0.34%	360.80
01-Jun-08		112,727	0.34%	383.27
01-Jul-08		119,337	0.28%	333.15
01-Aug-08		125,947	0.28%	351.60
01-Sep-08		132,557	0.28%	370.05
01-Oct-08		139,166	0.28%	388.51
01-Nov-08		145,776	0.28%	406.96
01-Dec-08	158,995	152,386	0.28%	425.41
01-Jan-09		158,995	0.20%	324.62
01-Feb-09		158,995	0.20%	324.62
01-Mar-09		158,995	0.20%	324.62
01-Apr-09		158,995	0.08%	132.50
01-May-09		158,995	0.08%	132.50
01-Jun-09		158,995	0.08%	132.50
01-Jul-09		158,995	0.05%	72.87
01-Aug-09		158,995	0.05%	72.87
01-Sep-09		158,995	0.05%	72.87
01-Oct-09		158,995	0.05%	72.87
01-Nov-09		158,995	0.05%	72.87
01-Dec-09	158,995	158,995	0.05%	72.87
01-Jan-10		158,995	0.05%	72.87
01-Feb-10		158,995	0.05%	72.87
01-Mar-10		158,995	0.05%	72.87
01-Apr-10		158,995	0.05%	72.87
<b>Total</b>		<b>158,995</b>		<b>9,600.11</b>



[Type text]

Norfolk Power Distribution Inc  
EB-2009-0238  
Exhibit 1  
Appendix 4

## **Exhibit 1**

### **Appendix 4: EnerSpectrum LRAM / SSM Report**

Norfolk Power Distribution Inc.

**LRAM and SSM Support**

October 19, 2009

Prepared by: Bart Burman, MBA, BA.Sc. P.Eng., Managing Partner

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### Attachments

- a. Attachment A – CDM Load Impacts by Class and Program
- b. Attachment B - Foregone Revenue by Class and Program
- c. Attachment C - SSM Amounts by Class and Program
- d. Attachment D - LRAM and SSM Totals by Class

### Appendices – LRAM and SSM Supporting Material

- f. Supporting Documentation for Third Tranche Programs
- g. OPA Sponsored Programs 2006 and 2007
- h. Guidelines for Electricity Distributor CDM EB-2008-0037
- i. NPDI OEB CDM Annual Reports
  - i. 2005 – OEB CDM Annual Report
  - ii. 2006 – OEB CDM Annual Report
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  - iv. 2008 – OEB CDM Annual Report

## 1. Introduction

Norfolk Power Distribution Inc. (NPDI) serves approximately 31,500 Residential and General Service customers in Simcoe, Delhi and Nanticoke. The LDC delivered 10 Conservation and Demand Management (CDM) programs under the Third Tranche CDM funding and implemented an additional 16 Ontario Power Authority (OPA) provincial programs in 2007 and 2008. Through reported gross CDM expenditures of \$590,880 on Third Tranche and OPA initiatives, NPDI reported a positive net TRC return of \$534,744, energy savings of 2.01 million kWh, and reduced peak demand by more than 445 kW.

These CDM activities in the residential and industrial customer segments have resulted in foregone revenues of \$158,995.39 for NPDI as set out in the accompanying Attachments. Accordingly, the LDC seeks to remediate this lost revenue through Lost Revenue Adjustment Mechanism (LRAM). Additionally, NPDI also seeks to realize shared savings for its investments in CDM under the Shared Savings Mechanism (SSM) in the amount of \$42,361.91, as set out in the accompanying attachments.

The Ontario Energy Board (OEB) introduced the LRAM and SSM processes outlined in the March 28, 2008 Guidelines for Electricity Distributor Conservation and Demand Management EB-2008-0037) (“CDM Guidelines”) for rate-based applications to recover revenues lost to customer energy conservation, and to share in gains from effective CDM programs prior to the completion of Third Tranche CDM programs.

LRAM calculations are made from the energy savings data from measured CDM program results, or other documented results as applied to the affected rate class. SSM is calculated as 5% of the net present value of the future net benefits from CDM investments. OPA sponsored programs, such as Every Kilowatt Counts, are not eligible for SSM because the OPA compensates LDCs through a contractual arrangement rather than the LDC recovering SSM amounts through rate riders. However OPA programs do represent the potential for lost revenue to the LDC, and may be claimed under LRAM.

The application for LRAM and SSM compensation that NPDI is considering as part of its 2010 IRM filing is based on its 2005 to 2008 inclusive CDM results.

## 2. Required

NPDI requested that EnerSpectrum Group support the preparation of the LDC’s LRAM and SSM claim including finalized calculations and report. In completing the scope of work related to LRAM and SSM, EnerSpectrum Group committed to:

1. Review Third Tranche CDM Annual Report filings by NPDI, including Total Resource Cost (TRC) calculations and underlying data provided by the LDC.

2. Prepare and finalize SSM and LRAM calculations and assumptions consistent with CDM Guidelines and suitable for inclusion in NPDI's 2010 IRM application, with supporting details.
3. Produce a report, recommendations, and supporting Attachments related to SSM and LRAM assessments.

### **3. About SSM/LRAM**

The OEB issued GUIDELINES FOR ELECTRICITY DISTRIBUTOR CONSERVATION AND DEMAND MANAGEMENT, EB-2008-0037 were applied to prepare this LRAM/SSM application.

LRAM was calculated as the product of the demand/energy savings by customer class and the Board-approved variable distribution charge appropriate to each respective class (net of Regulatory Asset Recovery rate riders). OPA sponsored program kW/kWhs were deemed eligible for LRAM.

NPDI seeks to recover 5% of the net benefits (TRC) created by CDM portfolio investments. This SSM claim applies only to customer focused initiatives that reduce the demand for electricity and/or the amount of energy used. Programs designed to improve Distribution System efficiency (eg. loss reduction) and OPA sponsored programs (eg., Every Kilowatt Counts) were excluded from SSM considerations.

### **4. Methodology**

To optimize the calculation of LRAM and SSM amounts, EnerSpectrum Group:

1. Reviewed existing LRAM and SSM CDM Guidelines and precedents set through LDC submissions to the OEB, to identify the most prudent course for NPDI's LRAM and SSM applications.
2. Sought counsel within OEB staff to validate assumptions and processes to complete LRAM and SSM submissions consistent with other LDC submissions. Validation by each specific technology employed is included in the accompanying documentation.
3. Reviewed NPDI's CDM program results and TRC calculations, verified assumptions and calculations, identified variances with reported values, and recommended adjustments as appropriate to maintain consistency with the CDM Guidelines. Actual program results were provided by NPDI, including CDM Annual Reports, OPA program results reports, and supplemental information relevant to LRAM and SSM calculations
4. Prepared report and recommendations related to LRAM and SSM calculations consistent with OEB CDM Guidelines which are in the accompanying documentation.

## 5. Results

In assessing and applying results from CDM programming to TRC, LRAM or SSM calculations, program results were assumed to begin after the program has been implemented. For this reason, the results of specific programs have been staggered into subsequent months or years to more accurately reflect the timing of the impacts from CDM programs. Where the results from a CDM program were reasonably expected to begin flowing in the same year, LRAM calculations are prorated to the end of that year.

The results used in LRAM calculations for OPA sponsored programs are contained in the accompanying documentation under OPA Conservation Results, issued July 14, 2009.

The accompanying table below sets out the calculated amounts for LRAM and SSM for NPDI's Third Tranche and OPA CDM programming. The calculation of the results, by program and customer class as applicable, are explained in the text below, and detailed in the appended attachments.

Rate Class	LRAM \$	SSM \$	Total
<b><u>Third Tranche</u></b>			
<b><u>RESIDENTIAL</u></b>	\$24,206.81	\$17,254.70	\$41,461.51
<b><u>GENERAL SERVICE &lt; 50kW</u></b>	\$1,282.10	\$373.71	\$1,655.81
<b><u>GENERAL SERVICE &gt; 50kW</u></b>	\$3,170.55	\$24,733.50	\$27,904.05
<b><u>OPA Programs</u></b>			
<b>RESIDENTIAL</b>	\$121,027.99		\$121,027.99
<b>GENERAL SERVICE &lt;50KW</b>	\$11.17		\$11.17
<b>GENERAL SERVICE &gt;50KW</b>	\$9,296.76		\$9,296.76
<b>UNMETERED SCATTERED LOAD</b>	\$0.00		\$0.00
	<b>\$158,995.39</b>	<b>\$42,361.91</b>	<b>\$201,357.30</b>

## 6. Determination of SSM Amount

For SSM, a distributor may recover 5% of the net benefits (TRC) created by CDM portfolio investments. As set out in the CDM Guidelines, program net benefits are determined by the present value of the avoided electricity costs over the technology's/program's life minus the

present value of program costs. All results are net of free ridership. Incentive payments identified by NPDI are excluded from these calculations. For all programs/projects, the OEB approved assumptions and measures list were used in TRC calculations in accordance with OEB's direction letter, Conservation and Demand Management ("CDM") Input Assumptions Board File No.: EB-2008-0352, January 27, 2009. Due to the timing of third tranche program decisions, OEB approved assumptions and measures lists published September 8, 2005 were applied in TRC and SSM calculations.

EnerSpectrum Group has validated applied TRC methodology against the CDM Guidelines (included in documentation) and calculated net TRC benefits for each CDM program. CDM incremental general administrative costs were included as part of overall portfolio TRC costs. EnerSpectrum Group's TRC Calculator © was used to ensure appropriate application of avoided costs, free ridership, discounted future benefits, and energy efficiency technology life.

Utility-side programs, such as NPDI's Distribution System Loss Reduction study in 2005, are not eligible for SSM treatment and was excluded from these calculations. Also excluded were results from OPA sponsored programs (e.g., Every Kilowatt Counts).

Programs considered for this application are described in annually submitted year-end CDM reports for 2,005, 2006, 2007 and 2008. For each eligible program, net load reductions were calculated (net of free ridership) for both SSM and LRAM calculations. Attachment A summarizes these load reductions.

For the purpose of TRC calculation to derive SSM, the applied discount rates for NPDI (approved Weighted Average Cost of Capital) were 8.57% (2005) 6.51 (2006), 6.51% (2007) and 7.19% (2008). The sum of all program NPVs, is \$847,238 resulting in the SSM claim of \$42,361.91. Attachment C summarizes the calculation of the SSM amounts by program and in total. Attachment E summarizes individual technology TRC (NPV) values by program. The supporting source data and TRC calculations are set out in detail in the documentation accompanying this report.

## **7. Determination of LRAM Amount**

LRAM amounts were identified by rate class consistent with the CDM Guidelines for programs that impacted revenues from 2005 to 2008. No forecast or other adjustment for the effects of CDM programs was made to the load quantities used in the preparation of NPDI's rate cases in prior years. The entire actual load reduction achieved by the eligible Third Tranche CDM programs is subject to LRAM treatment. In addition, OPA sponsored programs, although ineligible for additional SSM incentives, represent lost revenue through their successful implementation and are included in LRAM calculations.

For all programs/projects, the load impacts were derived based on the most recently published OPA Assumptions and Measures list were used in LRAM calculations in accordance with OEB's

direction letter, Conservation and Demand Management (“CDM”) Input Assumptions Board File No.: EB-2008-0352, January 27, 2009. This is also consistent with the precedent in the OEB Decision Order EB-2009-0192 October 8, 2009 (Horizon Utilities) that directed LRAM calculations use the most current available input assumptions for all CDM programs. Load impacts from third tranche programs were augmented by OPA results (Attachment A).

The sum of all program LRAM calculations, including OPA sponsored programs, is \$158,995.39.

Attachment B summarizes the CDM load impacts by program and rate class and the resultant revenue impacts.

### **8. Allocation and Manner of Recovery for SSM/LRAM Amounts**

The SSM/LRAM amounts arising from CDM programs in each respective rate class are allocated to that class for recovery.

### **9. Conclusions**

Overall, NPDI’s expenditures on CDM programming were found to be cost-effective, returning a positive net TRC value for the CDM program technologies implemented. A review of LDC-originated CDM programs with NPDI verified that documentation exists to support participation levels associated with the LRAM and SSM calculation. Therefore the values applied to LRAM and SSM calculations are considered valid.

### **10. Recommendations**

EnerSpectrum Group recommends the following:

1. SSM/LRAM amounts arising from CDM programs in each rate class be allocated to that class for recovery.
2. Incorporate impacts of CDM programming which occurred during the period 2005 to 2008 In future Cost of Service rate applications inclusive. This recognizes CDM as an established customer service element in the years ahead, with identifiable costs and benefits.
3. Use SSM calculation as one of the methods to assess the potential value of CDM programs considered for implementation.
4. Monitor OPA information and reports pursuant to its email of July 14, 2009 to all LDC conservation officers and program managers. The OPA stated that “2008 results are still preliminary and are subject to change” If final program results for NPDI subsequently change for any OPA program, updates or adjustments may need to be considered for the LRAM and SSM amounts calculated in this report. This report did not consider any OPA programs implemented or operated during 2009, as the results for these programs will not be available until sometime in 2010. Any savings attributed to 2009 for LRAM purposes are



based on assumed results carried over from OPA programs implemented in previous years only.

Assumptions by program

Program:	<b>Cold Water Wash</b>
Description:	Cold Water Washing (Detergent)
OPA Table Applied:	Residential
Element No.:	14
Number of Units:	92
EE Technology Life:	1
Start Year:	2005
Incremental Costs:	\$690.00
Discount Factor:	8.57%
LDC Costs:	\$250.00
Free Ridership Rate:	25%
TRC NPV:	\$1,801.03
Y/E CDM Reported TRC:	\$1,800.00
Difference:	-\$1.03
Reason for Difference:	

Assumptions by program

Program:	<b>Energy Audits for Major Customers</b>
Description:	Energy Audits
OPA Table Applied:	Direct Input
Element No.:	
Number of Units:	3
EE Technology Life:	5
Start Year:	2005
Incremental Costs:	
Discount Factor:	8.57%
LDC Costs:	\$25,192.00
Free Ridership Rate:	30%
TRC NPV:	\$220,113.62
Y/E CDM Reported TRC:	\$144,500.00
Difference:	\$75,613.62
Reason for Difference:	<ol style="list-style-type: none"> <li>1. Norfolk based their TRC on a forecasted 10 audits. Only 3 were actually completed. ESG based the TRC on 3.</li> <li>2. ESG used 147kW savings based on savings identified in the 2005 CDM filed report.</li> <li>3. ESG assumed a 5 year technology life.</li> <li>4. ESG assumed a 30% free ridership.</li> </ol>

Assumptions by program

Program:	<b>2005 Energy Star Window Program</b>
Description:	Energy Star Windows
OPA Table Applied:	Direct Input
Element No.:	
Number of Units:	185
EE Technology Life:	25
Start Year:	2005
Incremental Costs:	\$6,000.00
Discount Factor:	8.57%
LDC Costs:	\$3,726.97
Free Ridership Rate:	30%
TRC NPV:	-\$1,465.37
Y/E CDM Reported TRC:	\$5,800.00
Difference:	-\$7,265.37
Reason for Difference:	1. ESG used assumptions made in "Energy Star Window Incentive Program Background data" Excel sheet.      2. ESG assumed 30% free ridership rate.      3. ESG used 8.57% discount factor. Norfolk used 6.5%

Assumptions by program

Program:	2005 Lighten Your Electricity Bill								
Description:	15W CFL	Outdoor Timer	Indoor Timer	Indoor Timer for AC	Pstat - Space Cooling	Pstat - Space Heating	Seasonal LED Xmas Lights - 5W	Seasonal LED Xmas Lights - Mini Lights	Summary TRC
OPA Table Applied:	Residential	Residential	Residential	Residential	Residential	Residential	Residential	Residential	
Element No.:	24	22	38 (new tables)	88 (new tables)	55	56	35	36	
Number of Units:	1,336	32	8	8	52	20	570	570	
EE Technology Life:	4	10	10	18	18	18	30	8	
Start Year:	2005	2005	2005	2005	2005	2005	2005	2005	2005
Incremental Costs:	\$2,404.80	\$576.00	\$144.00	\$432.00	\$2,808.00	\$1,080.00	\$1,083.00	\$1,026.00	\$9,553.80
Discount Factor:	8.57%	8.57%	8.57%	8.57%	8.57%	8.57%	8.57%	8.57%	8.57%
LDC Costs:	\$1,763.71	\$112.00							\$4,202.18
Free Ridership Rate:	10%	10%	10%	10%	10%	10%	5%	5%	
TRC NPV:	\$25,733.38	\$3,479.63	\$612.44	\$1,030.76	\$6,699.95	\$17,922.96	\$9,116.17	\$658.15	\$61,051.25
Y/E CDM Reported TRC:	\$25,700.00	\$7,100.00	\$1,728.00		\$28,800.00		\$13,600.00		
Difference:	\$33.38	\$3,620.37	\$84.80		\$4,177.09		\$3,825.69		
Reason for Difference:		1. Norfolk used 6.51% discount rate. ESG used 8.57%	1. ESG used new OEB tables as other information was not available.		1. Used assumptions of 17.3% of total allocated to Space Heating and 45% Space Cooling based on same assumptions used in 2005 CDM filed Report. 2. Norfolk included both measures on one TRC which ends up excluding free ridership rates.		1. Norfolk included both measures on one TRC which ends up excluding free ridership rates.		

Assumptions by program

Program:	<b>2006 CFL Education &amp; Giveaway</b>
Description:	15W CFL
OPA Table Applied:	Residential
Element No.:	16
Number of Units:	918
EE Technology Life:	4
Start Year:	2006
Incremental Costs:	\$1,652.40
Discount Factor:	10.00%
LDC Costs:	\$4,097.49
Free Ridership Rate:	10%
TRC NPV:	\$15,551.95
Y/E CDM Reported TRC:	\$12,814.00
Difference:	\$2,737.95
Reason for Difference:	1. Norfolk included the cost of the lights in LDC Capital costs in addition to incremental equipment costs (double counted)

Assumptions by program

Program:	<b>2006 - Energy Audits for Major Customers</b>
Description:	Energy Audits
OPA Table Applied:	Direct Input
Element No.:	
Number of Units:	9
EE Technology Life:	5
Start Year:	2006
Incremental Costs:	
Discount Factor:	
LDC Costs:	\$10,336.81
Free Ridership Rate:	30%
TRC NPV:	\$318,525.64
Y/E CDM Reported TRC:	\$170,600.00
Difference:	\$147,925.64
Reason for Difference:	<p>1. Norfolk based their TRC on a forecasted 10 audits in 2005. ESG based the TRC on 9 audits that were completed in 2006.</p> <p>2. ESG used 262kW savings based on savings identified in the 2006 CDM filed report.</p> <p>3. ESG assumed a 5 year technology life.</p> <p>4. ESG assumed a 30% free ridership.</p>

Assumptions by program

Program:	<b>2006 Led Seasonal Light Exchange Program</b>
Description:	5W Xmas Light
OPA Table Applied:	Residential
Element No.:	22
Number of Units:	3,650
EE Technology Life:	30
Start Year:	2006
Incremental Costs:	\$6,935.00
Discount Factor:	6.51%
LDC Costs:	\$1,102.40
Free Ridership Rate:	5%
TRC NPV:	\$76,253.34
Y/E CDM Reported TRC:	\$59,383.00
Difference:	\$16,870.34
Reason for Difference:	1. Norfolk included the cost of the lights in LDC Capital costs in addition to incremental equipment costs (double counted)



Assumptions by program

Program:	2007 Energy Star Qualified Appliance Rebate Program				
Description:	Energy Star Dishwasher	Energy Star Freezer	Energy Star Fridges	Energy Star Front Load Washer	Summary TRC
OPA Table Applied:	Residential	Residential	Residential	Residential	
Element No.:	11	4	2	12	
Number of Units:	1	4	2	6	
EE Technology Life:	13	21	19	14	
Start Year:	2007	2007	2007	2007	
Incremental Costs:	\$90.00	\$720.00	\$126.00	\$1,080.00	\$2,016.00
Discount Factor:	6.51%	6.51%	6.51%	6.51%	
LDC Costs:					\$1,929.80
Free Ridership Rate:	10%	10%	10%	10%	
TRC NPV:	-\$28.63	-\$568.29	\$17.52	\$850.41	-\$1,658.79
Y/E CDM Reported TRC:					-\$1,784.00
Difference:					-\$125.21
Reason for Difference:					1. Norfolk included all technologies on one TRC

Assumptions by program

Program:	<b>2007 Environmental Action Kits</b>
Description:	15W CFL
OPA Table Applied:	Residential
Element No.:	16
Number of Units:	8,000
EE Technology Life:	4
Start Year:	2007
Incremental Costs:	\$14,400.00
Discount Factor:	6.51%
LDC Costs:	\$2,244.14
Free Ridership Rate:	10%
TRC NPV:	\$169,230.36
Y/E CDM Reported TRC:	\$143,483.00
Difference:	\$25,747.36
Reason for Difference:	1. Norfolk included the cost of the lights in LDC Capital costs in addition to incremental equipment costs (double counted)

Assumptions by program

Program:	2007 Norfolk Power Facility Lighting Retrofit Program		
Description:	2Lamp - T8 23W	4Lamp - T8 32W	Summary TRC
OPA Table Applied:	Industrial	Industrial	
Element No.:	1	2	
Number of Units:	152	108	
EE Technology Life:	3	3	
Start Year:	2007	2007	2007
Incremental Costs:	\$12,722.40	\$9,622.80	\$22,345.20
Discount Factor:	6.51%	6.51%	6.51%
LDC Costs:			\$1,820.01
Free Ridership Rate:	10%	10%	
TRC NPV:	\$8,967.07	\$9,622.80	\$8,846.59
Y/E CDM Reported TRC:			\$4,403.00
Difference:			\$4,443.59
Reason for Difference:			1. Norfolk included both measures on one TRC 2. Norfolk included the cost of the lights in LDC Capital costs in addition to incremental equipment costs (double counted)

Assumptions by program

Program:	<b>2007 Seasonal LED Light Exchange Program</b>
Description:	LED Christmas Lights - 5W
OPA Table Applied:	Residential
Element No.:	22
Number of Units:	5,000
EE Technology Life:	30
Start Year:	2007
Incremental Costs:	\$9,500.00
Discount Factor:	6.51%
LDC Costs:	\$1,113.56
Free Ridership Rate:	5%
TRC NPV:	\$104,152.26
Y/E CDM Reported TRC:	\$88,146.00
Difference:	\$16,006.26
Reason for Difference:	1. Norfolk included the cost of the lights in LDC Capital costs in addition to incremental equipment costs (double counted)

Assumptions by program

Program:	<b>2007 Water Heater Replacement Program</b>
Description:	Upgrade Water Heaters
OPA Table Applied:	Direct Input
Element No.:	
Number of Units:	103
EE Technology Life:	18
Start Year:	2007
Incremental Costs:	\$15,153.85
Discount Factor:	6.51%
LDC Costs:	\$3,029.11
Free Ridership Rate:	30%
TRC NPV:	\$7,328.42
Y/E CDM Reported TRC:	\$8,467.00
Difference:	\$1,138.58
Reason for Difference:	1. ESG assumed a 30% free ridership

Assumptions by program

Program:	2008 Energy Star Qualified Appliance Rebate Program				
Description:	Energy Star Dishwasher	Energy Star Freezer	Energy Star Fridges	Energy Star Front Load Washer	Summary TRC
OPA Table Applied:	Residential	Residential	Residential	Residential	
Element No.:	11	4	2	12	
Number of Units:	38	15	44	122	
EE Technology Life:	13	21	19	14	
Start Year:	2008	2008	2008	2008	2008
Incremental Costs:	\$3,420.00	\$2,700.00	\$2,772.00	\$21,960.00	\$30,852.00
Discount Factor:	7.19%	7.19%	7.19%	7.19%	7.19%
LDC Costs:					\$30,852.00
Free Ridership Rate:	10%	10%	10%	10%	
TRC NPV:	-\$1,120.32	-\$2,153.86	\$274.67	\$16,601.74	\$9,302.73
Y/E CDM Reported TRC:					-\$4,374.00
Difference:					\$4,928.73
Reason for Difference:					1. Norfolk included all technologies on one TRC 2. ESG used a discount rate of 7.19% 3. Norfolk included costs of rebates in OM&A costs

Assumptions by program

Program:	<b>2008 Environmental Action Kits</b>
Description:	CLF Giveaway 15W
OPA Table Applied:	Residential
Element No.:	16
Number of Units:	3,000
EE Technology Life:	4
Start Year:	2008
Incremental Costs:	\$5,400.00
Discount Factor:	7.19%
LDC Costs:	\$5,224.19
Free Ridership Rate:	10%
TRC NPV:	\$58,159.67
Y/E CDM Reported TRC:	\$49,424.00
Difference:	\$8,735.67
Reason for Difference:	1. Norfolk included the cost of the lights in LDC Capital costs in addition to incremental equipment costs (double counted) 2. ESG used 7.19% discount rate

**Norfolk Power Distribution Inc**

**EB-2009-0238**

**Exhibit 2**

**Exhibit 2: Z Factor: Extraordinary Event – Severe Storm Damage, January 2007**



## **Z Factor: Extraordinary Event – Severe Storm Damage, January 2007**

### **Overview**

In its 2008 rate application (EB-2007-0753) Norfolk Power Distribution Inc (NPDI) requested disposal of the balance in Account 1572 – Extraordinary Events, for amounts related to a severe winter storm which occurred in January 2007. In its decision the Board denied recovery but indicated an application would be entertained at a future date, if the Applicant chose to re-apply and provide additional evidence. NPDI hereby applies for approval to recover the amount recorded in its account 1572 as a Z Factor in its 2010 rate application over the period of one year, beginning on May 1, 2010.

The total amount requested for recovery is \$179,448, which includes \$164,235 of incremental expenses which were incurred as a direct result of the severe storm damage, which occurred January 14 2007. The incremental expenses have been reduced from the original 2008 application after scrutiny of accounts to ensure only incremental amounts are applied for. A summary followed by a detailed list of expenses is contained in Appendix A. An additional \$15,214 in carrying charges has been calculated based on the established OEB rates for deferral account carrying charges. Details of carrying charge calculations are listed in Appendix B.

### **Description of Event**

On the evening of Sunday, January 14, 2007, an ice storm hit throughout the mid-west United States and south-central Ontario. A period of unseasonably warm January temperatures was followed by a storm system consisting of strong winds, freezing rain, snow, and a drop in temperatures. Ice as thick as 1” clung to trees, hydro poles, conductors and devices across the service territory. With most of its service territory bordering the northern shores of Lake Erie, a vulnerable spot for lake effect snow, Norfolk Power Distribution Inc experienced the full impact of the storm and resultant wide-spread outages. Of its approximately 18,500 customers 16,080 were without power, some for as long as 33 hours. In order to facilitate efficient restoration of power, NPDI utilized its own staff incurring heavy overtime. Also, given the extent of damage and cold weather, extra crews from neighboring utilities and external contractors were called to aid in the restoration. The customer service centre was inundated with calls from cold and frustrated customers, wanting to know when power would be restored. The below-freezing temperatures meant that anyone requiring electricity for heat was at risk. The County of Norfolk opened up emergency centers where people could get warm and have a hot

meal. Crews worked day and night for three days to restore power to the County as quickly and efficiently as possible. This was followed by an additional week to clean up the aftermath of the storm including tree trimming and damaged plant replacement.

**Z-Factor Eligibility Criteria**

The following analysis and report identifies that the amount applied for meets the regulatory principles of causation, materiality, and prudence and should be therefore included in the 2010 approved rates for NPDI.

**Causation**

The costs NPDI is requesting for recovery are directly attributable to the repairs required due to the ice storm on January 14 2007. If the storm had not occurred, these repairs would not have been required. While mild storm damage does occur from time to time, the scope of damage and necessary repairs of this one storm exceeded the usual level of storm damage expense NPDI incurs in entire year. NPDI tracks storm damage repair costs in a separate maintenance sub-account and have summarized these expenses for the previous 4 years.

Table 1: Annual Storm Damage Summary

	2003	2004	2005	2006	2007
Non-Extraordinary Storm Damage	\$54,607	\$32,368	\$54,667	\$97,012	\$81,303
Extraordinary Storm Damage					164,235
Total Storm Damage	\$54,607	\$32,368	\$54,667	\$97,012	\$245,538

In addition, the amount of damage incurred exceeds the amount of storm damage expenses included in NPDI's rates. The rates established in the 2006 EDR included \$32,369 for storm damage repair expenses. This was part of the overall maintenance expense of \$747,613 and total Distribution Expenses before PILS of \$6,253,598.

### **Materiality**

Using the Board's materiality threshold of 0.5% of the Revenue Requirement for materiality of extraordinary event costs results in a materiality level of \$53,429 (0.5% of \$10,685,794 revenue requirement for 2006 EDR base year). With incremental costs totaling \$164,235, the Storm exceeds the materiality threshold determined by the Board.

### **Prudence**

As a matter of public safety, NPDI took the necessary measures to restore power to its 16,080 interrupted customers as quickly and efficiently as possible. After surveying the damage and identifying that 90% of its customers were without power in the cold winter, NPDI developed an action plan to restore power as quickly as possible. This meant overtime hours for its own staff as well as bringing in crews from neighbouring LDC's and external contractors to aid in the power restoration process. Calling on contractors NPDI has used in the past (because of their relatively low cost, proximity to the service area, and knowledge of the service area) was the most economical and reasonable solution after making full use of its own staff.

### **Historical Expenditures on Storm Damage Repairs**

Historical expenditures for storm damage repairs consists of costs related to several small storms throughout the year and are recorded in account 5100 – Storm Damage. This may typically include damage from lightning, wind, freezing rain, snow and other weather-related damage repairs that were completed as a direct result of weather induced outage. In addition, larger storms are also allocated their own sub-account number to further aid in cost tracking and analysis. As part of the annual audit the balances in the Storm Repair account each year has been reviewed by NPDI's external auditors. The storm damage related to Jan 14 2007 has been the only storm to warrant recording the expenses in Account 1572.

Table 2: Details of Historical Storm Expenses

	<u>2003</u>	<u>2004</u>	<u>2005</u>	<u>2006</u>	<u>2007</u>
Regular Labour (hours)	114.50	96.50	169.50	470.50	771.50
Overtime Labour (hours)	41.50	277.00	496.00	639.50	532.25
Regular Labour (cost in \$)	5,531	3,944	7,508	21,095	34,640
Overtime Labour (cost in \$)	2,338	14,615	26,500	36,196	31,480
Equipment Charges	2,410	5,125	9,295	15,380	13,570
Materials	3,517	5,616	10,672	13,225	19,679
Contractor & Other Expenses	40,811	3,068	692	11,116	146,169
<b>TOTAL</b>	<b>\$54,607</b>	<b>\$32,368</b>	<b>\$54,667</b>	<b>\$97,012</b>	<b>\$245,538</b>

Using the “Z Factor” criteria, Norfolk Power is only claiming incremental costs relating to the January 2007 Storm repairs. This means that only unscheduled overtime, costs of contractors not normally required, and special meal and accommodation allowances for staff & contractors are included in the total amount claimed under 1572. Normal operating costs (such as regular labour hours, materials, and equipment charges) were included in the maintenance account for storm damage repairs and/or capitalized based on their nature. Appendix A contains the full details of the expenses.

### Recovery

Consistent with the Decision by the Board EB-2007-0514 NPDI requests to allocate the expenses to the classes based on distribution revenue. For this purpose 2008 actual volume data has been used as it is the data underpinning the current distribution rates. NPDI proposes to recover approved amounts on the basis of volumetric charges. The rate riders have been included in the OEB 2010 IRM3 Rate Generator Model and are part of the customer impact analysis contained therein and described in the Manager’s Summary of the 2010 IRM application.

Table 3: Proposed Rate Riders

Customer Class	Distribution Revenue	Allocation Percentage	Allocation Dollars	Determinant	Billed kWh / kW	Proposed Volumetric Rate Rider (\$)
Residential	\$7,039,603	61.5%	\$110,339	kWh	140,646,761	0.000785
GS < 50 kW	2,147,442	18.8%	33,659	kWh	63,223,253	0.000532
GS > 50 kW	2,052,053	17.9%	32,164	kW	361,081	0.089077
Unmetered	22,413	0.2%	351	kWh	361,353	0.000972
Sentinel	42,004	0.4%	658	kW	818	0.804858
Street Light	145,220	1.3%	2,276	kW	9,279	0.245305
Total	\$11,448,735	100.0%	\$179,448			

**Appendix A**  
**Z-Factors Amounts to Be Recovered**

Internal Labour	(1)	\$47,683.78
Materials	(2)	11,102.15
LDC's and Outside Contractors	(3)	132,269.55
Trucks & Equipment	(4)	8,630.00
Special Accommodations & Meal Allowances	(5)	<u>2,063.41</u>
<b>Total Costs Relating to Jan. 15<sup>th</sup> Ice Storm</b>		<b>\$201,748.89</b>
<b>Adjustments:</b>		
Less: Non-Incremental internal labour	(1)	(\$28,884.13)
Less: Non-Incremental Trucks & Equipment	(4)	<u>(\$ 8,630.00)</u>
<b>2007 Ice Storm Incremental Expense</b>		<b><u>\$164,234.76</u></b>

**Appendix A con't**

**ITEM (1) – NPDI LABOUR DETAILS**

Total Regular Labour	651 hours	\$28,884.13
Total Overtime Labour	325 hours	<u>18,799.65</u>
Total Labour Relating on Storm		<b>\$47,683.78</b>
<i>Less: Regular Labour deemed non-incremental</i>		<u><del>(\$28,884.13)</del></u>
<b>Total Incremental Labour Costs</b>		<b><u>\$18,799.65</u></b>

<b>Hours O/T Worked for Storm</b>	Mon Jan 15	Tues Jan 16	Wed Jan 17	Thurs Jan 18	Fri Jan 19	Sat Jan 20	Sun Jan 21	Mon Jan 22	Tue Jan 23	Wed Jan 24	Thur Jan 25	Fri Jan 26	<b>TOTAL by Category</b>
Management	26.50	41.50	4.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>72.00</b>
Office Staff	6.75	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	<b>6.75</b>
Operations	87.00	111.00	56.50	7.00	3.00	8.00	0.00	0.00	0.00	0.00	0.00	2.00	<b>274.50</b>
<b>TOTALS</b>	<b>120.25</b>	<b>152.50</b>	<b>60.50</b>	<b>7.00</b>	<b>3.00</b>	<b>8.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>2.00</b>	<b>353.25</b>

**ITEM (2) - MATERIALS**

*Materials used in the restoration efforts were as follows:*

Various Hardware & Supplies (nuts, bolts, etc)	\$ 1,497.24
Overhead Conductors & Devices	6,556.78
Overhead Wires	<u>3,048.13</u>
<b>Total Materials Used</b>	<b><u>\$11,102.15</u></b>

**ITEM (3) - Local LDC's and Other Contractor Costs**

Brant County Power - Crews & Equipment for power restoration	\$ 3,340.00
Brantford Power - Crews & Equipment for power restoration	1,637.87
Erie Thames Services - K-Line ~ Crews & Equipment for power restoration	2,719.48
K-Line Construction - Crews & Equipment for power restoration	100,609.70
Oakhill Tree Service - Crews & Equipment for emergency tree trimming	<u>23,962.50</u>
<b>Total Amounts Paid to LDC's and Outside Contractors</b>	<b><u>\$132,269.55</u></b>

**Appendix A con't**

**ITEM (4) - Trucks & Equipment**

Pick-Up Trucks & Vans	204.50 hours used	\$2,045.00
Bucket Trucks & Work Platforms	219.50 hours used	<u>\$6,585.00</u>
<b>Total Charges for Trucks &amp; Equipment</b>		<b><u>\$8,630.00</u></b>

The trucks & equipment charges indicated above are largely indirect expenses, arising from charges allocated on an hourly basis and therefore have been removed from Account 1572.

**Adjusted Trucks & Equipment Used (excludes non-incremental)** **\$ 0.00**

**ITEM (5) ~ Special Meals & Accommodations**

Meals - K-Line Staff	\$ 289.80
Accommodations - K-Line Staff	148.69
Overtime Meals - NPDI Staff	1,440.12
Accommodations - NPDI Staff	<u>184.80</u>
<b>Total Amounts Paid for Special Meals &amp; Accommodations</b>	<b><u>\$2,063.41</u></b>

**Appendix B**  
**Z Factor - Carrying Charges**

Norfolk Power Distribution Inc

EB-2009-0238

Exhibit 2

Month	Principal Balance	Carrying Charge	
		Rate	Carrying Charge (\$)
01-Mar-07	\$164,234.76	0.38%	\$628.20
01-Apr-07	164,234.76	0.38%	\$628.20
01-May-07	164,234.76	0.38%	\$628.20
01-Jun-07	164,234.76	0.38%	\$628.20
01-Jul-07	164,234.76	0.38%	\$628.20
01-Aug-07	164,234.76	0.38%	\$628.20
01-Sep-07	164,234.76	0.38%	\$628.20
01-Oct-07	164,234.76	0.43%	\$703.47
01-Nov-07	164,234.76	0.43%	\$703.47
01-Dec-07	164,234.76	0.43%	\$703.47
01-Jan-08	164,234.76	0.43%	\$703.47
01-Feb-08	164,234.76	0.43%	\$703.47
01-Mar-08	164,234.76	0.43%	\$703.47
01-Apr-08	164,234.76	0.34%	\$558.40
01-May-08	164,234.76	0.34%	\$558.40
01-Jun-08	164,234.76	0.34%	\$558.40
01-Jul-08	164,234.76	0.28%	\$458.49
01-Aug-08	164,234.76	0.28%	\$458.49
01-Sep-08	164,234.76	0.28%	\$458.49
01-Oct-08	164,234.76	0.28%	\$458.49
01-Nov-08	164,234.76	0.28%	\$458.49
01-Dec-08	164,234.76	0.28%	\$458.49
01-Jan-09	164,234.76	0.20%	\$335.31
01-Feb-09	164,234.76	0.20%	\$335.31
01-Mar-09	164,234.76	0.20%	\$335.31
01-Apr-09	164,234.76	0.08%	\$136.86
01-May-09	164,234.76	0.08%	\$136.86
01-Jun-09	164,234.76	0.08%	\$136.86
01-Jul-09	164,234.76	0.05%	\$75.27
01-Aug-09	164,234.76	0.05%	\$75.27
01-Sep-09	164,234.76	0.05%	\$75.27
01-Oct-09	164,234.76	0.05%	\$75.27
01-Nov-09	164,234.76	0.05%	\$75.27
01-Dec-09	164,234.76	0.05%	\$75.27
01-Jan-10	164,234.76	0.05%	\$75.27
01-Feb-10	164,234.76	0.05%	\$75.27
01-Mar-10	164,234.76	0.05%	\$75.27
01-Apr-10	164,234.76	0.05%	\$75.27
<b>Total</b>	<b>164,234.76</b>		<b>15,213.61</b>
			<b>179,448.37</b>