

October 10, 2008

Ms. Kirsten Walli Board Secretary Ontario Energy Board 2300 Yonge Street 26th Floor, Box 2319 Toronto, ON M4P 1E4

Dear Ms. Walli

## Re: PowerStream Inc. (ED-2004-0420) 2009 Electricity Distribution Rate Application, EB-2008-0244

Please find enclosed two (2) paper copies and a CD containing the abovecaptioned application in PDF format. Please note also that PowerStream's 2009 Electricity Distribution Rate Application, in PDF format, is being filed on the Board's web portal.

New distribution rates have been calculated in accordance with the guidelines provided in the Board's November 14, 2006 *"Filing Requirements for Transmission and Distribution Applications"* (EB-2006-0170).

PowerStream has calculated customer bill impacts, from the rates proposed in this application, as follows:

- a Residential customer using 1,000 kWhs per month will experience a 0.6% decrease in the delivery line of their bill and a decrease of \$0.36 on the total monthly bill; and
- a General Service less than 50 kW customer using 2,000 kWhs per month will see a 1.4% decrease in the delivery line of their bill and a decrease of \$1.34 on the total monthly bill.



In its application, PowerStream has calculated the 2009 "revenue at current rates" to be \$112.8M. PowerStream is seeking approval for a Distribution Revenue Requirement of \$121.0 million. PowerStream's 2006 Board Approved Distribution Revenue Requirement was \$102.3 million.

If you have any questions, please do not hesitate to contact the undersigned.

Yours truly,

Original signed by

Colin A. Macdonald Director of Rates

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1		
2		ONTARIO ENERGY BOARD
3		IN THE MATTER OF the Ontario Energy Board Act, 1998;
4		S.O. 1998, c.15, Sched B, as amended;
5		AND IN THE MATTER OF an Application by PowerStream
6		Inc. for an Order or Orders approving or fixing just and
7		reasonable distribution rates for 2009.
8		APPLICATION
9	1.	PowerStream Inc. ("PowerStream" or the "Company") is a distributor as defined
10		in the Ontario Energy Board Act, 1998 (the "Act"). PowerStream holds Electricity
11		Distribution License ED-2004-0420.
12	2.	PowerStream hereby applies to the Ontario Energy Board (the "Board" or the
13		"OEB"), pursuant to section 78 of the Act, for an Order or Orders approving or
14		fixing just and reasonable rates for electricity distribution service for the period
15		May 1, 2009 to April 30, 2010. PowerStream accordingly proposes the following
16		title for the proceeding that is commenced by this Application:
17		PowerStream Inc.
18		2009 Electricity Distribution Rates
19		EB-2008-0244
20	3.	This Application has been guided by the Board's Filing Requirements for
21		Transmission and Distribution Applications, November 14, 2006 (the "Filing
22		Requirements") and the Board's 2006 Electricity Distribution Rates Handbook
23		(the "2006 Handbook"). It is based on a 2009 forward test year ("Test Year"), as
24		contemplated by the Filing Requirements.
25		

- In this Application, PowerStream is seeking approval of a 2009 Base Revenue
   Requirement of \$121,029,000 which includes a forecast 2009 Revenue
   Deficiency of \$8,260,000. If the 2009 Base Revenue Requirement is approved,
   the total electricity bill of a residential customer using 1,000 kWh/month and of a
   General Service < 50 kW customer using 2,000 kWh/month will be reduced by</li>
   0.3 percent and 0.6 percent, respectively.
- 5. In response to government initiatives, PowerStream is installing Smart Meters to
  replace its existing meters. The stranded costs associated with replaced meters
   \$4,400,000 as of December 31, 2007 remains in PowerStream's rate base in
  accordance with the Board's Smart Meter Generic decision (EB-2007-0063).
  These costs are recorded in Smart Meter Capital and Recovery Offset Variance
  Account, Sub-account Stranded Meter Costs (Account 1555).
- 13 6. In this Application, PowerStream is seeking to clear the balances in the Smart 14 Meter Capital and Recovery Offset Variance Account (Account 1555) and the Smart Meter O&M Variance Account (Account 1556) up to December 31, 2007. 15 16 This will result in a credit of \$0.19 per month per metered customer in the form of 17 a rate adder for the period May 1, 2009 to April 30, 2010. This will return a total 18 of \$577,000 to customers. In this Application, PowerStream is also seeking 19 approval of an updated Smart Meter rate adder of \$1.04 per customer per month, 20 effective May 1, 2009 to April 30, 2010, to fund the ongoing installation of Smart 21 Meters. These two amounts, when netted, result in a Smart Meter rate adder of 22 \$0.85 per month per metered customer for the rate year May 1, 2009 to April 30, 23 2010.
- The Company has accumulated balances in certain other Board-approved deferral and variance accounts since January 1, 2005. It proposes to clear balances accumulated to December 31, 2007, with certain exceptions.
  PowerStream is not seeking to clear Account 1588 RSVA<sub>power</sub>, Sub-account Global Adjustment and Account 1592 PILS and Tax Variance for 2006 and Subsequent Years. After the exceptions are taken into account, PowerStream is

proposing to refund \$27,900,000 to customers over two years (May 1, 2009 to
 April 30, 2011) through a rate rider.

3 8. PowerStream pays low voltage ("LV") charges to Hydro One Networks Inc. 4 ("Hydro One") for use of certain Hydro One distribution assets. The difference 5 between Hydro One's LV charges to PowerStream (recorded in Account 4750) 6 and the LV amounts billed to PowerStream's customers (recorded in Account 7 4075) is recorded in Account 1550 - LV Variance Account, in accordance with 8 Appendix B of a Board directive dated June 13, 2006. In this Application, 9 PowerStream is seeking: (i) to clear Account 1550 to December 31, 2007 (as 10 part of the \$27,900,000 noted in Item #7, above); and (ii) to recover in 2009 11 rates, a forecast LV amount of \$1,452,000 through an updated LV charge.

9. This Application seeks the Board's approval of new Retail Transmission Service
("RTS") rates to reflect the Board's approval, on an interim basis, of Hydro One's
sub-transmission ("ST") rates which became effective May 1, 2008 (EB-20070681), and the Board's Decision and Rate Order for Ontario Uniform
Transmission Rates that become effective January 1, 2009 (EB-2008-0113).

10. PowerStream is applying to recover a total of \$828,000 in connection with its
Lost Revenue Adjustment Mechanism ("LRAM") and its Shared Savings
Mechanism ("SSM") arising from Conservation and Demand Management
("CDM") programs delivered in the period 2005 to 2007. In this regard,
PowerStream proposes to collect \$828,000 from customers through a rate rider,
effective May 1, 2009 to April 30, 2010.

23 11. PowerStream accordingly applies to the Board, pursuant to section 78 of the Act24 for the following Orders:

a. an Order approving PowerStream's proposed final rates for the 2009 rate
 year, or fixing such other rates as the Board may find to be just and
 reasonable effective May 1 2009;

1 2	b.	an Order approving an updated Smart Meter rate adder, effective May 1, 2009 to April 30, 2010 to fund the continued installation of Smart Meters;
3	C.	an Order approving the clearance of balances in Smart Meter Variance
4 5		Accounts 1555 and 1556 up to December 31, 2007, for refund in the form of a rate adder effective May 1, 2009 to April 30, 2010;
6 7	d.	an Order approving clearance of the balances recorded in certain other deferral and variance accounts, as more particularly described in Exhibit
8 9		E, Tab 1, Schedule 1, by means of a rate rider for the period May 1, 2009 to April 30, 2011;
10	e.	an Order approving an updated LV charge, effective May 1, 2009;
10 11	e. f.	an Order approving an updated LV charge, effective May 1, 2009; an Order approving updated RTS rates, effective May 1, 2009;
	f.	
11	f.	an Order approving updated RTS rates, effective May 1, 2009;
11 12	f.	an Order approving updated RTS rates, effective May 1, 2009; an Order approving a rate rider, effective May 1, 2009 to April 30, 2010,
11 12 13	f. g.	an Order approving updated RTS rates, effective May 1, 2009; an Order approving a rate rider, effective May 1, 2009 to April 30, 2010, to recover LRAM and SSM amounts in connection with PowerStream's
11 12 13 14	f. g.	an Order approving updated RTS rates, effective May 1, 2009; an Order approving a rate rider, effective May 1, 2009 to April 30, 2010, to recover LRAM and SSM amounts in connection with PowerStream's CDM program;

- This Application is supported by the written evidence that is enumerated in
   Exhibit A1, Tab 1, Schedule 1 and filed with this Application. PowerStream may
   amend or supplement this written evidence prior to or during the course of the
   Board's hearing of this Application.
- 5 13. PowerStream requests the Board to give reasons, in writing, for its final decision
  and order(s) in this proceeding. This request is made pursuant to subsection
  17(1) of the *Statutory Powers Procedure Act.*
- 8 14. The following are the names and addresses of PowerStream's authorized
   9 representatives and its counsel for the purpose of serving documents on
   10 PowerStream in this proceeding:
- 11 (a) authorized representatives:
- 12 Ms. Paula W. Conboy
- 13Director of Regulatory and14Government Affairs
- 15 PowerStream Inc.
- 16Address for personal service17and mailing address:161 Cityview Boulevard18Vaughan, ON19L4H 0A9
- 20
   Telephone:
   905-532-4526

   21
   Facsimile:
   905 532-4557

   22
   E-mail:
   paula.conboy@powerstream.ca

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit A1 Tab 2 Schedule 1 Page 6 of 6

1 2 3 4 5 6 7 8		Mr. Colin A. Macdonald Director of Rates PowerStream Inc. Address for personal service and mailing address:	)	161 Cityview Boulevard Vaughan, ON L4H 0A9
9 10 11		Telephone: Facsimile: E-mail:		905-532-4649 905 532-4557 colin.macdonald@powerstream.ca
12				
13	(b)	counsel:		
14 15		Ms. Helen T. Newland Fraser Milner Casgrain LLP		
16 17 18 19 20 21		Address for personal service and mailing address:	1	Suite 3900 1 First Canadian Place 100 King Street West Toronto, ON M5X 1B2
22 23 24		Telephone: Facsimile: E-mail:		416-863-4471 416-863-4592 helen.newland@fmc-law.com
25				
26	Dated Octobe	r 10, 2008 at Toronto, Ontaric	)	
27 28 29 30			<b>Power</b> by its o Fraser	Stream Inc. counsel Milner Casgrain LLP <u>H.T. Newland</u> H.T. Newland
30 31			per:	H.T. Newland

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1		SPECIFIC APPROVALS REQUESTED
2	Powe	rStream requests Orders approving:
3	1.	PowerStream's forecast Base Revenue Requirement for the Test Year or such
4		other Base Revenue Requirement as the Board may find reasonable for the Test
5 6		Year, in each case adjusted, as required, to update the rate of return on equity ("ROE") and short-term debt rate as described in Exhibit F and corresponding
7		final rates, effective May 1, 2009;
8	2.	the clearance of balances in Smart Meter Variance Accounts 1555 and 1556 by
9		means of a rate adder, a credit to metered customers of \$0.19 per month
10		effective May 1, 2009 to April 30, 2010;
11	3.	the clearance of the balances recorded in certain deferral and variance accounts
12		by means of a class-specific rate rider effective May 1, 2009 to April 30, 2011;
13	4.	an updated rate adder of \$1.04 per customer per month, effective May 1, 2009 to
14		April 30, 2010, to fund the ongoing installation of Smart Meters;
15	5.	an updated LV charge, effective May 1, 2009;
16	6.	new RTS rates, effective May 1, 2009;
17	7.	recovery of \$828,000 in connection with PowerStream's LRAM and SSM, arising
18		from CDM programs delivered in the period 2005-2007, to be collected by means
19		of class-specific rate riders, effective May 1, 2009 to April 30, 2010; and
20	8.	current (i.e., 2008) rates as interim rates, effective May 1, 2009, if and only if the
21		preceding approvals can not be issued in time to implement final rates, effective
22		May 1, 2009.

#### ADMINISTRATIVE DOCUMENTS

2 The following administrative documents, specified in Section 2.2.1 of the Filing3 Requirements, are included in Appendix 1 of this Application:

- 4 PowerStream's Electricity Distribution License
- 5 Draft Issues List
- 6 Decisions/Procedural Orders/Motions/Correspondence
- 7 Accounting Orders
- 8 List of Non-Compliance With Uniform System of Accounts
- 9 Map of Distribution System
- 10 List of Neighbouring Utilities
- Explanation of Host or Embedded Utilities
- 12 Utility Organization Charts
- 13 Corporate Entities Relationship Chart
- Planned Changes in Organization/Operational Structure
- Status of Board Directives
- Company Policies and Procedures on Electricity Services and Service
   Charges
- List of Proposed Changes to Policies and Procedures on Electricity
   Services and Service Charges.
- Proposed Witness Panels and related *Curricula Vitae*

#### SUMMARY OF APPLICATION

#### 2 INTRODUCTION

1

PowerStream's application for 2009 rates has been guided by the Board's Filing
Requirements and the 2006 EDR Handbook. It is based on a 2009 forward Test Year.
Accordingly, the rates for which approval is sought are based on a revenue requirement
that is underpinned by forecasts of 2009 revenue and expenses.

PowerStream was created on June 1, 2004 by the amalgamation of Hydro Vaughan Distribution Inc. ("Hydro Vaughan"), Markham Hydro Distribution Inc. ("Markham Hydro"), and Richmond Hill Hydro Inc. ("Richmond Hill Hydro"). PowerStream completed the acquisition of Aurora Hydro Connections Limited ("Aurora Hydro") on November 1, 2005 thus adding a fourth municipality to the service territory.

12 PowerStream has grown and continues to grow, through the addition of new customers.

PowerStream is pursing opportunities to merge with other distributors and seeks to be one of the largest and most efficient regulated electric utilities in the Province. In 2008 PowerStream was in exclusive merger discussions with Barrie Hydro Distribution Inc. ("Barrie Hydro"). The merger has been approved by the Boards of Directors and Shareholders of both PowerStream and Barrie Hydro. PowerStream will be submitting a MAADs Application in October, 2008 and will be seeking to make the merger effective as soon as practical.

There have been recent increases in bad debt. Management has taken steps to monitor
large accounts, especially during the current economic uncertainties.

PowerStream strongly supports government and regulatory initiatives and is an activeparticipant in most of the Board's consultative processes.

#### 24 **PREVIOUS RATE APPLICATIONS: 2006-2008**

In October 2005, PowerStream filed two applications for 2006 rates: one for PowerStream and one for Aurora Hydro. The Board issued decisions on the PowerStream and Aurora Hydro applications on April 28<sup>th</sup> and 12<sup>th</sup> 2006, respectively, and new rates for all four rate zones (Markham, Richmond Hill, Vaughan and Aurora) were implemented, effective May 1, 2006. Service charges in the four rate zones were standardized at the same time.

On May 18, 2006, the Company sought a review of certain aspects of the Board's April 28<sup>th</sup> decision on the PowerStream application. On June 23, 2006, the Board issued a decision approving the relief sought by PowerStream. A September 22, 2006 rate order gave effect to the Board's June 23<sup>rd</sup> decision in the form of approval of a rate rider for the period November 1, 2006 to April 30, 2007.

On February 9, 2007, PowerStream filed an application for approval of 2007 rates, effective May 1, 2007. The rates proposed in that application were developed by adjusting 2006 rates for PowerStream's four rates zones in accordance with the 2007 EDR Model (the "2007 Adjustment"). The application was approved by the Board on April 12, 2007.

41 On March 7, 2007, PowerStream filed an application that requested the Board to, in 42 effect, "undo" the 2007 Adjustment and approve a new set of 2007 rates, adjusted for 43 harmonization and cost reallocation across PowerStream's four rate zones and, then, 44 further adjusted in accordance with the 2007 EDR Model. The harmonization aspect of 45 this application fulfilled PowerStream's commitment to the Town of Richmond Hill and 46 responded to the Board's direction in its decision on PowerStream's 2006 rate 47 application to harmonize rates across the four rate zones. The cost reallocation aspect 48 of the March 7<sup>th</sup> application reflected PowerStream's view that it was in its ratepayers' 49 best interests to begin the transition to rates based on fully allocated costs, sooner rather 50 than later, even before the Board's response to the filing of cost allocation studies by 51 individual utilities.

In a decision dated July 26, 2007, the Board approved PowerStream's harmonization
 and cost reallocation application and approved new distribution and retail transmission
 rates and loss factors, effective November 1, 2007, to reflect this decision.

55 On November 23, 2007, PowerStream filed an application for approval of 2008 rates, 56 effective May 1, 2008. This application was filed using the Board's "EDR" model and in 57 accordance with the Board's guidance on "2nd Generation Incentive Regulation". The 58 application incorporated revised retail transmission service rates in accordance with the 59 Board's October 29, 2007 letter regarding "Ontario Uniform Transmission Rate Order, 60 EB-2007-0759: Effect on Retail Transmission Rates." The application also sought 61 approval of an updated Smart Meter rate adder.

The Board approved PowerStream's application in a decision issued on March 17, 2008.
A rate order that reflected this decision was issued on April 17, 2008 (included in
Appendix 1, Schedule 3).

#### 65 SCOPE OF 2009 RATE APPLICATION

66 This Application seeks approval of electricity distribution rates for 2009, effective May 1, 67 2009. The proposed rates are underpinned by 2009 forecasts of operations, 68 maintenance and administration ("OM&A") expenses, return on rate base, amortization 69 expense and payments in lieu of taxes ("PILs"). The sum of these amounts is 70 PowerStream's "2009 Service Revenue Requirement." PowerStream's "2009 Base 71 Revenue Requirement" is defined as: (i) PowerStream's "2009 Service Revenue 72 Requirement"; less (ii) certain non-rate revenue amounts, referred to herein as 73 "Revenue Offsets."

74 The value of PowerStream's 2009 rate base has been calculated as the sum of: (i) the 75 net book value ("NBV") of the average of the PowerStream assets opening and closing 76 balances for 2009; and (ii) an allowance for working capital (underpinned by a forecast 77 of the 2009 "Cost of Power"). The return on rate base, rate of return on equity ("ROE") 78 and short-term debt rates have all been determined in accordance with the Board's 79 Report of the Board on Cost of Capital and Incentive Regulation (December 20, 2006) 80 ("Cost of Capital Report"). As required by the Board, the long-term debt rate has been 81 set at PowerStream's actual weighted average debt rate since this value is lower than 82 the deemed rate.

PILs have been determined in accordance with the methodology prescribed in the 2006
EDR Handbook. "Large Corporation Tax" has now been eliminated and is therefore no
longer included in the PILs calculation.

In order to forecast 2009 revenue at existing rates, PowerStream prepared load (i.e., energy consumption and demand) and customer forecasts for 2009. The methodology used for those forecasts was developed by PowerStream and is described, in detail, in Exhibit C1, Tab1, Schedules 1-3. Current rates (i.e., those in effect as of May 1, 2008) were applied to the forecast output in order to determine a "Forecast Revenue at Current Rates". The difference between this amount and PowerStream's 2009 Base Revenue Requirement is equal to PowerStream's "2009 Revenue Deficiency." In addition to the recovery of the 2009 Base Revenue Requirement, PowerStream is
also seeking to recover from ratepayers or provide a credit to ratepayers, as the case
may be, amounts associated with:

- 96 (i) the clearance of certain regulatory assets accounts;
- 97 (ii) the clearance of certain other variance and deferral accounts;
- 98 (iii) LRAM and SSM for 2005 to 2007; and
- 99 (iv) PowerStream's Smart Meter Investment Program.

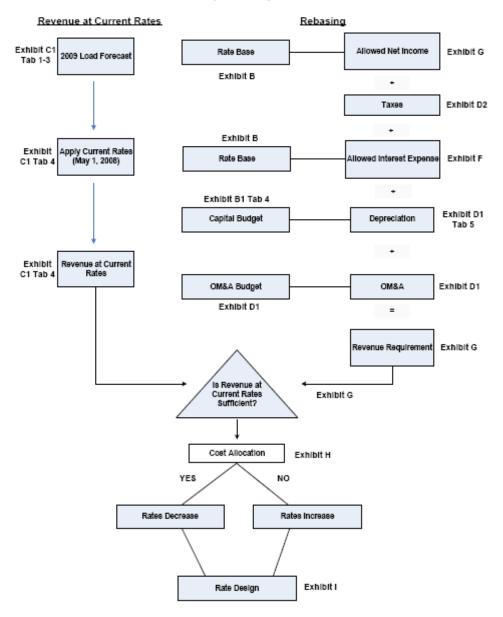
100 Items (i)-(iii), above, are proposed to be recovered from ratepayers in the form of rate 101 riders, as part of the variable distribution charge. Item (iv) is proposed to be recovered 102 from ratepayers in the form of a rate adder, as part of the fixed monthly charge.

- 103 The methodology that PowerStream used to derive the rates for which it seeks approval
- 104 in this application is consistent with the Filing Requirements and is depicted in Figure 1,

105 on the following page.

#### Figure 1 Process for Rate Application

Revenue Sufficiency/Deficiency Calculation



This diagram shows the process followed for the rate application. On the left side is the calculation of "revenue at current rates." On the right side is the "rebasing" calculation. Beside each step is the process is a reference to the appropriate Exhibit and Tab.

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109 **INCREASE IN REVENUE REQUIREMENT FOR 2009** 

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111 An analysis of the drivers of the increase in PowerStream's 2009 Revenue Requirement,

- 112 relative to 2008, is provided in Exhibit G.
- 113
- 114

## Table 1: PowerStream Revenue Requirement (\$ Millions)

	2006 OEB Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
OM&A Expenses	38.3	38.8	42.7	39.7	45.1
Depreciation	26.6	28.2	29.8	33.1	36.6
Target Net Income	15.9	16.0	16.7	17.1	18.2
Interest	16.3	16.4	17.1	17.5	18.7
Taxes	11.3	9.9	10.9	7.7	9.0
Service Revenue Requirement	108.4	109.3	117.2	115.1	127.6
Revenue Offsets	6.1	7.0	7.4	7.4	6.6
Base Revenue Requirement	102.3	102.3	109.8	107.7	121.0

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117 The principal reasons for the increases are summarized below:

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119

PowerStream's rate base increased by \$101,760,000 or 23 percent between • 120 2006 Board-approved and 2009, an average annual increase of 7.7 percent. 121 This increase reflects: (i) investments in new distribution plant to serve increased 122 demand; (ii) upgrades of existing plant; (iii) general plant purchases; (iv) the 123 installation of Smart Meters (to the end of 2007); and (v) an allowance for

working capital. Significant drivers of the increase in rate base are the
installation of one Transformer Station and the expansion of another, and the
construction of a new Head Office. These matters are discussed in detail in
Exhibit B1, except for Smart Meters which are addressed in Exhibit I, Tab 3.

- 129 PowerStream's OM&A expenses are forecast to increase by \$6,815,000 or 18 130 percent between 2006 Board-approved and 2009, an average annual increase of 131 6.0 percent. The principal drivers of this increase are an increase in number of 132 employees that are required to provide service to a growing number of 133 customers, increased labour costs and a number of new initiatives such as: a 134 program to hire Apprentices to renew the outside workforce; and consulting costs 135 related to the requirement for PowerStream to be compliant with International 136 Financial Reporting Standards (IFRS). These matters are discussed, in detail, in 137 Exhibit D1.
- 138

128

PowerStream's amortization expenses are forecast to increase by \$9,977,000 or
 38 percent between 2006 Board-approved and 2009, an average annual
 increase of 12.7 percent, reflective of the asset additions over these years.

142

143 Partially offsetting the increases in PowerStream's rate base, OM&A and 144 amortization expenses are a reduction, relative to 2006, in its cost of capital due 145 to the inclusion of short-term debt in the capital structure and a lower ROE 146 calculated using the April 2008 Consensus Forecast. As discussed in Exhibit F, 147 PowerStream expects that the Board will recalculate the ROE using the January 148 2009 Consensus Forecast. This revised calculation will then be used for the 149 purpose of determining PowerStream's 2009 Revenue Requirement. There is 150 also a reduction in PILs relative to 2006 Board approved as outlined in Exhibit 151 D2.

153 OTHER CHANGES AFFECTING RATES 154 155 In addition to changes in the Base Revenue Requirement, there are a number of other 156 factors that will affect the quantum of PowerStream's 2009 distribution rates: 157 158 Distribution rates will decrease as a result of clearance of the balances recorded • 159 in certain deferral and variance accounts. If approved, these clearances will 160 result in a \$27,900,000 credit to customers over the two year period May 1, 2009 161 to April 30, 2011. The credit to customers is proposed to be in the form of a rate 162 rider. 163 164 • Distribution rates will increase as a result of the forecast LV amount of 165 \$1,452,000 and updated LV charge. 166 As directed by the Board in its letter dated October 29, 2007, PowerStream 167 • adjusted its Retail Service Transmission ("RTS") rates to incorporate the new 168 169 Uniform Transmission Rates for Ontario transmitters. PowerStream's RTS rates 170 were approved by the Board in its March 17, 2008 Decision (EB-2007-0850) and 171 the rates went into effect effective May 1, 2008. In this Application, RTS rates 172 have been further updated to reflect the Board's approval, on an interim basis, of 173 Hydro One's sub-transmission rates effective May 1, 2008 (EB-2007-0681) and 174 the Board's Decision and Rate Order for Ontario Uniform Transmission Rates 175 that become effective January 1, 2009 (EB-2008-0113). 176 PowerStream is seeking approval to recover, in the form of rate riders, an LRAM • amount of \$430,000 and an SSM amount of \$398,000, both in connection with 177 178 PowerStream's CDM programs in the period 2005 to 2007. 179 180 PowerStream is seeking approval to clear the balances in Smart Meter variance • 181 accounts to December 31, 2007 and implement an associated rate adder 182 effective May 1, 2009 to April 30, 2010. This will be a credit of \$0.19 per month

- 183for all metered customers and will return a total of \$577,000 to customers.184PowerStream is also seeking approval to implement an updated Smart Meter185rate adder of \$1.04 per customer per month, effective May 1, 2009 to April 30,
- 186 2010 in order to fund the ongoing installation of Smart Meters.

#### 187 LIST OF PROPOSED RATES AND CHARGES

Tables 1 to 3 set out the proposed rates, smart meter adders and various rate riders for
which approvals are sought in this application. PowerStream has completed a "proof"
that the proposed rates will provide the 2009 Base Revenue Requirement in Exhibit I,
Tab 6, Schedule 6.

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#### Table 1: Summary of Current and Proposed Rates

		Current 2008 Rates		Proposed 2009 Rates	
Customer Class	Billing Deter- minant	Fixed (\$/customer/ month)	Variable (\$/billing determinant)	Fixed (\$/customer/ month)	Variable (\$/billing determinant)
Residential	kWh	13.23	0.0131	13.34	0.0140
GS<50 kW	kWh	29.91	0.0114	29.55	0.0124
GS>50 kW	kW	302.94	2.3627	302.58	2.7568
GS>50 kW – Legacy	kW	3,314.46	1.6590	Propose to eliminate	
Large Use	kW	8,979.30	1.3036	3,978.94	0.4686
Unmetered Scattered Load	kWh	14.35	0.0114	14.35	0.0141
Sentinel Lights	kW	2.01	6.0842	2.09	8.9101
Street Lighting	kW	0.84	3.4686	0.87	4.8335

196 197

197 Notes:

198 1. Existing rates are those in effect May 1, 2008.

2. Detailed proposed tariff sheets are included in Exhibit I, Tab 6, Schedule 2.

3. The fixed rates shown include the Smart Meter adder. Variable rates represent the distribution portion only, before rate riders.

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#### Table 2: Smart Meter Rate Adder

	Current	Proposed 2009 Rate Adders			
	2008 Rate Adder	Ongoing Program Funding (a)	Recovery – Meters Installed to End of 2007 (b)	Final, As Proposed (a) + (b)	
Smart Meter rate adder (per customer, per month)	\$1.21	\$1.04	(\$0.19)	\$0.85	

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206 Notes:

1. The Smart Meter rate adder is included in fixed charges presented in Table 1

 The Smart Meter rate adder applies to all metered customer classes: Residential, GS<50 kw, GS>50kw and Large Use.

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#### Table 3: Rate Riders

Customer Class	Class Deter- minant	Current 2008 Rate Riders	Proposed 2009 Rate Riders	
			Reg.	LRAM/SSM
			Liability	
			Credit	
Residential	\$/kWh	0.00	(0.0019)	0.0002
GS<50 kW	\$/kWh	0.00	(0.0019)	0.0001
GS>50 kW	\$/kW	0.00	(0.8029)	0.0282
GS>50 kW -	\$/kW	0.00	Propos	se to eliminate
Legacy				
Large Use	\$/kW	0.00	(1.1177)	0.0000
USL	\$/kWh	0.00	0.0011	0
Sentinel	\$/kW	0.00	(3.2643)	0
Lights				
Street	\$/kW	0.00	(0.7314)	0
Lighting				

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214 Notes:

- These rate riders are not included in the variable charges in Table 1 and are shown as separate lines in rate schedules. Regulatory liability amounts are proposed to be returned to customers over two years and the LRAM/SSM amounts collected over one year.
- 218 2. Existing rates are those in effect May 1, 2008.
  - 3. Detailed proposed tariff sheets are included in Exhibit I, Tab 6, Schedule 2.

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# BILL AND RATE IMPACTS

Tables 4, 5 and 6, below, set out the monthly bill impacts of PowerStream's application, for a "typical" customer in each rate class (see Note 2 below Table 4). None of the percent changes exceed the ten percent mitigation threshold specified in Section 13.1 of the 2006 EDR Handbook.

Table 4: Impacts on Total Bill for Typical Customer

	Consumption per	Demand per	Typical Bill		
Class	Class customer, kwh customer, kw			\$ Change	% Change
Residential	1,000	-	\$	(0.36)	-0.3%
GS<50	2,000	-	\$	(1.34)	-0.6%
GS>50	80,000	250	\$	(64.22)	-0.8%
Large Use	2,800,000	7,350	\$	(18,639.47)	-7.6%
USL	500	-	\$	2.19	3.7%
Sentinel Lighting	180	1	\$	(0.10)	-0.5%
Street Lighting	897,251	2,477	\$	3,874.83	2.7%

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## 234 Notes:

- 1. Includes fixed and variable distribution charges, smart meter rate adder, regulatory liability credit rate rider and LRAM/SSM recovery rate rider.
- 237
  2. Consumption levels are from the "typical customer" amounts used in the 2008 rate model provided
  238
  by the OEB, except for street lighting which reflects the number of connections for PowerStream.
- 239 3. Includes consumption adjusted by proposed loss factors. See Exhibit D1, Tab 1, Schedule 9 for a
   240 discussion on loss adjustment factors.

241 4. Includes GST at 5%.

244

## Table 5: Impact on the Distribution Portion of Bill for Typical Customer

Olana	Consumption per	Demand per	Typical Bill - Distribution charge			
Class	customer, kwh	customer, kw	\$ Change		% Change	
Residential	1,000	-	\$	(0.69)	-2.6%	
GS<50	2,000	-	\$	(1.96)	-3.7%	
GS>50	80,000	250	\$	(95.51)	-10.7%	
Large Use	2,800,000	7,350	\$	(19,352.71)	-104.3%	
USL	500	-	\$	1.90	9.5%	
Sentinel Lighting	180	1	\$	(0.14)	-2.8%	
Street Lighting	897,251	2,477	\$	3,483.33	5.6%	

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Notes:

 Includes fixed and variable distribution charges, smart meter rate adder, regulatory liability credit rate rider and LRAM/SSM recovery rate rider.

 Consumption levels are from the "typical customer" amounts used in the 2008 rate model provided by the OEB, except for street lighting which reflects the number of connections for PowerStream.

## Table 6: Impact on the Delivery Portion of Bill for Typical Customer

Class	Consumption per	Demand per	Typical Bill - Distribution charge			
Class	customer, kwh	n customer, kw		\$ Change	% Change	
Residential	1,000	-	\$	(0.19)	-0.6%	
GS<50	2,000	-	\$	(0.95)	-1.4%	
GS>50	80,000	250	\$	(49.16)	-3.2%	
Large Use	2,800,000	7,350	\$	(17,751.88)	-42.9%	
USL	500	-	\$	2.15	9.1%	
Sentinel Lighting	180	1	\$	(0.07)	-1.1%	
Street Lighting	897,251	2,477	\$	3,832.83	5.7%	

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#### 59 Notes:

2601. The "delivery" portion includes all distribution charges, as defined in Table 5 above and261transmission charges

# 262 2. Consumption levels are from the "typical customer" amounts used in the 2008 rate model provided 263 by the OEB, except for street lighting which reflects the number of connections for PowerStream.

#### **REVENUE DEFICIENCY**

2 The components of PowerStream's 2009 Revenue Deficiency are set out below in Table 1.

3 The revenue deficiency is \$8,260,000.

#### 4

## 5

6

## Table 1: 2009 Revenue Deficiency

		%	\$000
1	Rate Base		542,396
2	Cost of Capital	6.81	
3	Return on Rate Base (A)		36,919
4	Distribution Expenses		45,098
5	Amortization		36,540
6	Payment in Lieu of Taxes		9,040
7	2009 Service Revenue Requirement (B)		127,597
8	Less Revenue Offsets		(6,568)
9	2009 Base Revenue Requirement (C)		
			121,029
10	Forecast 2009 Revenue at Current Rates		112,769
11	2009 Revenue Deficiency		(8,260)

7 8 9

10

A = Line 1 X Line 2 B = Lines 3 + 4 + 5 + 6

C = Lines 7 - 8

## CAUSES OF REVENUE DEFICIENCY

2 The underpinning causes of the 2009 Revenue Deficiency are enumerated in Table 1 below.

3 The "Evidentiary References" column provides the sources for detailed explanations of the

4 deficiency in each row of the table.

5

## Table 1: Causes of Revenue Deficiency

Cause	Impact on Revenue Requirement (\$000)	Evidentiary Reference
Increase in Amortization Expense	(9,977)	D1-1-5
Increase in Distribution Expenses	(6,815)	D1-1-1
Increase in Return on Capital	(4,767)	G-1-1
Load Growth	10,518	C1-1-4
Decrease in PILs	2,310	D2-1-2
Increase in Revenue Offsets	471	C2-1-1
Total 2009 Revenue Deficiency	(8,260)	G-1-1

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#### **BUDGET GUIDELINES**

#### 2 OM&A BUDGET

3

1

4 PowerStream prepares a two-year OM&A budget as a matter of good business practice 5 and as part of the rate application process. In June 2007, a document entitled "2008-6 2009 OM&A Budget Guideline's ("Budget Guidelines"), pertaining to the 2008 and 2009 7 budget years, was distributed to all PowerStream Directors and Managers. The Budget 8 Guidelines mandated as follows: (i) general and step (i.e. merit-related) increases in 9 wages and benefits for existing employees; (ii) no new hires unless approved by the 10 Executive Management Team (EMT); and (iii) a decrease in the expenses not related to 11 headcount (such as purchased services) of five percent, relative to 2008. The Budget 12 Guidelines are provided in Appendix 1, Schedule 16.

13

Individual departmental OM&A budgets were completed in early September 2007 and were then reviewed by PowerStream's EMT. In December 2007, the EMT's budget recommendations were forwarded to PowerStream's Audit & Finance Committee (a subcommittee of PowerStream's Board of Directors) and, subsequently, to PowerStream's full Board of Directors, for approval. For purposes of this Application, the 2009 OM&A budget was updated as outlined in Exhibit D1, Tab 1, Schedule 1.

20

21 The OM&A budget process is described in detail in Exhibit D1, Tab 1, Schedule 2.

#### 22 CAPITAL BUDGET

23 PowerStream prepared a two-year capital budget (2008 and 2009) and a "Five Year 24 Capital Plan, 2008 to 2012" ("Five Year Capital Plan"). The process that led to the 25 preparation of the capital budget and five-year capital plan was initiated by a request. 26 issued to PowerStream's Directors and Managers in early 2007, for identification of 27 proposed capital projects. Of the proposed capital projects submitted, certain projects 28 were considered "mandatory" due to their legal or statutory issues and were more readily 29 accepted as part of the 2008 and or the 2009 capital budgets. Examples would include 30 the connection of new customer services or the requirement to relocate distribution plant to allow for the widening of a roadway. Other capital projects were subjected to a more
 extensive justification and prioritization process by PowerStream's Engineering
 Department. This process is described in detail in Exhibit B1, Tab 2, Schedule 1.

34

Table 1 summarizes the projects included in the Five-Year Capital Plan, divided into five
 categories: sustainment capital, development capital, operations capital, miscellaneous
 capital and Smart Meter capital.

- 38
- 39

## Table 1: Five Year Capital Plan – Summary (\$000's)

40 41

Capital Category	2008	2009	2010	2011	2012
Sustainment	19,401	19,618	23,638	31,050	24,930
Development	23,728	41,019	32,614	24,124	59,225
Operations	10,080	7,674	6,906	6,271	6,949
Miscellaneous	6,243	3,955	11,585	8,079	7,021
Smart Meters	6,994	12,975	12,616	0	0
Total	66,446	85,241	87,359	69,524	98,125

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## Sustainment Capital

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Sustainment capital consists principally of projects that are intended to maintain or improve distribution system reliability. Examples of such projects are: planned line replacements and upgrades, enhancements to existing transformer stations, items identified through the distribution system asset replacement program, system voltage conversions and switchgear replacements and upgrades.

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## 52 • Development Capital

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54 Development capital comprises projects that are mandatory in nature such as the 55 connection of new customer services, the installation of new transformer stations and 56 the relocation of distribution plant to accommodate road widening.

57	
58	Operations Capital
59	
60	Operations capital projects relate to the safe and efficient operation of the distribution
61	system. Examples of such projects include automation of system operations and
62	unplanned asset replacement.
63	
64	Other Miscellaneous Capital
65	
66	Other miscellaneous capital includes information technology installations and
67	enhancements, including the Customer Information System and Financial System.
68	
69	Smart Meters
70	
71	Smart Meter capital is spent to fulfill PowerStream's obligation to install Smart Meters
72	and supporting infrastructure, for all customers by the end of 2010.

## **CHANGES IN METHODOLOGY**

PowerStream's 2006 rate application was based on a historic test year. Accordingly,
PowerStream needed to make a number of process changes and develop new "tools", in
anticipation of the 2009 rate application. These changes included:

- a Rates Model to store and present data, and to do the calculations necessary to
   determine revenue requirement and rates;
- a Load and Customer Forecasting Model;
- an update to the process for allocating burdens (overheads) to capital
   expenditures and operating expenses; and
- an update to the to Cost Allocation Study.

PowerStream used the cost allocation model and Smart Meter rate adder modelpreviously developed by the Board.

13 PowerStream utilized a PILs model provided by Elenchus Research Associates (ERA).

14 The PILs calculations were reviewed by Deloitte. ERA also reviewed and provided

15 advice on the rates and forecasting models referred to above.

1	FINANCE
2 3	The following financial documents, which are specified in section 2.2.3 of the Filing Requirements, are included in Appendix 1 of this Application:
4	• audited financial statements for 2007 (Historical Year);
5	• pro forma financial statements for the Bridge Year (2008)
6	• pro forma financial statements for the Test Year (2009);
7 8	<ul> <li>a reconciliation of audited financial statements with the financial data presented in this application for rate-making purposes;</li> </ul>
9	<ul> <li>rating agency reports; and</li> </ul>
10	

10 • PowerStream's 2007 Tax Return.

## RATE BASE

## 2 OVERVIEW

1

PowerStream is seeking the Board's approval of a rate base of \$542M for 2009,
consisting of \$459M in net fixed assets and an \$83M working capital allowance. The
Board-Approved rate base for 2006 was \$440M.

6 The \$102M (23%) increase is underpinned by:

- PowerStream's capital investment process that is described in Exhibit B1,
  Tab 2, Schedule 1;
- PowerStream's capitalization policy and burden allocation process that is
   described in Exhibit B1, Tab 3, Schedule 1;
- PowerStream's capital additions in 2006 (actual), 2007 (actual for the historical year), 2008 (estimate for the bridge year), and 2009 (forecast for the test year) as provided in Exhibit B1, Tab 4, Schedules 1 and 2;
- PowerStream's three major capital investments that are described in Exhibit
   B1, Tab 5, Schedules 1 to 4;
- PowerStream's Five Year Capital Plan, 2008 to 2012, that is provided in
   Exhibit B1, Tab 6, Schedule 1; and
- PowerStream's Working Capital Allowance that is outlined in Exhibit B2, Tab
  1, Schedules 1 to 3.

Table 1 on the next page provides the year-over-year changes in rate base values.
PowerStream's year-over-year analysis of asset additions is provided in Exhibit B1, Tab
7, Schedule 1.

	т	able 1: Rate B	ase (\$'000)		
	2006 Board- Approved	2006 Actual	2007 Actual	2008 Estimate	2009 Forecast
Net Fixed Assets (a)	370,270	367,978	382,885	415,790	459,051
Working Capital Allowance (b)	70,365	77,168	79,866	83,208	83,345
Rate Base (a) + (b)	440,635	445,147	462,751	498,998	542,396
\$ Change Year-over- Year		4,512	17,604	36,267	43,398
% Change Year-over- Year		1%	4%	8%	9%
\$ Change 2009 to 2006 EDR Approved					101,761
% Change 2009 to 2006 EDR Approved					23%

24

### **CAPITAL INVESTMENT PROCESS**

#### 2 INTRODUCTION

1

PowerStream has a strategic plan that sets out specific, measurable, actionable goals
with clear expectation of outcomes. This plan is reviewed regularly and, in particular, it
is subject to a formal review and revision annually – in February – by PowerStream's
Board of Directors and its Executive Management Team ("EMT").

All current and planned corporate goals and initiatives, including the capital investment
process, are aligned with the strategic plan. A critical component of PowerStream's
strategic planning process is its Five Year Capital Plan; a copy of the current version,
2008-2012, is provided in Exhibit B1, Tab 6, Schedule 1.

The next section of this Exhibit describes the capital investment planning cycle; namely, a rolling five-year period. The current cycle covers the 2008-2012 period; work began in 2007. Capital expenditures were budgeted in detail for 2008 (the bridge year) and 2009 (the test year). These budgets were further refined in 2008 for the purposes of this 2009 EDR Application.

16 The third section of this Exhibit describes PowerStream's distribution system planning 17 process. This is a seven-step process that includes an asset condition assessment 18 program for asset management purposes. The outcome is an annual Distribution 19 System Planning Report.

The final section of this Exhibit describes the capital investment budget process. Capital expenditure envelopes are developed annually for a five-year period and base capital expenses are segregated from extraordinary capital expenses.

### 24 CAPITAL INVESTMENT PLANNING CYCLE

PowerStream's capital investment planning cycle is a rolling five-year period. The process starts each year with a review and revision – as required – of PowerStream's strategic plan by the Board of Directors and the EMT, in early February, and culminates with the approval of the capital investment budgets by the Board of Directors in December.

The current cycle covers the period 2008-2012 for which planning began in 2007. The outcome included detailed budgets for 2008 (the bridge year) and 2009 (the test year), that were approved in December 2007. These budgets were further refined in 2008 for the purposes of this 2009 EDR Application.

34 Figure 1 on the next page depicts the capital investment five year planning cycle. The 35 budget for the first year of this cycle is detailed and contains the most accurate 36 information: alternatives have been considered, preferred options have been chosen, 37 and cost estimates completed. In the second year of this cycle, specific activities are 38 identified although alternatives and cost estimates have not been as rigorously 39 developed as in the first year of the cycle. In years three through five, major projects are 40 identified but there is significantly less detail, alternatives may not have been identified, 41 designs are not be final, and cost estimates are based on historical per unit costing with 42 a significant contingency factor.



## Figure 1: PowerStream's Perpetual Planning Cycle

slightly less specific than the current year. Initiatives and goals identified and costed with less certainity than current year. significantly less detail supporting information. Best estmate based on current information available.

43

### 44 • Key Milestones

The key milestones and dates applicable to the capital investment planning cycle for2008-2012 were the following:

- The Board of Directors and the EMT reviewed the strategic plan, identified the
   corporate goals and initiatives, and approved both February 2007
- 49 The Finance Department developed the 2008-2012 financial forecast and the
   50 2008 and 2009 capital budget envelopes April 2007.
- The 2008/2009 Capital Investment Budgets were prepared as follows:
- 52 The EMT approved the Budget Guidelines June 2007
- 53 The Budget Guidelines were communicated to all staff June 2007
- 54 Staff prepared the two-year budgets (2008/2009) September 2007
- The 2008/2009 Capital Investment Budgets were approved as follows:

6 7	<ul> <li>The EMT approved the budgets for presentation to the Audit and Finance</li> <li>Committee of the Board of Directors – September 2007.</li> </ul>
8	<ul> <li>The Audit and Finance Committee approved the budgets for presentation</li> </ul>
9	to the Board of Directors – September 2007
0	<ul> <li>The Board of Directors approved the budgets - December 2007.</li> </ul>
1	Strategic Plan and Corporate Goals
52	PowerStream's Board of Directors and EMT review and revise, as required, the strategic
3	plan. They then identify corporate goals and initiatives that are aligned with the plan.
4	They also revisit and affirm or adjust PowerStream's vision and mission statement.
5	PowerStream's vision is:
6	• "We will be an innovative and socially responsible leader in power distribution
57	and related services in Ontario."
58	PowerStream's mission statement is:
59	• "To deliver reliable power and related services safely and efficiently to support
70	our customers' quality of life and to provide value to our shareholders."
71	For 2007 and 2008, PowerStream's corporate goals and initiatives pertain to the
2	following topics (Although the 2009 goals and initiatives have not yet been developed,
3	they are expected to be in categories very similar to 2008):
4	1. Corporate Governance
75	2. Successful Integration Plans
6	3. Advocacy
7	4. Corporate Culture
8	5. Mergers and Acquisitions Strategy
'9	6. New Business Opportunities
0	7. Performance Improvement Measures

- 81 8. Optimizing System Reliability, Performance and Profitability
- 82 9. Green (position PowerStream as a "green" enterprise).

### 83 FIVE YEAR FINANCIAL FORECAST

The corporate goals and initiatives are used in PowerStream's business planning process during the second and third quarter of each year. The key deliverables of the business planning process are:

- a Five Year Financial Forecast
- an updated Distribution System Planning Report (which includes an Asset
   Condition Assessment and Plans for New Transformer Station Capacity).
- 90 a Five Year Capital Plan
- the OM&A and Capital Budgets

92 The EMT determines the timeline for the OM&A and Capital Budgets. The schedule 93 allows staff adequate time to prepare budgets, the EMT appropriate time to review 94 the outcomes and Finance staff time to "package" information for the Audit & Finance 95 Committee and the Board of Directors. The Corporate Finance department prepares 96 Budget Guidelines that provide personnel with their responsibilities and detailed 97 methodology, set out the assumptions for budgeting purposes, and highlight the risks 98 and the corresponding mitigation measures. Corporate Finance also sets the 99 "budget envelope:" that is, the range within which the budgets can be developed in 100 order to meet PowerStream's deemed return on equity or "ROE."

101 The EMT reviews and approves or modifies the Budget Guidelines in June after 102 which the budget process begins in earnest. Corporate Finance analyzes past (i.e. 103 actual) financial results in detail and assists departments to develop their budgets as 104 required. Each department develops a detailed OM&A budget of its own for the first 105 two years of the planning cycle.

106The Engineering department also develops a detailed capital budget for the same107two years, based on its review and prioritization of capital projects-in consultation

with each department. All budgets comply with the Budget Guidelines and, inparticular, the budget envelopes.

110 The Corporate Finance Department combines the department-specific OM&A 111 budgets into a single OM&A Budget for PowerStream. The Chief Financial Officer 112 (CFO) with assistance from Corporate Finance, finalizes the OM&A and Capital 113 Budgets for presentation to the EMT. The EMT reviews and approves or modifies 114 each budget. The CFO then provides the Audit and Finance Committee of the 115 Board of Directors with a budget status report, in September. This committee 116 reviews and approves or modifies each budget for presentation to the Board of 117 Directors in December; the latter likewise reviews and approves or modifies each 118 budget.

### 120 DISTRIBUTION SYSTEM PLANNING PROCESS

PowerStream compiled its first annual Distribution System Planning Report (DSPR) in
2006. The 2007 DSPR is based on planning philosophies approved by the EMT. It
describes how PowerStream plans to do the following:

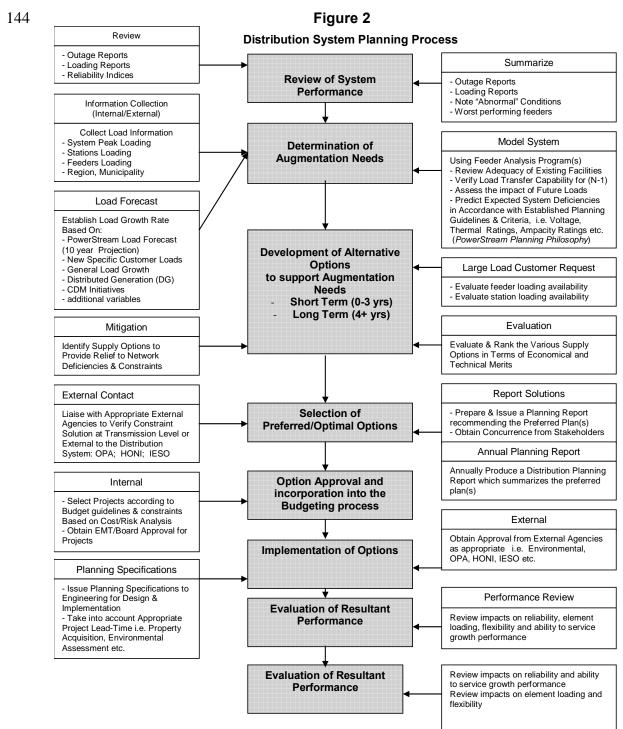
- Assess and record the nature, location, condition and performance of the assets
   comprising its distribution system;
- 126 2. Develop and implement plans for the augmentation of the distribution system;
- 1273. Develop and implement plans for the refurbishment or replacement of assets that128 have reached the end of their useful lives; and
- 4. Develop contingency plans to deal with events that have a low probability of
  occurring but that are nevertheless plausible and, if they were to occur, would
  have a substantial impact on customers.

132 Distribution system planning can be defined as a rational process comprising field 133 measurements and analytical activities, which collectively ensure that specifications and 134 authorization, including appropriate lead times, are available for the most economic 135 expansion or modification of the distribution system to meet customer requirements.

Distribution system planning is a continuous process. Load growth and reliability are
evaluated on an ongoing basis to determine optimal solutions that are then
recommended for the annual capital investment process.

- 139 The typical distribution system planning cycle consists of seven steps depicted in Figure140 2 on the next page.
- 141
- 142
- 143

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit B1 Tab 2 Schedule 1 Page 8 of 31



146 The key steps in the distribution system planning process, as depicted in Figure 2, are 147 the following:

- 148 1. Review of System Performance
- 149a. PowerStream's Engineering Planning department reviews outage and150loading reports, and reliability indices, on an ongoing basis to assess the151performance of the distribution system.
- b. "Abnormal" conditions (for example, violations of planning guidelines,
  whether temporary or permanent) and worst performing feeders are
  noted.
- c. System Performance Reports are peer reviewed by PowerStream's
   technical personnel and are also provided to the EMT for its information.
- 157 2. Determination of Augmentation Needs
- 158a. Engineering Planning models PowerStream's short-term and long-term159capacity needs using various sources of system loading data, regional160growth estimates, and anticipated energy conservation measures.
- 161b. Engineering Planning analyzes the ability of the distribution system162(substations, feeders, etc.) to handle the projected load growth and163identify areas on the distribution system that require additional capacity.
- 164 3. Development of Alternative Options to support Augmentation Needs
- 165a. Engineering Planning identifies short-term and longer-term options for166addressing the distribution system augmentation needs.
- b. Engineering Planning evaluates options, ranks them based on their
  economical and technical merits and develops project proposals
  accordingly.

170	4. Selection	of preferred/optimal options
171	a. Th	ne project proposals are included in the annual capital investment
172	pr	ocess as well as the annual DSPR.
173	b. Fo	or large Transformer Station projects, PowerStream personnel liaise
174	wi	th external agencies such as regional and municipal road authorities to
175	er	nsure that there are no conflicts with other projects that may be planned.
176	5. Option Ap	oproval and Budgeting
177	a. Pi	rojects selected for implementation through the capital investment
178	pr	ocess are submitted to the EMT for approval. Very large projects such
179	as	s new Transformer Station will be present separately to the EMT for
180	ap	pproval. Subject to any modifications, the Audit and Finance Committee
181	wi	ill refer the project to the Board of Directors for approval.
182	b. Ap	oproved projects are incorporated into the capital budget for the
183	fo	llowing year.
184	6. Implemer	ntation of Options
185	a. Er	ngineering Planning issues the planning specifications, as required, to
186	Er	ngineering Design to implement budgeted projects.
187	7. Evaluatio	n of Resultant Performance
188	a. Fo	ollowing project implementation, Engineering reviews the resultant
189	Sy	stem performance. Projects impacts are compared to the expected
190	re	sults. This help to improve the ongoing planning process.
191	Projects that are	identified through the distribution system planning cycle fall into one of
192	the following five	categories:
193	1. Ca	apacity Related Projects - Development
194	2. R	egulatory or Grid Authority Directives – Development

- 1953.Reliability Related Projects Sustainment
- 196 4. Asset Condition Assessment Projects Sustainment
- 197 5. Special Projects Miscellaneous

### 198 **1. Capacity-Related Projects - Development**

199 PowerStream designs, builds, maintains, and operates its own transformer stations. The 200 most significant component of capacity-related projects is the planning for new or 201 upgraded transformer stations and the associated egress feeders. PowerStream uses a 202 peak demand forecast to determine capacity needs and the timing of new transformer 203 stations. PowerStream is forecasting the need for one new 28kV Transformer Station 204 every three years commencing in 2009 not only to keep pace with projected growth in 205 customers and demand, but also to ensure the consistent and reliable future supply of 206 electricity.

The peak demand forecast is weather-normalized and then adjusted to account for energy conservation based on forecasts made by the Ontario Power Authority ("OPA"). It differs from the peak demand forecast that is used for rate-making purposes. The former is used to identify the capacity required in the near to longer term and, therefore, is focused on system peak whereas the latter is used to measure electricity sales and revenue and is focused on the overall shape of the demand curve. The two forecasts are compared, however, to ensure consistency.

#### 214 **2.** Regulatory or Grid Authority Directives- Development

Projects in this category include those related to Board requirements such as the elimination of long term load transfers, IESO requirements including capacitor bank installations, and Hydro One requirements such as revenue metering and transfer trip protection mechanisms.

### 219 **3. Reliability Related Projects - Sustainment**

220 PowerStream actively tracks and measures the reliability of its distribution system and

221 participates in the Canadian Electrical Association Service Continuity Report ("CEA-222 SCR"), a ranking of the following industry-standard indices: **SAIDI** = Customer 223 Hours/System Customers (i.e., the average length of interruption per customer on the 224 system); **SAIFI** = Customers Affected/System Customers (i.e., the average number of 225 times an interruption occurred per customer on the system); and CAIDI = Customer 226 Hours/Customers Affected = SAIDI/SAIFI (i.e., the average length of interruption per 227 customer interrupted). The target benchmark for PowerStream is the top quartile of 228 Canadian utilities of similar size that participate in CEA-SCR.

Reliability-driven projects are established to maintain, as a minimum, current levels of
 service to customers at the previous three-year moving averages of reliability
 performance. The 2004 – 2006 average was used in the 2007 DSPR:

232 SAIDI = 0.847

234 CAIDI = 0.684

235 PowerStream is planning a variety of projects to maintain or enhance these levels of 236 reliability: new feeders, reinforcement of existing feeders, additional switches, and 237 distribution automation. Feeders with deteriorating reliability statistics (reliability indices 238 or outage statistics) are targeted for review and remedial action plans are developed to 239 improve reliability. Reliability measures are addressed through the continued refinement 240 and development of the Asset Condition Assessment program, feeder reconfiguration 241 and balancing, radial feeder supply remediation, distribution automation, improved 242 design reviews for customer connections, participation on the smart grid initiative and 243 monitoring of new reliability indices such as ASIFI (Average System Interruption 244 Frequency Interruption Index) and ASIDI (Average System Interruption Duration Index) 245 through pilot programs.

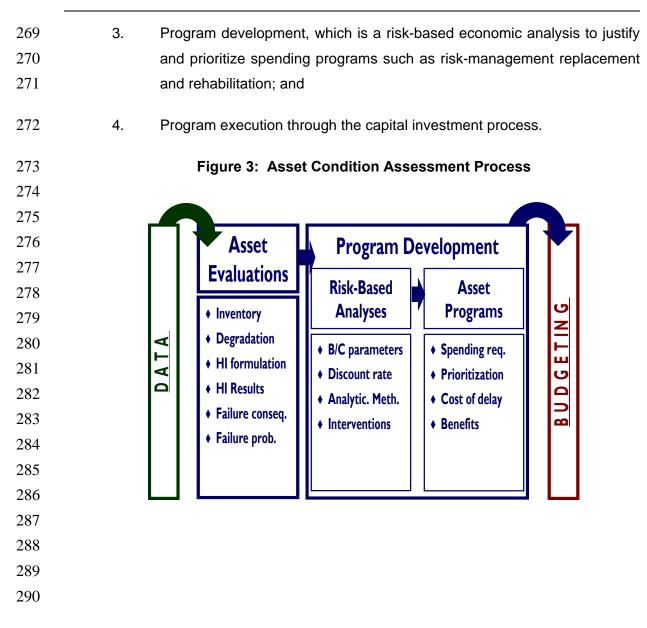
#### 246 **4. Asset Condition Assessment Projects - Sustainment**

The Asset Condition Assessment process is one of the more important evaluations in the DSPR. Assets are selected for review on the basis of the relative importance in providing reliable supply. PowerStream retained Kinetrics Inc. to review its 230kV power transformers in 2006 and, in 2007, to analyze its circuit breakers, primary underground cables, and or distribution station transformers<sup>1</sup>. The review of all major asset classes will be complete by the end of 2008.

253 The Asset Condition Assessment process gathers engineering and other technical 254 information from numerous sources and, thereafter, prepares detailed analysis based on 255 appropriate algorithms resulting in the formulation of a "Health Index." Health indices 256 determined in this manner allow ranking of the entire population of a specific asset class 257 into categories ranging from "very poor" to "like new" condition; they also permit the 258 quantitative determination of asset failure risk for each category, using probabilistic 259 techniques. All consequences of failure for each asset class are identified and, again 260 using probabilistic techniques, the overall impact of failure risk of an asset is quantified. 261 Practical risk mitigation options for each asset category are identified and, thereafter, 262 cost estimates for each mitigation option are prepared. PowerStream can accordingly 263 make optimal investment decisions by balancing the value of the risks against the 264 cost(s) of risk mitigation measures as part of the annual budgeting process. The typical 265 Asset Condition Assessment process has the following steps (Figure 3):

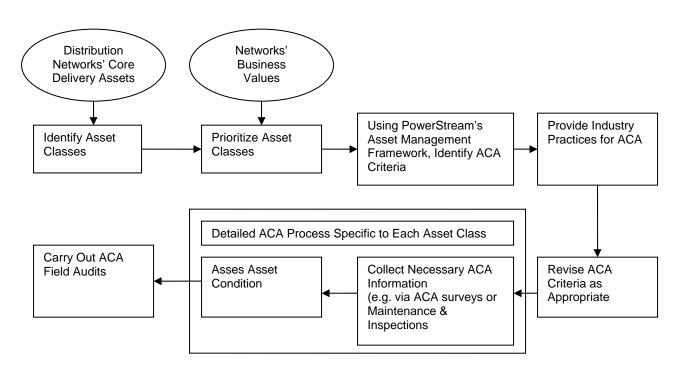
- 266 1. Data capture;
- 267
  2. Asset evaluations, which translate condition and criticality information into
  268
  repeatable, quantitative measures;

<sup>&</sup>lt;sup>1</sup> Distribution stations – also called municipal stations – perform the same function as transformer stations; however, they are supplied at a lower voltage and they have a much lower capacity.



- 291 PowerStream has adopted an Asset Condition Assessment ("ACA") process that 292 was created by Kinectrics Inc. It is depicted in Figure 4.
- 293 294

Figure 4: PowerStream's Overall Asset Condition Assessment Process



304

PowerStream has elected to optimize the ACA effort by concentrating initial efforts on those assets that represent the highest priority, have a high asset value, and expose its distribution system and its customers to a high risk.

PowerStream accomplished its objective by grouping the assets into logical asset classes. These classes were then broken down into three categories and, thereafter, prioritised into Priority 1, Priority 2, and Priority 3 based on value to the business. The following summarizes the three phases of PowerStream's ACA process:

- 303 Phase I (2006) Complete:
  - 230kV Power Transformers

305Phase II (2007) - Complete - data gaps are being addressed to clarify and306enhance model results:

308

Primary Underground Cables

**Distribution Stations** 

- Station Switchgear/Circuit Breakers (not Distribution Stations)
- 310 Phase III (2008- In Progress):

•

- 311 Poles
- Distribution Stations
- Distribution Switchgear
- 230kV Switches

315 Phase III assets tend to be high in number and low in individual value. The ACA 316 process is heavily weighted towards visual observations by experienced field staff and 317 less so on individual test results.

- 318 **Priority 1** assets represent the greatest level of importance in providing reliable supply.
- 319 **Priority 2** assets represent the mid-level of importance in providing reliable supply.
- 320 **Priority 3** assets represent the lowest level of importance with low program
- 321 expenditures or low risk from individual unit performance. A number of assets in this
- 322 category are considered "run to failure" assets. Assets in this category tend to have
- 323 relatively consistent historical spending.
- The 2006 assessment of 230kV power transformers showed that the "health index" was very good and no expenditures are needed in the next five years. Some assets reviewed in Phase II require the investment of funds to extend their useful life.
- 327 The success of the ACA process in determining an asset's health index depends in large
- part on the available condition data of the asset. Low levels of data quantity and quality
- 329 reduces accuracy.

# **5.** Special Projects

- 331 Special projects arise from time to time. PowerStream may purchase specific analysis
- 332 software packages, other planning tools, or purchase assets from other utilities such as
- 333 egress feeders from transformer stations outside of its service area.

#### 334 **CAPIT**

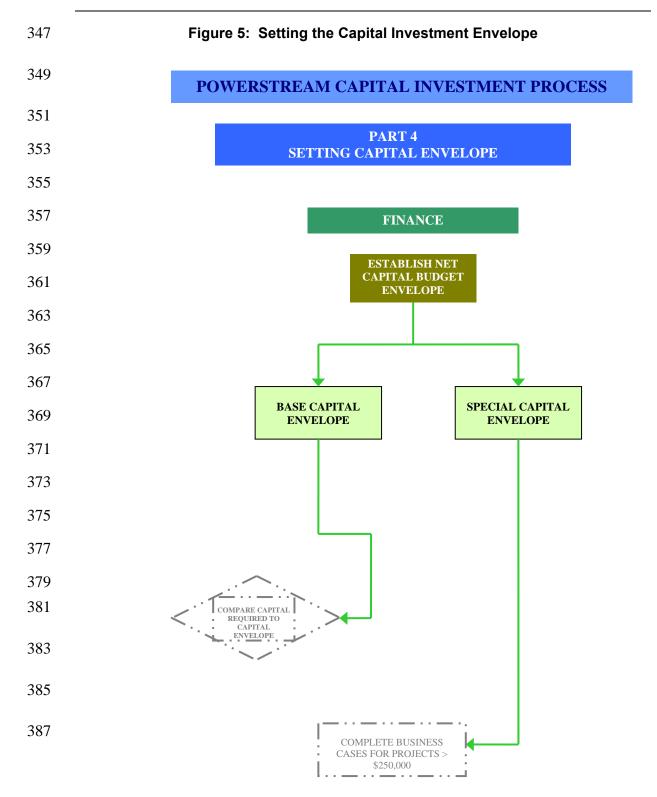
### CAPITAL INVESTMENT BUDGET PROCESS

### 335 SETTING THE CAPITAL BUDGET ENVELOPE

As part of its five year financial forecast, the Corporate Finance Department establishes a five-year projection of revenue, OM&A costs, depreciation, interest expense, and taxes that would produce a net income that provides the allowable return. As part of this work, Corporate Finance establishes gross and net capital expenditure "envelopes", or target ranges, for each of the five years.

The capital expenditure envelope has two components. One is the base capital program, which is set close to depreciation, and the other is special capital projects expenditures (for example, a new Transformer Station or a new project such as plant relocation to accommodate the York Region Rapid Transit).

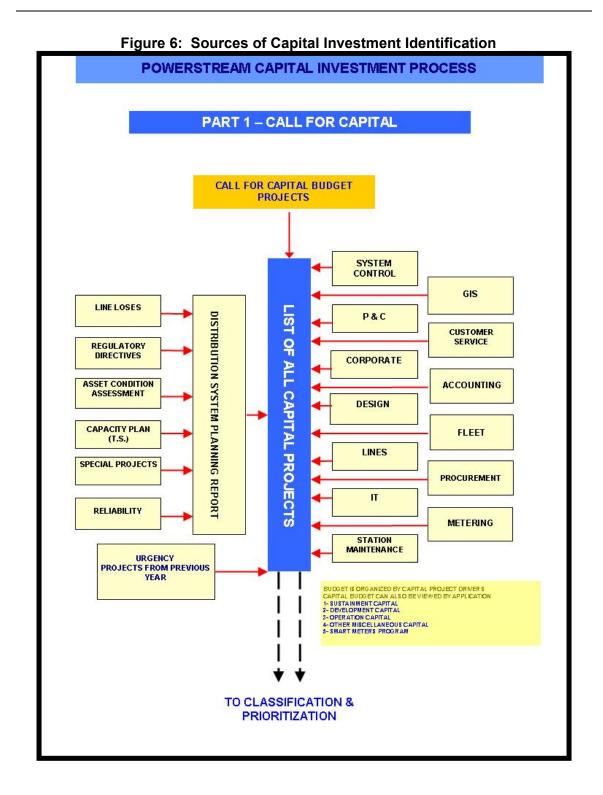
Figure 5 depicts the the setting of the envelope for the capital investment budget process.



### 388 IDENTIFYING CAPITAL INVESTMENT PROJECTS

389 Each Department identifies its capital investment needs in detail over the short term (the 390 first two years of the five-year planning cycle) and in less detail over the long term period 391 (the last three years of the planning cycle). Departments prepare a budget estimate for 392 each potential investment that is identified. In addition to the internal "call" for 393 departmental capital investment requirements, PowerStream meets with external 394 agencies such as road authorities (Region of York, Ministry of Transportation, etc.), 395 municipal planning and economic development departments, and property developers to 396 ascertain their respective five-year requirements and any plans they may have that 397 would impact PowerStream's capital investment plan.

Figure 6 on the following page depicts the various sources of capital requirements withinPowerStream.



- 402 As Figure 6 indicates, there are numerous sources for potential capital investment 403 projects including the following:
- 404 1. Recommendations arising from the annual Distribution System Planning Report ;
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- 407 3. Incomplete investment initiatives from previous years (carryover projects or work
  408 in progress from previous budget year);
- 409
  4. New customer service requirements in subdivisions, commercial/industrial
  410 services, and in-fills (restoration, upsizing and replacement of existing homes)
  411 based on experience and growth projections that are supported by municipal
  412 economic development plans (e.g., development charges studies); and
- 413 5. Capital maintenance and repair initiatives to cover equipment failures and
  414 replacement programs including testing and preventative maintenance programs
  415 (e.g., pole testing);
- 4166. Fleet (vehicles and equipment) initiatives to replace aging units and to add new417units as required;
- Information technology (IT) initiatives to ensure business hardware and software
  systems are current and capable of meeting business needs (e.g., a desktop
  computer replacement program based on a four-year replacement cycle) and
  software/hardware requirements to support the Customer Information System
  and financial accounting applications;
- 423 8. Operations (Control Room) requirements including development and support of
  424 grid control technology such as the outage management system and SCADA
  425 (supervisory control and data acquisition) systems;
- 426 9. Revenue metering capital costs such as failed equipment replacement;

- 427 10. Economic model rebates to developers representing PowerStream's required
  428 capital contribution for expansions in accordance with section 3.2 of the
  429 *Distribution System Code*;
- 430 11. The upgrading and maintenance of the distribution system protection and control
  431 systems used to protect personnel and equipment while maintaining an
  432 acceptable level of reliability and system performance;
- 433 12. The testing and maintenance required to ensure operational functionality and
  434 safety of PowerStream's Transformer Stations and smaller sized distribution (or
  435 municipal) stations;
- 436 13. The capitalization of interest throughout the construction or installation of capital437 projects;
- 438 14. The need for tools, testing equipment, and specialized operating equipment439 required to maintain and operate the distribution system; and
- 440 15. Special initiatives such as the Smart Meter Program.

# 441 SORTING OF CAPITAL INVESTMENT PROJECTS

442 PowerStream prepares and monitors its capital investment budget process by the
443 department requesting the particular investment. For purposes of identifying and
444 reporting to regulatory agencies and for comparison with other distributors,
445 PowerStream has sorted its capital investments into one of the following categories.

446
1. Sustainment Capital - projects that replace depleted infrastructure to
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- 2. Development Capital projects that involve system expansion or relocation
  due to growth and/or to satisfy external demands; for example, new customer
  connections, relocation of distribution system plant (typically due to road
  widenings), new subdivisions, commercial developments, new or upgraded
  Transformer Stations, new lines and individual unit-metering programs for
  condominium buildings, the York Region Transit relocation, and the 407 Express
  Toll Route.
- 3. Operations Capital infrastructure capital projects that support the day-today operation of the distribution system; for example, unplanned distribution
  replacements (storm damage and other breakdown replacements), the Outage
  Management System, distribution operations (the Geographic Information
  System, the control room and SCADA, major tools, and fleet vehicles and
  equipment).
- 465 4. Other Miscellaneous Capital all other miscellaneous expenditures; for
  466 example, office equipment, new computer systems and upgrades, software,
  467 warehouse equipment, and buildings.
- 468 5. Smart Meter Program the change-out of electromechanical meters for
  469 Smart Meters.
- 470

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Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit B1 Tab 2 Schedule 1 Page 25 of 31

## 477 CLASSIFICATION OF CAPITAL PROJECTS

- 478 Capital investment projects are divided into two categories based on whether or not
- 479 PowerStream has the ability to defer the project.

**Non-discretionary** – investment initiatives required by parties other than PowerStream and considered "must do" initiatives. Requirements for such initiatives are usually legal-statutory based (mandatory requirement to satisfy obligations specified by regulatory organizations), health and safety based, or customer driven. Carry-over investment initiatives (i.e. work-in-progress) from previous budget years is also considered non-discretionary as it is required to complete work already started. Examples would include work required from others such as the governments, road authorities, the IESO, etc.

**Discretionary** – investment initiatives driven or proposed by PowerStream to enhance the system performance benefiting its users. Examples would include projects to reduce system losses, add flexibility to the operation and maintenance of the distribution system, meet system needs relying on best practices, reduce congestion, and build new or enhance existing interconnections.

480

481 As the capital investment initiatives are identified over the five-year period, PowerStream 482 reviews each "discretionary investment" to determine which initiatives can be deferred 483 past the budget year without significant impact on its distribution system or on its 485 customers. The discretionary category is sub-divided into two groups:

487 489	<u>Urgency One</u> – These discretionary investments "will be" or "must be" done in the budget year. Delay of these projects past the budget year will have an unacceptable impact on PowerStream and its customers as determined by the capital budget committee.
491	
493	<b><u>Urgency Two</u></b> – These discretionary investments could be delayed past the budget year with acceptable or no adverse impacts on PowerStream or its customers. Typically, these projects can be moved to a future year in the planning cycle process.

### 495 **IDENTIFYING PROBABILITY PROJECTS**

496 Typically, in any budget year, the total dollar value of the capital investment initiatives 497 initially identified in the budget process is greater than the total dollars of the capital 498 budget envelope provided by Corporate Finance. It is therefore necessary to prioritize 499 these investments to ensure the most important initiatives are undertaken in the budget 500 year. However, based on experience, there are a number of Non-Discretionary and 501 Urgency One projects that will not be done in the budget year for reasons outside of 502 PowerStream's control. For example, road authority work may be delayed because of 503 land procurement or easement difficulties which will cause the project to be delayed to 504 the next budget year (or later).

505 To account for the likelihood of some Non-discretionary and Discretionary – Urgency 506 One projects not occurring in the budget year, PowerStream identifies these projects in a 507 separate group called "Probability Projects". Through experience, staff know that only a 508 percentage of these projects will be undertaken in the budget year, usually between 10% 509 to 20%. Applying this probability factor to these projects provides a means to avoid 510 allocating capital dollars to projects that are not likely to require these investments in that 511 year.

512 For example, there may be six probability projects with a total capital cost of \$10 million, 513 however, only \$2 million may be earmarked for the budget year. The forecast spending 514 on probability projects is reviewed by the EMT each month as part of the monthly budget 515 update.

### 516 **First Draft of Capital Budget**

517 The first draft of the capital budget is now complete. The total capital dollars required for 518 work-in-progress, probability projects and "Urgency One" projects is now compared to 519 the base capital envelope set by Finance. There is also a budget line item called 520 "Unforeseen Projects" to cover the costs of unidentified non-discretionary projects that 521 arise after the budget is finalized and approved. Every non-budgeted capital project is 522 tracked in this category. The dollar value for unforeseen projects is an estimate based523 on previous years experience.

524 If the required capital dollars are less than or equal to the base capital envelope, then 525 "Urgency Two" projects (projects that were deferred to the next budget year earlier in the 526 budget process) are brought into the budget so that the budget total matches the 527 approved base capital envelope.

528 If the required capital dollars total more than the budget envelope, then the discretionary 529 projects are prioritized as described below. The budget committee either reduces the 530 budget by removing lower priority projects or the EMT is requested to consider 531 increasing the capital budget envelope.

### 532 **Prioritization of Capital Projects**

In order to enhance the budget process PowerStream has developed a prioritization
methodology to assist in ranking discretionary projects. This methodology was
introduced for the 2009 budget year.

536 Overall importance of any capital project to the organization is determined by the 537 projects importance to PowerStream's corporate goals and objectives.

538 PowerStream then prioritizes the Urgency One investments based on their relative 539 strategic importance to its corporate objectives for the budget year. Figure 7 below 540 identifies the strategic issues and corporate objectives used to evaluate the priority of a 541 capital project to PowerStream.

543

# Figure 7: Strategic Importance of Discretionary Capital Investment

	2008 Strategic Topics	2008 Corporate Objectives
a.	Health & Safety	Maintain highest levels of employee and public safety.
b.	Regulatory Compliance	Full compliance with regulatory requirements.
C.	Customer Service	Maintain highest levels of customer service. Ensure supply capacity to meet customer needs.
d.	System Reliability	Top quartile feeder reliability performance, SAIDI, SAIFI, risk mitigation and evaluation.
e.	System Efficiency & Effectiveness	Minimize losses, lower OM&A costs, optimize modern technology, manage aging assets, smart grid strategy.
f.	Financial Profitability	Meet net income targets and long term financial objectives.
g.	Environmental	Be a leading green company in the electricity industry.

# 544

545 The budget team – comprising representatives from each department or business unit 546 that make capital investment requests – rates each Urgency One investment for its impact on every corporate objective, using the following ranking system, were it not to bemade in the budget year:

549	Zero (0)	- no impact
550	One (1)	- minor impact
551	Two (2)	- major impact

552 Three (3) - severe impact

Each Urgency One investment would have a total number representing the impact on each of the objectives. The Urgency One investments with the largest total values have a higher priority than the ones with lesser total values; for example, Project "ABC" – a new line extension required for capacity and growth reasons – might be scored as follows:

558	Strategic issue	a = 0 (no impact on health or safety)
559	Strategic issue	b = 2 (major impact on regulatory)
560	Strategic issue	c = 2 (major impact on customer service)
561	Strategic issue	d = 0 (no impact on reliability)
562	Strategic issue	e = 1 (minor impact on efficiency)
563	Strategic issue	f = 1 (minor impact on profitability)
564	Strategic issue	g = 0 (no impact on environmental)

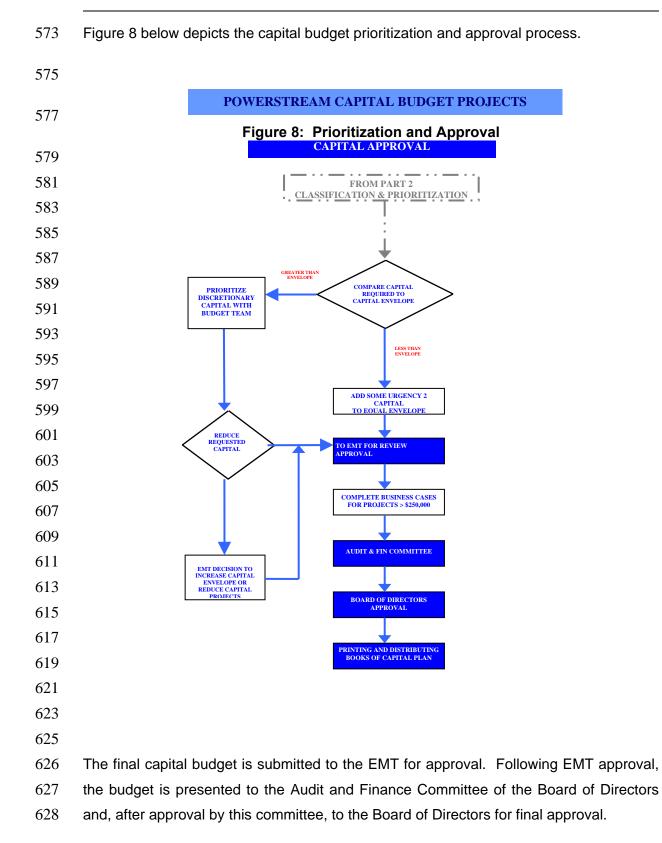
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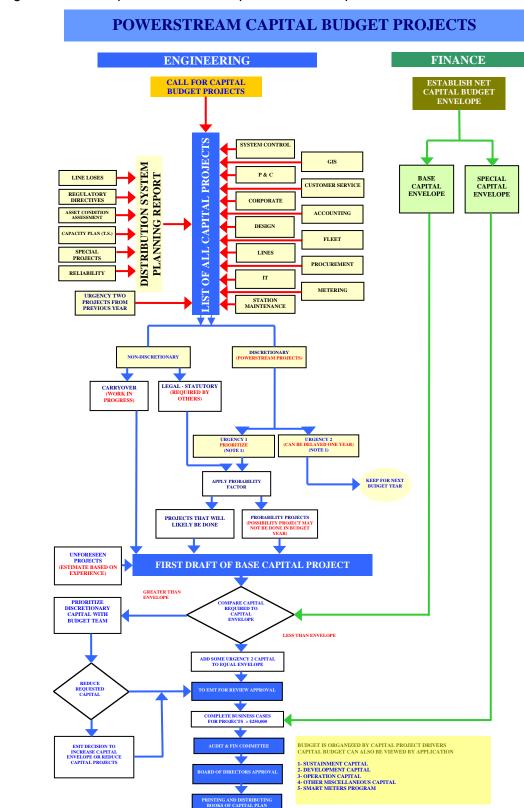
566 The total value of Project "ABC" is 6. Project "ABC" would have a higher priority than 567 any other Urgency One project with a total value lower than 6 but a lower priority than 568 any other Urgency One project with a total value higher than 6.

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630 Figure 9 below depicts the overall capital investment process.

# **CAPITALIZATION POLICY AND BURDEN ALLOCATION PROCESS**

## 2 OVERVIEW

PowerStream has a policy for determining whether costs should be classified as capital expenditures or operating expenses. There is also a process for the allocation of burdens (overheads) to capital and operating projects. Both the capitalization policy and the burden allocation process are described below.

# 7 CAPITALIZATION POLICY

8 PowerStream follows capitalization policies and principles that are based on Generally 9 Accepted Accounting Principles ("GAAP"), in particular CICA Handbook Sections 3061 10 to 3064 on Capital Assets, and guidelines set out by the Ontario Energy Board in the 11 Accounting Procedures Handbook (APH) Article 410 "Property Plant and Equipment".

12 PowerStream capitalizes interest on funds for construction at the Ontario Energy Board's

13 prescribed interest rate.

# 14 BURDEN ALLOCATION PROCEDURE

In 2007 PowerStream conducted a review of its payroll benefits and overhead costs and the corresponding burden rates to ensure that costs are recovered appropriately and completely by applying these costs to the appropriate capital and OM&A accounts in compliance with full absorption costing practices.

The study resulted in updated 2008 burden rates that reflect current costs and activity levels. This was the first change in burden rates since the creation of PowerStream in June 2004, when burden rates and allocation methods were standardized on the existing Markham Hydro rates and methods, and the Markham vehicle rates were adopted.

23 The 2008 Burden rates were used in forecasting 2009 test year expenses.

## 24 CAPITALIZATION POLICY

- PowerStream follows capitalization policies and principles that are based on Generally Accepted Accounting Principles ("GAAP"), in particular CICA Handbook Sections 3061 to 3064 on Capital Assets, and guidelines set out by the Ontario Energy Board in the Accounting Procedures Handbook (APH) Article 410 "Property Plant and Equipment".
- 29 Below is PowerStream's Capitalization Policy.

Subject: Capitalization	
Effective Date: December 2005	Policy Owner: EVP & Chief Financial
Update Date: July 31, 2008	Officer

### 30 1) Source of Policy

- 31 The sources of this capitalization policy are from:
- 32 1.1 <u>Ontario Energy Board</u> Accounting Procedures Handbook Article 410 *Property Plant*
- 33 *and Equipment*, and
- 34 1.2 <u>Canadian Institute of Chartered Accountant</u> (CICA) handbook Sections 3061 to 3064 –
   25 Carital Acasta
- 35 Capital Assets.

## 36 2) <u>Criteria for the Capitalization</u>

- 37 2.1 When expenditures incurred to purchase or to build assets that will provide benefits to the
   38 Corporation, for more than one year, the expenditure will be capitalized.
- 2.2 Expenditures incurred to improve or replace the existing asset will be capitalized if the
   asset's useful life is extended or the asset's potential productivity is increased or the
   associated costs are potentially lowered.
- 42 **3**) <u>Guidelines Definition</u>
- 43 3.1 <u>Tangible Assets</u>

44	Property, plant and equipment are identified as tangible assets provided that they are
45	held for use in the production or supply of goods and services for the Corporation, are
46	intended for a continuing use, and are not intended for sale in the ordinary course of
47	business.
48	3.2 Intangible Assets
49	Non-physical resources such as software, organizational cost, trade patents and rights are
50	intangible assets which provide a benefit or advantage to the Corporation.
51	3.3 <u>Goodwill</u>
52	When an asset is acquired for a cost over and above the net amount of the acquired assets
53	and assumed liability, the excess cost is considered good will and classified as asset in
54	balance sheet. No amortization is applied to goodwill but an impairment test is done
55	annually.
56	3.4 <u>Betterment</u>
57	Betterment is a cost that is incurred to enhance the service potential of a capital asset.
58	Expenditures for betterments are capitalized. This enhancement in service potential can
59	include an increase in the physical output or service capacity, decrease in associated
60	operating costs, extension in the useful life of the asset, or improvement in the quality of
61	the asset's output.
62	4) <u>Capitalization Guidelines</u>
63	4.1 Materiality Limits
64	All expenditures for capital assets, including grouped assets and betterments are subject
65	to materiality limits.
66	At times the administrative costs of capitalizing an asset may outweigh the intended
67	benefits. While an expenditure may meet the definition to qualify as a capital asset, a
68	dollar level is set, and if the expenditure falls below this limit, it is not capitalized. This
69	level is known as Materiality Limit.

70	Items costing less than \$1,000 are expensed as these are below the materiality level.
71	4.2 <u>Tangible assets</u>
72	Tangible assets are recorded as either grouped assets such as utility poles and lines or
73	readily identifiable (individual) assets such as computers and vehicles:
74	a) Grouped assets are those assets that by their nature make identification of individual
75	components impractical (such as conductors and devices, line transformers, poles, and
76	associated fixtures).
77	As such this type of asset is depreciated as a group and is assumed that the group will
78	provide the benefits until the end of the pre-set service life.
79	b) A readily identifiable asset is an asset that has a material unit cost and is tracked on an
80	individual basis such as computers and vehicles.
81	4.3 Payroll Burden and Overhead Costs
82	Capital assets that are self-constructed by the Corporation include the payroll burden on
83	labour cost, Engineering overhead and Management Labour burdens.
84	4.4 <u>Capital Spares</u>
85	Spare transformers are accounted for as capital assets since they form an integral part of
86	the reliability program for a distribution system. These transformers are held in storage
87	for the purpose of backing up transformers in service in the existing distribution system.
88	As such, these spare transformers are amortized at the same rate as transformers that are
89	energized.
90	4.5 Leasehold Improvements
91	When a structure/building is leased for a limited period of time that is more than a year,
92	expenditures incurred on renovating the structure/building are capitalized. These
93	expenditures include but are not limited to, for example, electrical work, ventilation, new
94	carpet.

#### 95 4.6 <u>Amount to be Capitalized</u>

96 The amount to be capitalized is the total cost to acquire or construct a capital asset,
97 including any ancillary costs incurred to place a capital asset into its intended state of
98 operation.

- 99 4.7 <u>Repair Cost</u>
- 100A repair is a cost which is incurred to maintain the existing service potential of a capital101asset. These repairs are wear and tear in the normal use of the capital assets and do not102enhance the service life the asset. Expenditures for repairs are expenses in the period in103which they occur.

#### 1044.8 Interest Cost

105Interest is capitalized on the cots while the assets are still in state of Work-in-Progress106(WIP). While the assets are being constructed, funds are tied up and therefore the107opportunity to use the funds is lost to the Corporation or funds have to be borrowed at a108cost. Furthermore, as the asset is being constructed, revenue is not generated by the asset109and therefore the interest expense forms part of the asset.

- 110 Interest capitalization ceases when the asset is energized or the asset is ready for use.
- 111Interest capitalization is calculated on a monthly basis by reviewing the WIP base of all112the capital work orders net of any capital contributions. Interest is not compounded.
- 113 The interest rate used is prescribed by the Ontario Energy Board.

#### 114 **5.0** <u>Amortization</u>

115 Capital assets are generally amortized based on a method and useful life set by the OEB APH

and is considered a suitable and appropriate indicator of useful life for the industry.

- 117 However, large and unique capital expenditures will be reviewed on an individual basis to
- 118 determine the expected life and appropriate method of amortization.

119 The following are the methods of amortization for the majority of the Corporation capital 120 assets:

Type of Capital Asset	Method of Amortization	<u>Service Life</u> <u>in Years</u>
Building & Fixtures	Straight Line	50
Distribution System (poles, tower and fixtures, U/G & O/H conductor & device, transformers, and meters)	Straight Line	25
Transformer Stations	Straight Line	40
Distribution Stations	Straight Line	30
Computer Hardware	Straight Line	5
Computer Software	Straight Line	3
Leasehold Improvements	Straight Line	10 (Note 2)

- Note 1: This update is to clarify the existing policy and procedures. The policy on
  capitalization remains unchanged.
- 123 Note 2: When the duration of the lease is shorter than 10 years, the maximum length of
- service life is the lease period.

## 125 **BURDEN ALLOCATION PROCEDURE**

Burden rates are used to recover indirect costs such as payroll benefits, Engineering and Stores overhead costs that are associated with the direct costs charged to capital or operating, maintenance and administration ("OM&A") expenses.

At the creation of PowerStream in June 2004, burden rates and allocation methods werestandardized on the existing Markham Hydro rates and methods.

In 2007, PowerStream conducted a review of its payroll benefits, overhead allocation process and the associated burden rates to ensure that costs are recovered appropriately and completely by applying these costs to the appropriate capital and OM&A accounts and in compliance with full absorption practices. The objectives of the study were to:

- ensure that the payroll benefits and overhead cost pools are properly
   designed to capture all relevant costs;
- 138
  138
  139
  2. review the design of all existing burden rates and propose rate changes,
  139
  where applicable, to ensure that the underlying costs are fully recovered;
- review costs related to the Smart Meter and CDM programs and propose
  specific burden rates, if necessary, to recover the appropriate amount of costs
  associated with these programs.

143 The burden rates reviewed were:

- a. Payroll Burden
- b. Engineering Burden
- 146 c. Management Labour Burden
- 147 d. Stores Burden
- 148 e. Vehicle Burden
- 149 f. Smart Meter and CDM Programs

## 150 A) PAYROLL BURDEN

The payroll burden is to recover benefit costs such as the employer's portion of the
Canada Pension Plan, Employment Insurance, OMERS Pension, Employer Health Tax,
Workers Safety Insurance Board premiums, dental and medical plans.

These burden rates are applied to the direct wages based on the employee category.
For example, "Inside" billing staff wages are charged to Billing and Collecting expense.
An additional amount of 40% of the wages is charged to Billing and Collecting to reflect
the full compensation cost. The amount applied is credited against the payroll benefits
cost pool.

An "Outside A" lineperson's wages are charged against a work order. Based on the work order, this may be a capital cost or an operation and maintenance expense. An additional amount of 80% of the wages is charged to the same work order and cost category to reflect the full compensation cost. The amount applied is credited against the payroll benefits cost pool.

New rates were calculated using current costs. The burden rates applied to the wages
of PowerStream's different payroll categories are shown in Table 1. The 2008 burden
rates have been used in determining the 2009 budget amounts.

167

# Table 1: Payroll Burden Rates

Payroll Categories	2007 Rates	2008 Rates
"Outside A" (e.g. lines staff, meter staff)	60%	80%
"Outside B" (e.g. mechanic, stores staff)	30%	40%
Inside (e.g. engineering, administrative, accounting)	30%	40%
Management	30%	40%
Temporary	10%	10%
Students	10%	10%
Board of Directors	10%	10%

168 The "Outside A" and "Outside B" categories are used to distinguish between those 169 operational staff involved directly in capital construction, operation and maintenance 170 activities ("A") from those who perform a supporting role ("B").

Burden rates for "Outside A" staff reflect that in addition to benefit costs, their time for sick, vacation, training and safety meetings is charged to the burden pool and allocated only to the hours spent on capital, operating and maintenance work. The cost of small tools and safety items is also included in this burden. For all other employee categories, the wages for sick, vacation, training and safety meetings are charged directly to the same expense line (e.g. Billing and Collecting) as their regular wages and not included in the burden rate.

In accordance with the OEB's APH, payroll burdens are applied to regular time only. That is, they do not apply when employees are paid overtime. However in 2007 and prior years, burdens were applied to overtime as well as regular time. This resulted in lower burden rates since the rates were applied to both regular and overtime hours. In 2008 the rates are applied to regular hours only.

183 Increased benefit costs and the change from applying burden against all hours to only 184 regular hours are the reasons for the increase in payroll burden rates.

#### 185 **B) ENGINEERING BURDEN**

The engineering burden recovers the salaries and departmental expenses of the engineering staff and the operations supervisory staff who plan, design, direct and inspect the capital work and operation and maintenance ("O&M") work. The Engineering burden rate is 60% for both contract labour and PowerStream labour. This burden rate is applied on the "Outside A" staff /contract direct labour cost and charged against the same work orders as the direct labour with the costs flowing to the corresponding capital or O&M cost categories. The amount applied is credited against the burden cost pool.

The engineering burden rate was recalculated on the basis that it is only applied to "Outside A" labour and contract labour charges on work orders and no longer against inventory issued from Stores.

Prior to 2008 some of the Engineering burden was allocated by charging a separate engineering burden on the value of inventory issues. This was to reflect engineering's involvement in setting material standards. It was determined during the study that this overhead cost is relatively small. To simplify the burden application it was decided to apply only one burden to materials (i.e., the stores burden discussed below).

201 Engineering burdens are shown in Table 2. The 2008 rates have been used in 202 determining the 2009 budget amounts.

203

#### Table 2: Engineering Burden Rates

Engineering Burdens	2007 Rates	2008 Rates
Engineering Payroll ("Outside A")	50%	60%
Engineering Contract	50%	60%
Engineering Stores:		
On Warehouse Issues	20%	0%
On Direct Shipment	20%	0%

# 205 C) MANAGEMENT LABOUR BURDEN

The management labour burden is to charge capital work orders with a portion of the compensation cost of management staff that are involved with capital projects but not included in the Engineering burden. For 2008 and 2009 this is estimated to be 6% of the capital work order costs. This burden is charged to the capital work orders and deducted from the OM&A costs to ensure there is no double counting.

211

# 212 D) STORES BURDEN

The Stores Burden recovers the cost of operating the warehouse, such as salaries of warehouse and purchasing staff assigned to this function. The Stores Burden is 15% of the cost of materials issued from Stores and 5% on direct shipment to job sites. Based on the variance analysis conducted during the review, there is no change to the stores burden proposed for 2008. The 2008 rates have been used in determining the 2009 budget amounts. Table 3 shows the Stores burdens.

219

220

#### Table 3: Stores Burden Rates

Stores Burden	2007 Rates	2008 Rates
Warehouse Issue	15%	15%
Direct Shipment	5%	5%

221

#### 222 E) VEHICLE BURDEN

The vehicle burden rates (in dollars/per hour) are to recover the costs associated with vehicles such as amortization, repair & maintenance, fuel, and insurance. Individual rates are developed for major vehicle classifications based on expected utilization. The vehicle charges are based on vehicle timesheet reporting prepared by the "Outside A" employees which identifies the vehicle, number of hours, the work order and the capital or O&M cost category to be charged. The vehicle rate is based on the classification of the vehicle being used.

PowerStream increased its vehicle rates to reflect inflationary pressures on costs, including increased fuel prices, of approximately 31% since the rates were last updated. Depending on utilization, individual rates have increased by less or more than the average cost increase. The 2008 rates have been used in determining the 2009 budget amounts. Vehicle burden rates are shown in Table 4.

235

#### Table 4: Vehicle Burden Rates (\$ per hour)

Vehicle Classification	2007 Rates	2008 Rates
H01 Car	6.40	13.09
H02 Trailers	10.60	21.62
H03 1/2 Ton Pick Up	12.20	15.93
H04 1 Ton Pickup	15.60	18.21
H05 1/2 Ton Van	13.30	15.14
H06 ¾ Ton Pickup	13.30	15.14
H07 1 Ton Van	20.80	23.67
H08 Dump Truck	22.50	44.38
H09 Fork Truck	16.70	31.86
H10 1.5 Ton Pick Up	17.30	36.42
H11 Tension Machine	26.50	30.16
H12 Single Bucket Truck	37.30	46.94
H13 Flat Bed Truck	31.80	42.77
H14 Digger	33.40	61.93
H15 Double Bucket Truck	37.10	52.76

#### 236 F) SMART METER AND CDM PROGRAMS

237 The effect of the above burdens on the Smart Meter and CDM programs was reviewed.

It was concluded that the above burdens should be applied using PowerStream's normalmethods with the exception of the Engineering burden.

240 CDM Programs are carried out by the Conservation department and their costs are not 241 subject to the Engineering burden.

The Smart Meter program is carried out by the metering group within the Engineering and Operations cost pool. This program expected to span a period of four years, ending in 2010. The program is administered by identifiable individuals and therefore, full engineering burden rates should not apply. Rather, the estimated time on Smart Meters for these individuals should be recovered by a specific Smart Meter engineering burden rate applied to contract labour.

In setting the 2008 rates, PowerStream also retroactively adjusted the applied overheads for 2007 to reflect the appropriate amount of overheads. The 2008 rates have been used in determining the 2009 budget amounts. Table 5 summarizes the smart meter engineering burden rates.

252

#### Table 5: Smart Meter Engineering Burden Rates

Smart Meter Burden Rates	2007 Rates	2008 Rates
Engineering Payroll (Outside A)	50%	0
Engineering Contract	50%	35%
Engineering Stores:		
On Warehouse Issues	20%	0%
On Direct Shipment	20%	0%

253

# 255

# **OVER/UNDER ABSORPTION OF BURDENS**

All payroll benefit and overhead burden rates are applied through PowerStream's JD Edwards accounting system. The rates are applied against the costs attracting the burden such that applied burdens are charged to the same OM&A or capital cost categories. The amount applied is credited back against the burden cost pool.

Any over or under applied balance, remaining after application at set burden rates, is allocated to the applicable capital and OM&A accounts on a proportional basis.

If a material unapplied balance were to occur, PowerStream would check the basis of the allocation and related calculations and determine whether an adjustment would be required. If material unapplied balances were to continue, PowerStream would consider whether burden rates require adjustment.

# **CAPITAL ADDITIONS**

# 2 OVERVIEW

3 PowerStream's capital spending is summarized in Table 1, below.

5

7

#### Table 1: Capital Spending (000's)

	2006 Actual	2007 Actual	2008 Estimate	2009 Forecast
Capital Spending	50,446	67,389	66,446	85,241
\$ Change Year over Year		16,943	(943)	18,795
% Change Year over Year		34%	(1%)	28%

<sup>6</sup> Notes: 1. Amounts are net of capital contributions

- 8 The capital additions are described in Exhibit B1, Tab 4, Schedule 1 and 2. Three major
- 9 projects are described, in detail, in Exhibit B1, Tab 5, Schedules 1 to 4.

#### 10 CAPITAL GROUPINGS

11 PowerStream groups capital into the five categories that are commonly used by the

12 Board:

- Sustainment Capital
- Development Capital
- 15 Operations Capital
- 16 Other Miscellaneous Capital
- Smart Meter program
- 18 The five categories are defined in Exhibit B1, Tab 2, Schedule 1.

<sup>2. 2007</sup> to 2009 includes Smart Meters

#### CAPITAL ADDITIONS - 2007 to 2009

#### 2 OVERVIEW

3 Table 1 presents the value of PowerStream's capital additions based on five categories

4 for the years 2007 to 2009.

5

# Table 1: Capital Additions 2007 to 2009 (\$000)

Capital Category	2007	2008	2009
	Actual	Estimate	Forecast
Sustainment	8,373	19,401	19,618
Development	12,448	23,728	41,019
Operations	13,587	10,080	7,674
Miscellaneous	22,756	6,243	3,955
Subtotal Without Smart Meters	57,164	59,452	72,266
Smart Meters	10,225	6,994	12,975
Total	67,389	66,446	85,241

6 Table 2 below provides further details on the types of projects in each of the 57 categories.

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Table 2. Froject by Category 2007 to 2009 (\$000)					
	2007	2008	2009		
1. Sustainment Capital					
1a. Pole or Line Replacements / Upgrades	2,538	5,319	4,454		
1b. Transformer Station Enhancements / Upgrades	253	4,528	3,232		
1c. Asset Condition Assessment Program	0	2,092	5,339		
1d. Distribution System Voltage Conversions	2,231	2,838	3.465		
1e. Switchgear Replacements / Upgrades / Refurbishments	1,222	1,316	1,239		
1f. Cable Replacement	118	1,063	333		
1g. Load Transfers From Other LDC's	283	651	0		
1h. Distribution Transformer Enhancements / Upgrades / Refurbishment	832	741	261		
1i. Load Interrupter Switch Replacement	386	386	409		
1j. Distributor Station Enhancements / Upgrades	45	93	403		
1k. Unforeseen Capital Projects	463	375	414		
Total Systainment Capital	8,373	19,401	19,618		
2. Development Capital		-, -			
2a. Transformer Stations - Additional Capacity	1.556	14,217	22,771		
2b. Residential Subdivisions	4,440	5,119	5,019		
2c. Distribution System Plant Re-Location	1,877	2,268	5,892		
2d. New Commercial Services	90	183	181		
2e. Distribution Stations - Additional Capacity	376	103	0		
2f. New Overhead or Underground Lines	3.645	1,439	6,742		
2g. Unforeseen Capital Projects	464	375	414		
Total Development Capital	12.448	23,728	41,019		
3. Operations Capital	,		,		
3a. System Operation Automation	2,005	2,872	1,819		
3b. Unplanned Equipment Replacement	1,835	1,609	1,678		
3c. Suite-Metering Costs	1,708	1,472	1,086		
3d. Fleet	2,277	1,315	887		
3e. Wholesale Meters	239	416	256		
3f. Tools	347	312	310		
3g. Smart Grid Program	0	273	505		
3h. Meter Re-Verification and Replacement Program	629	204	390		
3i. Asset Condition Assessment Model Development	108	167	25		
3j. Geographic Information System	53	137	101		
3k. Conservation & Demand Management - Smart Meter Pilot	769	0	0		
3I. System Control Room	1,970	0	0		
3m. Storm Damage To Distribution System	1,016	1,302	617		
3n. Conservation & Demand Management - Load Control Devices	630	0	0		
Total Operations Capital	13,587	10,080	7,674		
4. Other Miscellaneous Capital					
4a. Information Technology Enhancements	2.139	1,222	823		
4b. Customer Information System Enhancements	872	1,666	1,351		
4c. Financial System Enhancements	1,407	1,170	303		
4d. New Computer Equipment / Replacement	420	908	800		
4e. New Head Office	17,687	794	381		
4f. Software Purchase	231	483	297		
Total Other Miscellaneous Capital	22,756	6,243	3,955		
5. Total Smart Meters Program	10,225	6,994	12,975		
Total Capital Expenditures	67,389	66,446	85,241		
· · ·					

# Table 2: Project by Category 2007 to 2009 (\$000)

9 10

8

#### 11 **PROJECT DESCRIPTIONS**

12 The project descriptions outlined below further describe PowerStream's capital program. 13 Capital spending for each category is derived based on the best available information at 14 the time of budget. In Table 2, the individual line items may include capital spending 15 related to a single project, a number of similar projects or an expected allowance based 16 on historical trending. Larger projects and the related capital spending have been 17 identified to provide examples of specific capital activities within the five categories. 18 These projects may not represent the total capital spending for each line item in the 19 table.

#### 20 **1.** Sustainment Capital

21 In order to better determine capital replacement costs, in 2005 PowerStream began 22 developing its Asset Condition Assessment (ACA) program. PowerStream will have 23 most of its distribution plant assets assessed by 2008 year end. As a result of the ACA 24 program, process data gaps were identified and initiatives have been undertaken to 25 close these gaps. PowerStream has commenced a three-year program to establish 26 processes within the organization to capture any changes to assets in the distribution 27 system. PowerStream plans to have the ACA program fully implemented by 2010. In 28 the past, determination of asset replacement was derived based on a maintenance 29 program involving the maintenance and station field staff and was more reactive in 30 nature.

The 2009 sustainment capital was determined partially by the initial results of the ACA
 program and partially by field identification and cost trending from previous years.

#### 33 **1a. Pole or Line Replacements / Upgrades**

These planned projects are carried out to sustain the reliability of the overhead distribution system and to ensure that the system has the ability to provide electricity via alternate routing in the event of interruption to normal supply. Sustainment work is typically divided into two categories: the installation of replacement or reconfigured overhead distribution lines and replacement of end-of-life poles identified by the pole maintenance program. Identified below are some of the larger projects completed orplanned between 2007 and 2009.

# • **2007-Bayview Avenue – Stouffville Road to Bloomington Road**

- 42 This project, one of four related projects, was required to provide back-up 43 capacity to sections of the Town of Aurora. This project involved the 44 installation of two new 28kV circuits on 116 poles, with 11 load sectionalizing 45 switches.
- 2007-Bayview Avenue Bloomington Road to Vandorf Road
- This project, the second of four projects which, provided new 28kV backup capacity to sections of the Town of Aurora involved the rebuild of an older existing pole line to accommodate new circuits. Existing 44kV and 13.8kV circuits on the old poles were relocated to new poles.
- 2008-Vandorf Road Bayview Avenue to Leslie Street
- 52 The third of four projects required to provide new 28kV backup capacity to 53 sections of the Town of Aurora, involved the rebuild of an older existing pole 54 line to accommodate new circuits. Existing 44kV and 13.8kV circuits on the old 55 poles were relocated to new poles.
- **56 2008-Leslie Street Vandorf Road to Wellington Road**
- 57 The fourth of four projects required to provide new 28kV backup capacity to 58 sections of the Town of Aurora, this project involved the rebuild of an older 59 existing pole line to accommodate the new circuits. Existing 44kV and 13.8kV 60 circuits on the old poles were relocated to the new poles.
- 61

# • 2009-9<sup>th</sup> Line – Bur Oak to Major Mackenzie Drive

This Markham project replaces an old radial single phase overhead pole line
by a new 28kV double circuit pole line. This replacement project improved
reliability and restoration abilities by providing alternate circuits to the area.

# 2009-Major Mackenzie Drive – 9<sup>th</sup> Line to Reesor Road Similar to the project above, this Markham project replaces an old radial single phase overhead pole line with a new 28kV double circuit pole line. This replacement project will improve reliability and restoration abilities by providing alternate circuits to this area in Markham

# **• Yearly Replacement Program of Deteriorated Poles**

As part of its annual maintenance program, PowerStream performs tests on wood poles to determine their condition. Poles that are aged, damaged or deteriorated present an unacceptable risk of failure and unplanned outages. The budget for pole replacements is based on the identification of poles requiring replacement in the year preceding the actual capital spending. Poles are continually being replaced as they reach end-of-life.

#### 77 **1b.** Transformer Station Enhancements / Upgrades

PowerStream owns ten transformer stations throughout its service area which are used to transform 230kV from the transmission system to 28kV distribution voltage. These stations vary in age, with some as old as 25 years. Equipment wearing out, component failure, weather damage, and the like require capital expenditures to ensure these stations remain safe, reliable and in good overall operating condition. Capital spending may vary from year to year depending on actual unplanned events at the stations. Typically, as stations age, more capital expenditure is required to maintain them.

Projects completed in 2007 included a remedial drainage project around the existing control building at the Vaughan Transformer Station #1 and the replacement of a failed capacitor bank at Markham Transformer Station #1.

Based on reliability and risk assessment of aging transformer station assets, in 2008 it was decided to purchase spare units for a number of critical components in various stations. This included key protection relay spares for the Richmond Hill Transformer Station #2 (no spares were purchased when the station was built), and one 75/100/125 MVA power transformer. There are currently ten same-sized transformers in-service.

93 This spare equipment would be used if in-service equipment failed and required 94 replacement. Other 2008 projects include the installation of on-line transformer gas 95 analysis equipment on transformers at the Markham Transformer Station #1 which 96 monitor dissolved gases in the transformer's insulating and cooling oil and are used as a 97 predictive diagnostic tool to warn of pending transformer failure. At the recommendation 98 of the Planning Department, new reclosers are being installed on the Vaughan 99 Transformer Station #3 M5 circuit in Vaughan to break up the very long line distance and 100 improve operating reliability.

101 Projects planned for 2009 include the purchase of one 50/75/83 MVA power transformer 102 as a spare to the ten in-service transformers at the smaller transformer stations in 103 Markham. Other projects include the modernizing of remote transfer trip line protection 104 at the Vaughan Transformer Stations #1 and #2 by using PowerStream's SONET ring 105 fibre optic communications system. This project is required by Hydro One as part of its 106 operating protection and control modernization to fibre optic tripping and replaces the 107 older telephone circuitry that does not offer operational reliability. Another project 108 provides the control room operator with additional information on transformer loading 109 and operating temperatures, monitoring telemetry will be installed on the transformers at 110 the Markham Transformer Stations #1, #2 and #3.

#### 111 **1c.** Asset Condition Assessment (ACA) Program

In the past, PowerStream's predecessor companies did not have proactive and methodological programs in place to address asset replacement based on asset condition and life expectancy. Replacements or refurbishments were typically reactive and based on annual maintenance programs which replaced or repaired assets that failed or were defective. Moreover, these programs addressed only a limited and selective group of assets and were subjective based on field inspections and minimal testing, if any.

In 2006, as part of its commitment to improve the internal processes aimed at long term
 efficiencies and system reliability, PowerStream began to develop a comprehensive
 Asset Condition Assessment (ACA) program. PowerStream retained an external

122 consultant to assist in developing a robust ACA model which will be the foundation of 123 PowerStream's ACA program in the future. A detailed explanation of this process is 124 outlined in Exhibit B1, Tab 2, Schedule 1. PowerStream is currently in transition from its 125 annual maintenance program used for the identification of aged assets to the new ACA 126 program. Portions of this ACA program are in place and the results have helped 127 management to identify asset remediation requirements in both the 2008 and 2009 128 capital budgets. Over the next two years, the ACA model will be further enhanced to 129 cover all major assets.

Based on preliminary results of the ACA study, in 2008 PowerStream will replace an old
8 kV overhead distribution system in the community of Maple with a new 28 kV system.
The existing system is 45 years old with rotted poles, deteriorated wire insulation and is
an "island" radial load having no back-up supply.

In 2009, PowerStream has identified \$5.3 million in replacement costs based on the preliminary results of the ACA model. PowerStream expects the final requirements defined by the model will exceed the 2009 replacement costs. A plan has been developed to stage system replacements based on urgency and system impacts in order to mitigate risks to the customer.

Based on the initial assessments, one 2009 project will be the replacement or refurbishment of older circuit breakers in some of the transformer stations. Four 25-year old GEC outdoor type circuit breakers in Markham's TS#1 and TS#2 will be replaced. Two indoor circuit breakers, one each at Vaughan TS#1 and Richmond Hill TS#1 will be refurbished. Further projects will be identified by the end of 2008 upon completion of the ACA model.

#### 145 **1d. Distribution System Voltage Conversions**

In several areas within PowerStream's service territory, there are a number of older areas of both overhead and underground construction where assets have reached the end of their useful life. These assets operating at lower voltages (typically 8kV and 13.8 kV) require higher maintenance and offer lower reliability and operating performance.

- 150 Projects outlined below represent the large conversion projects undertaken or planned
- 151 between 2007 and 2009.
- 2007-Graham Municipal Station voltage conversion from 13.8kV to 27.6kV
   This Markham project involved the replacement of older municipal station
   assets that were a source of continuing reliability and maintenance problems.
   The project converted an old 13.8kV to the newer 27.6kV thereby eliminating
   the need for a station.
- 157 2008-Amber Municipal Station F3 voltage conversion from 13.8kV to
   158 27.6kV
- This project in Markham consists of the complete replacement of old existing 160 13.8 kV pole lines to new double 28kV circuits. The existing system incurs an 161 unacceptable number of outages each year. This project will provide back-up 162 (or alternate) supply to Amber station to minimize outages to customers in the 163 event of a loss of supply and allows for balancing of the electrical load on the 164 supply feeders from the transformer station. This will improve voltage quality 165 and distribution system operating efficiency.
- 2009-Romfield and area streets, conversion from 13.8kV to 27.6kV
- 167This project in Markham replaces an older underground 13.8kV circuits and168submersible transformer vaults with 28kV underground and padmount169transformer design. This project is required as a result of aging assets, poor170reliability, high maintenance costs and operational switching limitations.
- 171 1e. Switchgear Replacements / Upgrades / Refurbishments

PowerStream has over 1,500 padmount switchgear throughout its distribution system which are used to isolate customers from the distribution system and provide open points in the distribution grid. This project includes capital spending related to the planned replacement, upgrades and refurbishment of switchgears. Each year, capital spending may be a result of one of the following reasons:

- 177a.Switchgear replacements whereby the gear has failed, either178developing an electrical fault where insulation has broken down or179where the gear has been damaged by vehicles such as snowplows,180cars, trucks, etc. Failed switchgear results in customer outages.
- 181b.Replacement of switchgear as a result of a maintenance program182which is based on the condition of in-service switchgears. This183program includes the replacement of switchgear which is rusted or184the operating mechanism has failed. The replacement of these185switchgears is performed during planned outages.
- 186c.Refurbishmentofswitchgearstypicallyoccurswhennew187switchgears fail in such a way that they can be refurbished. These188repairs may be performed in the field using replacement parts.

#### 189 **1f. Cable Replacement**

190 Throughout PowerStream's service territory, there are a number of locations where 191 cable failures occur due to a variety of reasons. This has caused an unacceptable level 192 of system performance to the point that it is determined that cable replacement is more 193 cost effective in the long run than cable repair. Many older cables have multiple splices 194 from past cable faults. Cables become increasingly more susceptible to damage due to 195 fault currents and normal loading as a result of the multiple splices and aging insulation. 196 These cable replacement projects are planned projects. Some of the larger projects are 197 identified below.

198

#### • 2007-Municipal Station #3 feeder cable

199This project involved the replacement of approximately 150 metres of failed200three phase 750kcmil underground feeder cable on Aurora's Municipal Station201#3, feeder F1. The cable failed and replacing the 150m portion of cable was202determined to be a more prudent option than attempting repair considering203longer term costs and reliability issues.

# • 2008-Wells Street – Centre Street to Wellington Street East

This part of the distribution system in Aurora is 40 years old. In addition to the age of the distribution system, many of the older homes in this area have been upgraded, adding apartments and offices thereby causing significant increase in the electrical loading. The additional load caused overstressing of these older assets and therefore new distribution assets were installed.

#### • 2008-Marie Court and Vintage Court

This project in Markham converts aging overhead and underground distribution with submersible transformers to more modern padmount design. The old system is over 30 years old and has been identified by Operations as an area causing reliability issues.

#### • 2008-Martin Grove Road – Langstaff Road to Woodbridge Avenue

- This project in Vaughan was identified as a result of five cable failures in various locations in a two-month period in 2007. This resulted in five power outages to this residential neighbourhood. It was determined that the cable had reached the end of its useful life. Temporary re-routing of area circuits allowed for the cable replacement in 2008.
- 221

#### • 2009-Arnold Avenue

The overhead secondary distribution system in this part of Vaughan is approximately 50 years old. In many places, older housing in this area has been torn down and replaced by significantly larger homes having greater electrical load. This project will replace the overhead system with new system to maintain service reliability.

#### 227 1g. Load Transfers From Other LDCs

There are a number of locations along PowerStream's border with neighbouring utilities whereby customers in PowerStream's service territory are supplied by the neighbouring utility. In the past, this was done for reasons of efficiency whereby the neighbouring utility's distribution system was more accessible that of PowerStream. The *Distribution*  232 *System Code* gave utilities to the end of 2008 to feed these customers from its own 233 system or lose them to the neighbouring utility. PowerStream has identified a number 234 projects with Hydro One and Toronto Hydro where it was practical to feed the customers 235 from its distribution system.

# 236 **1h. Distribution Transformer Enhancements / Upgrades / Refurbishment**

PowerStream has 33,000 in-service padmount and polemount transformers throughout its distribution system that provide utilization voltages to its customers. This project includes capital spending related to replacement, upgrades and refurbishment of these transformers. Each year, capital spending may be a result of one of the following reasons:

- 242a.Replacement of transformers that have failed; for example, developing an243electrical fault where insulation has broken down. This can be caused by244lighting, switching surges, overloading, etc or where the transformer has245been damaged by vehicles such as snowplows, cars or trucks, etc. Failed246transformers result in customer outages.
- b. Replacement of transformers as a result of a maintenance program
  based on the condition of in-service assets. This program includes the
  replacement of transformers which are rusted or the operating
  mechanism has failed. The replacement of these assets is performed
  during planned outages.
- c. Refurbishment of transformers occurs when failed transformers are tested
  and evaluated. If deemed cost effective to repair, these units are sent to
  one of several transformer service companies in the area.

#### 255 **1i.** Load Interrupter Switch Replacement

PowerStream has over 1,000 load interrupter switches throughout its distribution system.
These are overhead switches used to isolate customers from the distribution system and
to provide open points in the distribution grid. This project includes capital spending

- related to replacement, upgrades and refurbishment of these transformers. Each year,capital spending may be a result of one of the following reasons:
- 261a.Failed switches whereby an electrical fault occurs because of insulator262damage, damage from lightning, or operating mechanism failure. Failed263load interrupter switches result in customer outages.
- 264b.Replacement of load interrupter switches as a result of a maintenance265program which is based on the condition of in-service assets. Using infra-266red scanning equipment, switches are identified that are over-heating and267require replacement.
- 268c.Refurbishment of switches occurs when new switches fail in such a way269that they can be practically refurbished using replacement parts from the270manufacturer.

# 271 1j. Distribution Station Enhancements / Upgrades

Distribution Stations, also called Municipal Stations, perform the same function as
Transformer Stations with the notable exception they are supplied at a lower voltage,
usually at the 44kV or 28 kV levels, and have a much lower capacity rating, usually using
5 MVA or 10 MVA transformers. PowerStream has 15 Distribution Stations throughout
its service area: 4 in Vaughan, 4 in Markham, and 7 in Aurora.

These stations vary in age, some as old as 40 years. Equipment wearing out, component failure, weather damage, animal contact, and the like requires capital expenditure to ensure these stations remain safe, reliable and in good overall operating condition. Capital spending may vary from year to year depending on actual unplanned events at the stations. Typically, as stations age, more capital expenditure is required to maintain them in good operating condition.

In 2009, a major project is located in Aurora and covers the enhancement of the feedertie between Aurora's MS#3 and MS#4

#### 285 1k. Unforeseen Capital Projects

286 Despite the best efforts of the budget team to identify all of the capital requirements for 287 any one budget year, there are always capital projects that arise after the budget has 288 been approved. If such projects are discretionary, every effort is made to defer them to 289 the next budget. However, many of these unidentified projects are non-discretionary as 290 they are initiated by third parties such as road authorities or customers. PowerStream 291 annually establishes a capital allowance budget to ensure there are funds available for 292 these costs. The amount of this capital item is based on previous years experience and 293 is normally divided equally between Sustainment and Development Capital.

#### 294 **2. Development Capital**

#### 295 2a. Transformer Station-Additional Capacity

296 Capital spending under this category is related to providing needed additional 297 distribution system capacity as determined by planning to meet load growth. In this 298 period (2008-2009) PowerStream is undertaking three major projects, namely

- 299 a. Markham TS #4,
- 300b.Connection of the Markham TS #4 and Vaughan TS #1 expansion to the301distribution system, and
- 302 c. Armitage Feeder Expansion.

A new Transformer Station from design to commissioning typically takes three years to complete. Markham TS#4 project began in 2007 with design and purchase of some long delivery material (transformers and switchgear). 2008 will see land acquisition and construction of the station representing the bulk of the projects capital cost. In 2009, construction of the station will be completed and the station will be commissioned with an in-service date of November 2009.

In 2009, a number of feeder connections will be required between transformer stationsand the distribution system to utilize the capacity. Four new feeders, representing half of

311 the final number of feeders, will be installed at the Markham TS#4 location. As well, four 312 additional feeders will be installed at the Vaughan Transformer Station #1 expansion to

313 complete the total feeders from this station that was placed in service in 2006.

314 The Armitage Feeder Expansion in 2009 covers the installation of two new 44kV feeder 315 circuits which will provide needed capacity from Hydro One's Armitage Transformer 316 Station to the Aurora service area. Most of the Town of Aurora is fed from the Armitage 317 Transformer Station. In 2009, additional capacity will become available at this station as 318 the Hydro One's Holland Junction Transformer Station comes in-service. PowerStream 319 requires the additional capacity to feed new growth in the Aurora area and to relieve the 320 strain on existing feeders that have been exceeding their operating limits for the past few 321 years. The cost to install these two new feeders is forecasted to be \$5.8M.

#### 322 **2b.** Residential Subdivisions

323 Throughout its service territory, particularly in the municipalities of Markham and 324 Vaughan, there is strong growth of home construction. On average, over the past three 325 years, PowerStream has connected 6,000 new residential homes to its system. Much of 326 this growth is carried out by developers in residential subdivisions via the standard Offer-327 To-Connect agreements between the developer and PowerStream. Under Section 3.2 328 of the Distribution System Code, PowerStream is required to cost-share with the 329 developer the cost of the expansion of the electrical distribution system throughout the 330 The amount of this cost-sharing is determined by the Economic development. 331 Evaluation Model, a calculation prescribed by the OEB which determines the net present 332 value of the operating cash flows from the development. Typically, depending on the 333 timing of connection of residential houses in a subdivision, PowerStream rebates 334 between 40% and 60% of the subdivision costs to the developer.

#### 335 2c. Distribution System Plant Relocations

336 As communities within PowerStream's service territory continue to grow, it is 337 accompanied by road construction, re-alignment and widening of existing roads as well 338 as the installation of new water and sewer infrastructure. This development work is 339 controlled by Provincial, Regional and Municipal authorities. Because PowerStream's 340 distribution system is located on the road allowance, at the request of the road authority, 341 it must be relocated to accommodate this development work. Each year, PowerStream 342 reviews the five and ten year road authority plans for development to identify where 343 distribution system conflicts exist and to budget for resolution of these conflicts. The 344 majority of these projects involve relocating portions of the distribution system. These 345 projects are usually cost shared with the road authority. PowerStream classifies these 346 projects as non-discretionary and schedules the construction to accommodate the requirements of the road authority. 347

348 One significant project in this category is the relocation of the distribution system to 349 accommodate road widening required for a bus rapid transit corridor on Yonge Street 350 and Highway 7 in York Region. The rapid transit system is part of a 10 -15 year plan that 351 will eventually see the bus rapid transit system evolve into a light rail transit system 352 and/or extension of the existing subway. This project is expected to start in 2009 costing 353 \$5.5M.

#### 354 2d. New Commercial and Industrial Services

355 Annually, PowerStream installs about 140 three-phase electrical services to customers 356 throughout its service territory. Most of the cost of these services, totaling \$8 million per 357 year, is paid by the customer requesting the service in accordance with PowerStream's 358 Conditions of Service. A typical service comprises the installation of high voltage cable 359 in the customer supplied concrete encased duct bank, a pad mount step-down 360 transformer and the metering system. The customer normally pays 100% of these costs 361 with the exception of the re-alignment or re-routing of PowerStream's distribution system 362 to provide acceptable operating configuration.

#### 363 **2e.** Municipal Distribution Stations – Additional Capacity

In 2007, PowerStream began adding needed capacity in its distribution stations located
 in Aurora. The additional capacity was required to meet the increased demand related
 to commercial and industrial load growth in the Aurora area. One distribution station

MS#6 (sized 10 MVA with two 13.8 kV feeders) was upgraded. It is located on Bayview Avenue north of Vandorf side road. Two new municipal stations MS#7 and MS#8, each have a capacity of 10 MVA with four 13.8kV feeders and were required to feed the large commercial development north of Wellington Street, between Leslie Street and Hwy 404.

#### 371 **2f.** New Overhead or Underground Lines

Each year as growth continues in PowerStream's service territory, new overhead and underground circuit extensions have to be installed to provide capacity in the required development areas. Work would include new pole line installations, adding additional circuits to existing pole lines, etc. The recommendations for projects that expand the distribution system come from the Engineering Planning Department's Distribution System Planning Report.

378 One notable 2009 project is the installation of two three-phase overhead circuits on 379 Dennison Avenue from Warden Avenue to Esna Park at an estimated cost of \$3.1 380 million to provide capacity relief on two overloaded circuits (22M5 and 22M6) in this 381 area.

#### 382 2g. Unforeseen Capital Projects

383 Despite the best efforts of the budget team to identify all of the capital requirements for 384 any one budget year, there are always capital projects that arise after the budget has 385 been approved. If such projects are discretionary, every effort is made to defer them to 386 the next budget. However, many of these unidentified projects are non-discretionary, 387 often originated by third parties such as the road authorities or customers. To ensure 388 these capital projects are tracked and that capital monies have been allocated to cover 389 these costs, PowerStream carries a capital allowance in each budget. The amount of 390 this capital item is based on previous years experience and is typically divided equally 391 between Sustainment and Development Capital.

#### **392 3. Operations Capital**

393 Operations Capital is capital required to support the day to day operation of the 394 distribution system. It includes unplanned distribution equipment replacement (e.g. 395 storm damage and other breakdown replacements), fleet/tools/warehouse operations, 396 distribution system management and control programs such as OMS (outage 397 management system), GIS (geographic information system), SCADA (supervisory 398 control and data acquisition), smart grid, metering programs (excluding Smart Meters) 399 and the Operations Centres.

#### 400 **3a.** System Operation Automation

401 Most of the projects under this heading apply to either the Supervisory Control and Data
 402 Acquisition (SCADA) system or the Outage Management System (OMS) system.

403 The SCADA system is the real-time system that connects the control room operator to 404 the distribution equipment in the field. The system uses a two-way communications 405 network that feeds operating data from equipment in the field back to the control room to 406 provide the operator with status of the device, loading information, alarm and warning 407 This information is displayed on electronic screens and computer indication, etc. 408 terminals in the control room. Using the SCADA system, the operator can control 409 equipment in the field in response to the information, performing operations such as 410 opening and closing switches, raising or lower voltages, etc. The SCADA system is a 411 required tool to control PowerStream's distribution system in accordance with the 412 requests of the IESO and Hydro One Transmission Control. The SCADA system is also 413 a powerful data management tool, used to establish trends for loads and voltages and 414 assists in planning expansion of the distribution system.

SCADA is the single most important tool in operating a safe and reliable distribution system. Having the ability to operate a field switch in the distribution system from the control room saves hours of unnecessary downtime to customers who would otherwise have to wait while field crews were dispatched to manually operate field switches. 419 One of PowerStream's continuing initiatives is the installation of 12 new remotely 420 controlled switches each year at selected locations of the distribution system where 421 these switches can have the largest impact on reliability improvement. The switches are 422 called SCADA-Mates and provide two-way radio communication with the control room.

The Outage Management System (OMS) is a computer based software system that integrates information from SCADA and Smart Meters in the system to provide power outage information at the customer level. PowerStream has chosen ESRI (supplier of PowerStream's GIS system) to provide their system called RESPONDER. The OMS would allow faster response and restoration times to customers without power. In many occurrences the control room operator will know which customers are without power even before the customers themselves are aware.

Phase I of this project will be completed in 2009. In the future, Phase II of the OMS will
offer IVR (integrated voice recognition) services to the customer whereby customers
would be told of the outage and when power will likely be restored.

#### 433 **3b. Unplanned Equipment Replacement**

Unlike the planned equipment replacement covered in the Sustainment portion of the capital budget, unplanned equipment failure requiring repair or replacement usually represents emergency conditions whereby customers are without power or at risk of losing power. As this work is reactive it has to be carried out immediately, often requiring after-hours servicing

These projects cover unforeseen failure of overhead and underground distribution equipment resulting from manufacturer deficiency, car accidents or extreme weather conditions. These projects are considered non-discretionary. The amounts in the capital budget are based on previous years' experience however it is not uncommon that severe weather conditions can result in greater than budget expenditures in some years.

#### 444 **3c.** Suite-Metering Costs

This program for condominium and apartment type complexes covers the installation of individual unit-metering equipment (a smart meter) to replace the bulk metering systems used in the past. Providing each condo or apartment with their own meter promotes individual energy usage and allows the individual to participate in energy savings programs. Individual suite metering provides equity or fairness amongst all the individuals in the building.

#### 451 **3d.** Fleet

452 On an annual basis PowerStream's fleet program includes an assessment of its fleet 453 condition and considers the replacement of existing vehicles as well as purchases of additional vehicles and equipment required to serve the growing service area. 454 455 PowerStream has a detailed fleet replacement program which charts the lifecycle of 456 existing vehicles and equipment and assists in determining the spending for any given 457 year. These costs may include expenditures on large line truck vehicles required to 458 service overhead or underground distribution assets or light-weight vehicles required by 459 field engineers and technicians, metering or customer service areas of the business.

In 2007 fleet spending was high as a result of delayed delivery of heavy vehicles due tosupplier problems.

#### 462 **3e.** Wholesale Meters

463 The IESO has mandated that all wholesale meter locations throughout the province be 464 made compliant with their wholesale meter standards. Wholesale metering is on the 465 230kV supply points to PowerStream's transformer station. The required update, while 466 mandatory, was allowed to be phased-in by allowing and LDC to go to the end of the old 467 meter re-verification date before the standards had to be met. This is a multi-year project 468 that commenced in 2005 and will be fully completed in PowerStream by 2010. The 469 upgrading usually involves the replacement of the PT's, CT's and meter on each 230kV 470 feeder to each transformer station.

#### 471 **3f. Tools**

This project involves the purchase of tools that are required by six different departments for the ongoing operation, construction, maintenance, and repair of the distribution system. Tools include power measuring equipment, cutters & crimpers, relay testing equipment, communications testing equipment. These tools replace worn out, broken or lost tools used by these department on a daily basis.

#### 477 **3g.** Smart Grid Program

478 Smart Grid is the integration of several technologies within a distribution company to 479 provide the utility and the customers more information about the distribution system 480 thereby improving performance and reliability. Most of these technologies already exist 481 in the utility but operate autonomously. The backbone of any smart grid is its two way 482 communication system. Communications coupled with distributed automation, sensors 483 and remote operated equipment will, in the future, provide a distribution grid that will be 484 self-restoring, provide greater reliability, improve power quality, improve energy 485 management and have shorter duration power outages. Smart grid will provide more 486 information to both the customer and the utility about what is happening on the 487 distribution system. Smart grids will mean different things to different utilities. The level 488 of intelligence will have the distribution grid of the future respond to correct or minimize a 489 problem on the distribution system before the control room operator becomes aware 490 there is a problem.

PowerStream, although still finalizing its smart grid strategy, has identified a number of smart grid initiatives including the installation of fault detectors that pinpoint the location of an electrical fault to the operators as soon as the fault happens. Another project is the installation of intelligent fault interrupters which limit the level of electrical current when a fault occurs thereby significantly reducing the damage to cable and switchgear as faults are located and cleared. 497 Smart grid technologies create a level of intelligence in distribution operation which
 498 provides higher reliability, better asset utilization, improved grid performance and a more
 499 adaptive operating system.

#### 500 **3h.** Meter Re-Verification and Replacement Program

501 PowerStream manages the re-verification and replacement of meters in accordance with 502 Measurement Canada's guidelines. PowerStream's meters have a meter seal expiry 503 date and, upon seal expiry, a sample of meters within a group are taken out of service 504 and replaced with new meters. Those meters taken out of service are re-verified or 505 checked to ensure accuracy and functionality. If a certain percentage of the meters pass 506 these tests, then the seal expiry date is extended for the group and no further actions 507 are required until the new expiry date is reached. If the meters fail the basic tests, the 508 entire group of meters is replaced.

#### 509 **3i.** Asset Condition Assessment Model Development

510 The Asset Condition Assessment (ACA) model development program began in 2006 511 was a multi-year project undertaken with consultants with expertise in this area 512 (Kinectrics) to develop the appropriate asset condition assessment models for 513 PowerStream.

514 The purpose of having a practical model to determine asset replacement is increasingly 515 more important as the utility ages. Further details of this program are outlined in Exhibit 516 B1, Tab 2, Schedule 1.

#### 517 **3j. Geographic Information System**

A Geographic Information System ("GIS") was established in PowerStream's Planning department in 2005. This planning, design and operations tool uses a spatial data base upon which engineering design information and equipment data is managed. This system cross reference consultant's drawings, manufacturers' equipment information and equipment location into one single platform that is used throughout PowerStream. Each year, the GIS is improved by adding enhancements to existing applications as well as new applications to improve the system overall effectiveness. Expenditures are forconsulting services and software enhancements.

#### 526 3k. Conservation Demand Management – Smart Meter Pilot

527 The 2007 spending is related to 3<sup>rd</sup> tranche CDM program initiatives. These programs 528 included a smart meter pilot project, wind/solar installation and capacitor banks which 529 were installed to reduce system losses.

#### 530 **3I.** System Control Room

PowerStream's system control room was re-located to 161 Cityview Boulevard in 2007. There were a number of initiatives specific to the control room that were undertaken with the control room relocation. These initiatives included new control room work stations (ISO -11064, Part 4 standard), control room/situation room furniture, swing panels, raised operating theatre roof to view visual display wall, specialized lighting to work with visual display wall, control room air conditioning system, special acoustic ceiling, raised floor, and special communications wiring.

#### 538 **3m.** Storm Damage to Distribution System

At least once a year PowerStream's distribution system sustains significant damage due to extreme weather conditions. While these weather conditions usually occur in the wintertime there have been several occasions in the past few years where severe damage has occurred during the summer months. As a result of these storms parts of the distribution system were significantly damaged and required prompt repair and replacement to restore power.

545 In the capital budget process, a separate work order has been setup to capture severe 546 weather damage costs to the distribution system.

#### 547 **3n.** Conservation Demand Management – Load Control Devices

548 The 2007 spending was related to 3<sup>rd</sup> tranche CDM program initiatives. This program 549 included residential load control devices installed to reduce peak load.

#### 550 **4.** Other Miscellaneous Capital

#### 551 4a. Information Technology Enhancements

Information technology systems are the backbone that supports PowerStream's ability to
 provide reliable and efficient service to its customers. Capital investments in technology
 include:

- Phone System Enhancement- This project will redesign the call flow, using
   voice recognition technology to incorporate self service speech applications,
   to enhance call flow and to introduce basic automated transactional options
   for customers related to inquiry about account balances, bill due date, last
   payment amount and date etc.).
- File Nexus This application eliminates the need for storage of paper by electronically archiving paper files and reports. This eliminates the need to print and store reports and provides efficient access to information for all departments. PowerStream continues to integrate File Nexus with other applications to improve its records management processes. In 2009 the tool will be leveraged to integrate with the financial system and automate components of the Accounts Payable process.
- Knowledge/Document Management This is a central repository for
   corporate information which provides departments with the ability to share
   and manage information. This system is also a development platform for
   automating workflows and document management. In 2009 PowerStream
   proposes to use this system to automate a number of paper-based
   processes.
- Web Based Customer Server/Bill Payment This system provides
   customers the ability to view and pay their bills on-line as well as the ability to
   view their consumption history. This system offers the customer an alternate
   form of communication with PowerStream.

#### 577 **4b.** Customer Information System Enhancements

578 PowerStream's Customer Information System (CIS) currently processes electricity and 579 water bills for upwards of 230,000 customers. The system also maintains customer 580 information, including financial transactions, consumption history and meter records.

581 The CIS enhancements are in response to evolving regulatory requirements, rate 582 changes, improving customer service and internal efficiency and security. In 2009, 583 PowerStream is proposing to develop an Electronic Data Interchange module to 584 eliminate the need for manual processing of Electrical Safety Authority (ESA) connection 585 approvals. PowerStream also proposed to modify the CIS to automate the billing of 586 individual condo suite units related to PowerStream's suite metering initiative. 587 Modifications to the system are also required to accommodate the growing number of 588 customers who wish to generate electricity with solar and wind energy. Other examples 589 of enhancements include review and enhancement of application security and 590 development of interfaces to external systems including the phone system and Outage 591 Management System.

592 PowerStream maintains its CIS system to be complaint with billing requirements and 593 allow effective operations. However it recognizes that the application was originally 594 developed over 15 years ago, and has undergone numerous revisions to meet changing 595 requirements. As such PowerStream is proposing to begin a process to replace its CIS 596 system with some exploratory work leading to a feasibility study. It is expected that the 597 replacement of a system so vital to the operation of the company will take three years.

598 To ensure the current CIS operates effectively over the coming three years, 599 PowerStream proposes to replace the existing hardware component of the CIS in 2009. 600 The current hardware is five years old, and poses an increased risk of failure, increased 601 maintenance costs and potential difficulty with sourcing of replacement parts.

#### 602 **4c.** Financial System Enhancement

The continuing objective is to provide a secure and solid foundation from which
PowerStream can leverage an interconnected business structure between all operating
units.

606 Review of PowerStream's financial systems concluded that the current system was not 607 adequate to meet both current and long term needs of the organization. It was 608 identified that the company needed to align business requirements with software 609 solutions and eliminate the current practice of utilizing departmental (stand-alone) 610 applications to meet the needs of specific users.

As a result, PowerStream decided to upgrade its JD Edwards financial system to version 8.12 beginning in 2007 and to implement additional modules to better integrate data in order to improve information reliability, reduce reporting timelines and eliminate the silos of information. Specifically, job cost, accounts payable 3-way match, and updating the chart of accounts were implemented. The upgrade to version 8.12 also positioned PowerStream to take advantage of improvements to the Human Resources module, which will take place in 2008 and 2009.

Implementation of the HR Module will enable the centralization of Employee vacation and sick time records, eliminating the need for separate systems currently used by various departments for this purpose. The HR module will also provide opportunities to stream line components of the current time entry process.

In addition, modifications to the financial system will be required in 2009. Accounting practices and procedures will need to be changed in order to comply with International Financial Reporting Standards (IFRS). The new IFRS accounting and financial reporting standards will require PowerStream to make significant changes to the way it collects, stores and reports financial information.

Implementing IFRS will be a multi year project with a mandated implementation of 2011.In 2009, PowerStream proposes to review the impacts to business processes and

systems with plans to establish a test environment to begin development and enableparallel reporting in 2010.

#### 631 4d. New Computer Equipment / Replacement

632 Computer equipment replacements and enhancements are necessary in maintaining the 633 security, reliability and effectiveness of the overall infrastructure. Equipment is also 634 purchased to accommodate new business requirements, system expansion and 635 redundancy. Also included is a yearly program to maintain the appropriate lifecycle of 636 computers, printers and plotters with replacements based on the end of lifecycle and to 637 minimize maintenance costs in the future.

PowerStream currently supports approximately 400 end-user computers. To minimize the financial impact, a staggered 4 year life cycle is used which results in the replacement of approximately 100 units per year. A similar lifecycle management program is utilized on approximately 40 file servers, which will result in the replacement of approximately 10 servers in 2009.

Along with replacement of file servers, replacement of the external storage system
(SAN), which is currently four years old, is proposed in 2009. The SAN is a critical piece
of infrastructure which stores all of PowerStream's data files and emails.

#### 646 **4e.** New Head Office

Expenditures related to the construction of the head office are explained in detail inExhibit B1, Tab 5, Schedule 3.

#### 649 4f. Software Purchases

This expenditure pertains to the on-going program to purchase software to support and improve day-to-day operations. In some cases software is purchased or upgraded to maintain compatibility with business partners who routinely exchange electronic files with PowerStream. Some examples include ongoing license updates for AutoCad, Microsoft

- 654 Windows Server, business applications, anti-virus and security software required as 655 computers need replacement.

# 656 SMART METERS

- 657 PowerStream is installing Smart Meters and an AMI communication system as part of
- the Government of Ontario's Smart Meter Initiative. By 2010, 100% of PowerStreamcustomers will be fitted with a smart meter.

# MAJOR PROJECTS – OVERVIEW

5 The capital additions that contribute to the proposed increase in rate base are identified in 6 Exhibit B1, Tab 4, Schedule 2. Three projects make up a significant portion of this 7 increase. An overview of these projects is presented below. Detailed descriptions are 8 provided in the following Schedules in Exhibit B1, Tab 5:

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1 2

3 4

• B1-5-2: Vaughan Transformer Station (TS) #1 Expansion (2006)

- *B1-5-3:* Corporate Head Office (2008)
- 11 *B1-5-4:* Markham TS #4 (2009)
- 12

#### 13 VAUGHAN TS #1 EXPANSION

14

15 The Vaughan TS #1 is located in a commercial/industrial area near the Highway 16 407/Dufferin Street intersection. It was commissioned in 1989 on a site that was large 17 enough to permit future station expansion. Increasing customer demand along the 18 Highway 407 corridor from Bathurst Street to Keele Street was causing the station to 19 reach its maximum loading capacity. Prior to the formation of PowerStream in 2004, 20 Hydro Vaughan, one the predecessor companies, recognized the need for additional 21 capacity and began the process to install transformation facilities. In mid-2005, 22 PowerStream began to examine the plan proposed by and commenced by Hydro 23 Vaughan and considered a number of alternatives for providing additional capacity - given 24 that the merger had transpired and this now allowed PowerStream to take into account the 25 existing capacity across its entire service area - Markham, Richmond Hill, and Vaughan at 26 the time - for capacity planning purposes.

The most viable alternative was the doubling of the capacity at Vaughan TS #1 at a cost of \$30M for the following reasons: no additional land was required, the station was central to the developing load, and there was sufficient space to install distribution feeders. The Vaughan TS #1 Expansion was placed into service in 2006.

# 31 CORPORATE HEAD OFFICE

32 In the summer of 2004, PowerStream recognized that they needed to take steps to 33 develop a comprehensive facility plan that would address the problems created by 34 geographic separation based on the predecessor locations in Markham, Richmond Hill 35 and Vaughan and enable PowerStream to realize the opportunities arising out of the 36 earlier amalgamation. The Board of Directors arrived at two decisions, the first was to 37 close the Richmond Hill location. The lease was up for renewal and the closure would 38 assist in temporarily managing the issue of geographic separation. The second decision 39 was to engage a real estate consultant to conduct a needs assessment and develop a 40 comprehensive strategic facility plan.

41 The Strategic Facility Plan identified two conceptual alternatives to the status guo of two 42 head office and service centre locations. The status quo was not a viable option for the 43 following reasons: cramped quarters, inadequate meeting facilities, travel between 44 locations, and lack of space for growth. The proposed alternatives were as follows: a 45 consolidated head office and service centre facility with a secondary service centre within 46 the service territory and a head office and two service centres at existing or alternate 47 locations in the Town of Markham or City of Vaughan. In December 2004, the 48 PowerStream Board of Directors decided to pursue the single head office and two service 49 centre options and the Executive Management Team with assistance from the real estate 50 consultant began to evaluate the alternatives under this option.

51 In the evaluation process PowerStream "short listed" and toured existing buildings; 52 however, these buildings were rejected for the following reasons: insufficient space, non-53 contiguous floors, poor access for customers and staff, and lack of a cost advantage. 54 PowerStream accordingly chose a new building. There were, however, two options that 55 PowerStream examined: lease and purchase. PowerStream decided to purchase land 56 and construct its head office because that was the more cost-effective option. The building 57 cost, including land, was \$27.7M.

PowerStream also decided to design the building so as to achieve LEED – Leadership in
 Energy and Environmental Design – certification. PowerStream considered it prudent to

demonstrate the importance of and its commitment to energy conservation while ensuring
an adequate financial return. The official gold-standard certification was received on
September 24, 2008.

# 63 **MARKHAM TS #4**

64 Capacity planning identified the need for an additional Transformer Station in Markham, in 65 2009. Two non-transformation and three transformation alternatives were considered. 66 The non-transformation alternatives were determined to not be viable. The transformation 67 scenarios were evaluated based on nine factors, including: available property, proximity 68 to transmission lines, proximity to load growth areas, effects on the natural, cultural and 69 socio-economic environments and cost. Potential sites were scored based on the nine 70 factors and a preferred Transformer Station site was identified. The budgeted cost is 71 \$47M with an in-service date of December 2009. Some of the cost is for additional 72 feeders that will be installed after the 2009 test year. One-half of the cost to the end of 73 2009 has been included in rate base for 2009.

# 74 SERVICE CENTRE

PowerStream plans to consolidate its two existing services centres into a single servicecentre in 2010.

1

# **VAUGHAN TRANSFORMER STATION #1 EXPANSION**

#### 2 OVERVIEW

3 PowerStream's Vaughan Transformer Station #1 ("TS1") is located on Dufferin Street in 4 Vaughan, on a site that is adjacent to the Parkway Transmission Corridor south of 5 Highway 407, where it is connected to Hydro One's 230kV transmission lines. One of 6 PowerStream's predecessors, Hydro Vaughan, commissioned Vaughan TS1 in May 7 1989 with two 75/125 MVA transformers, 28 kV switchgear, and associated protective 8 and ancillary equipment. Vaughan TS1 is accordingly a Dual Element Spot Network 9 ("DESN") station; in this station configuration, the loss of a transmission line or a station 10 transformer will not result in an interruption of downstream customer loads. There were 11 10 feeder lines emanating from Vaughan TS1 when it was commissioned. Hydro 12 Vaughan thereafter expanded Vaughan TS1 in 1993 by adding static capacitor banks 13 and again in 1997 by adding two feeder lines.

PowerStream completed the third expansion of Vaughan TS1 ("TS1E") in 2006. This project added two 75/125 MVA transformers, 28kV switchgear, and associated protective and ancillary equipment. Vaughan TS1 thereby became a double DESN station. The project also involved the construction – ultimately – of 12 distribution feeder lines on road allowances in Richmond Hill as well as Vaughan. These feeders include two 28kV tie feeders between Vaughan TS1E and PowerStream's Richmond Hill Transformer Station #2 ("TS2"). The cost of the project was \$30.2M.

# 21 **NEED FOR EXPANSION**

Hydro Vaughan initiated what became the Vaughan TS1E project in 2002 when its load
 forecast, which compared its available capacity to its peak demand forecast, indicated
 that additional transformation capacity was required for two purposes:

- 1. to increase capacity in its service area to accommodate growth; and
- 26 2. to relieve high loading conditions on the existing Vaughan TS2.

Hydro Vaughan considered and rejected the "do nothing" option. Doing nothing would
 result in the loading of its existing three transformer stations above accepted planning

29 levels, thereby exposing its service area to a significant risk of power outages.

# 30 **PROJECT ALTERNATIVES**

Hydro Vaughan accordingly chose the "do something" option and examined six
 alternatives. These alternatives were based on Hydro Vaughan's ability to meet technical
 requirements for transmission connection, distribution feeder integration, and scheduled
 timelines.

Expand Vaughan TS1: This alternative offered the following benefits: the site was
 large enough to accommodate the requisite expansion, the 230kV connection with
 Hydro One was available, multiple routes for feeder egress were available, and the
 site was proximate to some of Hydro Vaughan's most heavily loaded areas.
 Interconnection with Hydro One's protection systems was a potential problem;
 however, a similar installation had been successfully energized and was currently in
 service in Sarnia.

Expand Vaughan Transformer Station #2: This alternative offered the following
benefits: the 230kV connection with Hydro One was available and the site was also
proximate to Hydro Vaughan's major load centres. There were, however, the
following drawbacks: the need to purchase additional land, although it was available,
and feeder congestion in the area (i.e., additional feeder egress was problematic).

3. New Transformer Station at Royal Plastics: Royal Plastics was Hydro Vaughan's largest commercial customer, it was located in the vicinity of the Parkway Transmission Corridor, and preliminary discussions with it indicated support, in principle, to allowing Hydro Vaughan to build a TS on its property. These factors made this alternative attractive. The principal drawback, however, was feeder congestion in the area.

53 4. New Transformer Station at Keele/407: This alternative offered the following benefits:
 54 the new site would be proximate to Hydro Vaughan's major load centres, land was

available, Hydro One's transmission lines were nearby, and there was no feeder
congestion either north or south on Keele Street. There were significant drawbacks,
however, in terms of cost and timing; namely, the need to purchase the land, conduct
a Class Environmental Assessment for Minor Transmission Facilities, and arrange
for connection to Hydro One's transmission lines.

5. New Transformer Station at Kipling/Teston: This alternative would have provided
PowerStream with much-needed diversity in its 230kV supply from Hydro One
assuming transmission capacity was available. It was not, however, because Hydro
One advised that its transmission lines were fully loaded and were not scheduled for
reinforcement until 2008.

6. Utilize Capacity from Richmond Hill Hydro: Richmond Hill Hydro (one of 65 66 PowerStream's predecessors) had recently completed its second transformer station 67 – now PowerStream's Richmond Hill TS2 – that would not be fully utilized until 2008. Markham Hydro (another of PowerStream's predecessors) originally arranged for 68 69 positions on four feeder lines emanating from that transformer station but, subsequently, there were indications that Markham Hydro would exchange those 70 71 positions if Richmond Hill Hydro would do likewise with its positions on feeder lines 72 emanating from Hydro One's Buttonville Transformer Station.<sup>1</sup> It was uncertain at 73 the time, in other words, that Hydro Vaughan could obtain feeder positions of its own 74 with Richmond Hill Hydro's second transformer station. Another significant drawback 75 was the cost of the infrastructure that would be needed to utilize the capacity, if it 76 were available, and the limited time that the capacity would be available.

77 7. Local Generation: Hydro Vaughan had received, at the time, proposals for peak78 shaving generation in the order of 10-200MW. The availability of such generation
79 would have required, however, back-up transformation and distribution facilities on
80 Hydro Vaughan's part to provide reliability to its customers. The proposals were
81 uncertain, moreover, because the proponents seemed to require governmental
82 assistance that was not then available.

2009 EDR Application

<sup>&</sup>lt;sup>1</sup> This station now serves only PowerStream via its 12 distribution feeder lines.

# 83 HYDRO VAUGHAN'S CHOICE

Hydro Vaughan chose the first alternative – an expansion of its Transformer Station #1 –
because it would provide more benefits with fewer drawbacks at the least cost. Hydro
Vaughan planned to install a single 75/125 MVA transformer and six feeder lines with an
in-service date in the spring of 2005.

#### 88 **POWERSTREAM'S ROLE**

The formation of PowerStream in 2004 consolidated the distribution capacity and infrastructure in Markham, Richmond Hill, and Vaughan into a single utility. This consolidation, in turn, allowed PowerStream to take into account the existing capacity across its entire service area – Markham, Richmond Hill, and Vaughan at the time – for capacity planning purposes.

94 PowerStream concluded that there was sufficient capacity from all sources to offset, 95 approximately, the equivalent of one year's load growth in Vaughan. At the same time, 96 though, PowerStream's forecasts of load growth across its entire service area confirmed 97 Hydro Vaughan's conclusion that capacity relief was still required in Vaughan albeit one 98 year later.

#### 99 **POWERSTREAM'S ALTERNATIVES**

Hydro Vaughan had begun the expansion of what is now Vaughan TS1 before PowerStream was formed in 2004. PowerStream's alternatives involved timing – keep the same in-service date (spring of 2005) or delay it – and the expansion's design. PowerStream reviewed both to determine whether the in-service date could be delayed by utilizing its existing transformer stations and, in addition, whether the additions were adequate to meet PowerStream's needs across its entire service area (i.e., Markham and Richmond Hill as well as Vaughan).

PowerStream considered where new system capacity could be installed having regard to
 the fact that Hydro Vaughan's expansion project was the most advanced transformer
 station project. Switchgear had already been ordered by Hydro Vaughan, for example,

the following had been completed: the Class Environmental Assessment for Minor Transmission Facilities and the System Impact Assessment (IESO). Vaughan TS1 was sized to become a double DESN station, moreover, in that the 230 kV connection with Hydro One could accommodate another DESN station and the site was large enough to construct it.

115 PowerStream decided to consider three alternatives that reflected the distribution 116 capacity and infrastructure across three municipalities rather than one of them alone:

 No Vaughan TS1 Expansion: This alternative involved the transfer of 20 MVA of load (approx.) to the feeders from PowerStream's Richmond Hill TS2. This transfer would be a no-cost exercise; however, it would still leave PowerStream's three transformer stations in Vaughan, including Vaughan TS1, overloaded by 30 MVA in 2005.

122 2. Original Vaughan TS1 Expansion: This alternative involved Hydro Vaughan's plan to 123 expand Vaughan TS1 using a single transformer. While this alternative would add 124 capacity, it would not defer the in-service dates for new transformation capacity. It 125 would also fail to meet N-1 security criteria for the transmission-connected load 126 supplied from the TS. N-1 security means that customer loads will continue to be 127 supplied even with a "major" network element out of service. At the transformer 128 station level, N-1 security is achieved by having sufficient redundancy to 129 accommodate all sources and duration of first contingency outages related to 130 transmission lines and station transformers. One means to accomplish this is the 131 DESN station design in which the loss of a transmission line or a station transformer 132 will not result in an interruption of downstream customer loads. This option would 133 add more capacity but, on the other hand, it would not comport with PowerStream's 134 planning criteria of which one is the DESN station design.

Vaughan TS1E Project: This alternative would convert the Vaughan TS1 to a double
 DESN station and, in addition, it would utilize spare capacity at Richmond Hill TS2 by
 means of two 28kV tie feeders between the two transformer stations. It would also

- delay the need for any future transformer station in Markham and Vaughan by one ortwo years.
- 140 PowerStream chose the third alternative because it allowed for the following:
- optimal use of existing facilities; that is, fully loading what has already been built
   and paid for;
- 1432. additional distribution system tie and backup facilities between transformer144 stations; and
- 3. better economics in that the net present value of the cost of the third alternative
  was \$1.6 million lower than the net present value of the cost of the second
  alternative.

# 148 CAPITAL COST

149 The capital cost of the Vaughan TS1E project was \$30.2M: \$12.4M for the cost of

expanding the transformer station ("within the fence") and \$17.8M for the 12 feeder lines.

151 The following is a breakdown of the \$30.2M:

152	Design:	costs include preliminary and detailed design, approvals
153		by Hydro One, the IESO, various provincial Ministries
154		and local government agencies (~\$0.55M);
155	Major Equipment:	transformers, switchgear, protection and control systems
156		(~\$5.75M);
157	• Other hardware:	remaining equipment such as grounding reactors,
158		insulators, station service transformers, battery system,
159		capacitor banks and cables (~\$0.85M);
160	Installation:	costs include civil construction, electrical construction,
161		and commissioning (~\$3.35);

162	•	Miscellaneous:	provincial taxes, construction extras (~\$1.9M); and
163 164	•	Distribution feeders:	Costs to integrate the 28kV distribution feeders from the station to the connection points.

#### **HEAD OFFICE**

# 2 INTRODUCTION

1

3 After the 2004 merger of Hydro Vaughan, Richmond Hill Hydro and Markham Hydro, 4 PowerStream had the three head offices and three service centres of the predecessor 5 utilities. The purpose of this evidence is to describe the process that led to the 6 Company's decision to consolidate the three head office facilities at one location and the 7 further and subsequent process that led to the decision to construct, own and operate a 8 new head office at 161 Cityview Boulevard, adjacent to the intersection of Highway 400 9 and Major Mackenzie Drive in the City of Vaughan. A design/build contract with Belrock 10 Construction was executed on December 8, 2005. Construction of the new office 11 building commenced in March 2006 and was completed in December 2007. 12 PowerStream moved into its new head office on February 2, 2008. The building cost 13 including the land acquisition was \$27.7 million.

# 14 THE DECISION TO CONSOLIDATE

When PowerStream was created in May 2004, it had approximately 377 administrative
employees, working in 14 different departments, spread across three head office
locations:

- in the Town of Markham, at the former Markham Hydro building;
- in the Town of Richmond Hill, at the former Richmond Hill Hydro building; and
- in the City of Vaughan, at the former Hydro Vaughan building which was shared
   with the City of Vaughan and the Vaughan Fire Department.
- 22
- 23 Key information on these three facilities is shown in Tables 1 to 3.

#### Table 1: Facilities Space at Time of Merger

Location	Address	Office	Warehouse	Outside	Total Occupied SF
Markham	8100 Warden Ave	49,322	45,100	101,114	195,536
Richmond Hill	1150 Elgin Mills Rd E	85,845	12,837	46,960	145,642
Vaughan	2800 Rutherford Rd	20,076	15,798	253,790	289,664
Total		155,243	73,735	401,864	630,842

25 26

27

#### Table 2: Annual Facilities Cost at Time of Merger

Location	Address	Annualized Costs
Markham	8100 Warden Ave	\$1,209,806.00
Richmond Hill	1150 Elgin Mills Rd E	\$1,378,391.00
Vaughan	2800 Rutherford Rd	\$794,270.00
Total		\$3,382,467.00

28

29

# Table 3: Facilities Head Count at Time of Merger

Location	Address	Office	Operations
Markham	8100 Warden Ave	77	56
Richmond Hill	1150 Elgin Mills Rd E	61	31
Vaughan	2800 Rutherford Rd	118	34
Total		256	121

30

31 The geographical separation of staff across the City of Vaughan and the Towns of 32 Markham and Richmond Hill had significant and adverse operational and cultural 33 consequences, at the employee and departmental level. Operationally, of greatest 34 concern was that employees belonging to any one department were spread among three 35 offices. This made intra-department operations, communication and interaction difficult 36 and inefficient. Work processes, procedures and infrastructure required attention in 37 three locations with a management workforce in many cases, not located in the same 38 location as their staff. The decentralized organizational structure was costly and 39 ineffective in running day-to-day activities. For example, regular and special-purpose 40 meetings required employees to travel among the three locations. Additionally, 41 maintaining three separate IT infrastructures was costly and difficult to manage.

42 Geographic separation also meant that PowerStream's Executive Management Team 43 ("EMT") did not have ready access to all of its managers; moreover, the members of the 44 EMT were all located in one office and were not visible or accessible to employees 45 headquartered in the other two offices. Finally, it was difficult for the EMT to assist in 46 developing a cohesive, efficient functioning team when they were separated from a large 47 portion of the newly merged workforce. From an overall organizational perspective, all 48 of these factors impaired the development of a new and efficient culture for the merged 49 entity.

50 In the summer of 2004, PowerStream's Board of Directors and its EMT recognized that 51 they needed to take steps to develop a comprehensive facility plan that would address 52 the problems created by geographic separation and enable PowerStream to realize the 53 opportunities arising out of the amalgamation. They also recognized that a decision 54 would have to be taken with respect to the lease of the Richmond Hill office which was 55 up for renewal at the end of 2004. In 2004, the occupancy costs for Richmond Hill, 56 Markham & Vaughan were approximately \$3.4 million per annum with a NPV of \$38.8 57 million based on a fifteen year lease. Renewal of the Richmond Hill lease, even for a 58 short period of time, would limit PowerStream's facility planning options, given that the 59 building was owned by the Town of Richmond Hill and it was unlikely that the Richmond 60 Hill building could be expanded to accommodate any degree of inter-office consolidation. 61 Further complicating the situation was the fact that the Town of Richmond Hill had 62 expressed some interest in reclaiming the Richmond Hill office building for its own use.

63 In light of the above, PowerStream's Board of Directors made two decisions. The first, 64 was a decision to give notice to the Town of Richmond Hill that it was terminating its 65 lease, effective December 31, 2004, and to relocate the Richmond Hill employees to 66 PowerStream's two other head office locations. This was a trade-off to temporarily 67 address the problems of geographic separation while waiting for the outcome of the 68 Strategic Facility Plan. The second was a decision to issue a Request for Proposal in 69 connection with the development of a comprehensive "Strategic Facility Plan" for 70 PowerStream.

# 71 CLOSING THE RICHMOND HILL OFFICE

From September to December 2004, PowerStream relocated 88 staff, including 61 administrative (i.e., head office) staff, from the Richmond Hill office to the Markham and Vaughan head office locations. The resulting two-office arrangement reduced some of the problems of geographic separation by facilitating a certain degree of intra-office consolidation; employees in some, but not all, departments were now located in one office instead of being spread among three offices. This arrangement was, however, not without its own set of problems. These included:

- insufficient space in the two head office locations to accommodate the
   consolidated workforce; accordingly, employees were required to "double up" in
   offices and/or work in unacceptably small offices (30 square feet or less);
- insufficient and inadequate meeting facilities as a result of converting meeting
   rooms to office space;
- inadequate and insufficient storage and loading capacity as a result of converting
   warehouses and loading bays into office space; and
- geographic separation which, although reduced, continued to give rise to
   problems of duplication, increased work-related travel and impairment of the
   development of a cohesive corporate culture; the return travel time between the
   Markham and Vaughan office was about 45 minutes.

In addition to the problems described above were concerns related to PowerStream's ability to accommodate a growing workforce in the future since the current facilities were already inadequate. PowerStream expected its customer base to continue to grow at an average rate of between three and five percent per year. Moreover, PowerStream had announced its intention to pursue further amalgamations and acquisitions. It was recognized that these two factors would result in a requirement for more services, additional employees and, thus, more space.

#### 97 DEVELOPMENT OF STRATEGIC FACILITY PLAN

In August, 2004, PowerStream selected LNR Corporation ("LNR"), an independent real
estate advisor, not affiliated with any land developer or landlord, to develop a "Strategic
Facility Plan" that would enable the following corporate objectives:

- development of a cohesive and productive post-amalgamation corporate culture;
- reduction or elimination of operating and other inefficiencies (and the associated
   costs) caused by geographic separation;
- realization of the potentials of amalgamation by, *inter alia* "driving out" new
   operational efficiencies;
- accommodation of some degree of future growth of PowerStream's workforce;
- improved access to customers and *vice versa*; and
- development and enhancement of PowerStream's image within in the
   community.

LNR was requested to identify and evaluate viable conceptual alternatives to the statusquo of two head offices and two services centres. Specifically, LNR was directed to:

- identify the current and future organizational and behavioural dynamics that
   would link the work environment strategy to PowerStream's business objectives
   and strategy;
- identify and evaluate all viable conceptual "alternatives" to the status quo,
  including "lease," "build to own", and "build to lease" options;
- identify potential head office and service centre locations (existing buildings and
   building sites) within PowerStream's service territory; and
- provide a detailed financial analysis of all viable alternatives.
- 120 From September to December 2004, LNR performed the following tasks:
- it conducted a visioning session and individual interviews with the EMT in order
   to gain a comprehensive understanding of the Company's strategic objectives;

- it facilitated focus groups with selected employees identified by PowerStream to
  solicit input with regard to the desired work environment;
  it administered a detailed "Client Need Analysis Questionnaire", designed to elicit
  additional specific information on the needs of each department;
- it evaluated current state effectiveness;
- it performed a "needs analysis" in regard to PowerStream's strategic objectives,
   culture, demographics, expectation of future growth and location criteria (i.e.,
   proximity to a 400 series highway in order to provide easy access for its
   customers and staff and an east and west presence for its two service centres to
   meet response time requirements); and
- it evaluated PowerStream's work environment with regard to the number of staff
   and departments and future workplace standards.

The end-product of this activity was the preparation of the Strategic Facility Plan ("the Plan"). The Plan included sections and analysis of the current situation, future needs and objectives, space planning standards, organizational effectiveness and adjacencies, service centre needs, growth, current and future cost analysis. The Plan also provided detailed modelling of relevant conceptual alternatives as further outlined below.

The Plan was supported by comprehensive budgets, market data and space
programming. The Strategic Facility Plan identified two conceptual alternatives to the
status quo:

Alternative 1: consolidated head office and service centre facility and a
 secondary service centre facility; and

Alternative 2: a head office facility and two service centres at existing or
 alternate locations, in the Town of Markham and the City of Vaughan.

147 Under Alternative 1, PowerStream would relocate its entire staff (i.e., administrative and 148 service staff) to a new consolidated head office and service centre facility and maintain a 149 secondary service centre to ensure it could meet minimum response times in its service 150 territory. This alternative had a net present value of approximately \$28,000,000. Under Alternative 2, PowerStream would relocate its administrative staff, only, to a new head
office facility and would maintain separate service centres in the City of Vaughan and the
Town of Markham. This alternative had a net present value of approximately
\$23,000,000.

155

# Table 4: Comparison of Conceptual Alternatives

Alternative 1	Alternative 2
Consolidated head office and service centre and a secondary service centre location	Standalone head office facility with 2 service centres at existing (or alternate) locations in Markham and Vaughan
NPV \$28,000,000	NPV \$23,000,000

156 157

158 Both Alternatives 1 and 2 would have enabled PowerStream to consolidate its 159 operations and accommodate expected growth. A significant disadvantage of 160 Alternative 1, however, was that the head office commercial was not compatible with the 161 heavy industrial use of the service centres. Outside storage sites (a requirement for a 162 service centre facility) were extremely scarce and were generally situated in locations 163 that would be harder to reach for customers and employees generally, on roadways 164 more suitable for truck traffic. Even if such a site could be found, investigation revealed 165 that developers (or in turn PowerStream if they were to own the facility) would consider 166 development of an office building on such an industrial site to be an undesirable 167 investment strategy for the reasons identified above. Additionally, industrial and 168 commercial areas generally have different types of zoning and accommodating both 169 uses would create a challenge in terms of attaining required municipal approval. Finally, 170 Alternative 1 was more expensive than Alternative 2 on a net present value basis.

171 The Strategic Facility Plan was presented to PowerStream's Board of Directors on 172 December 15, 2004. The Board authorized PowerStream's EMT to pursue Alternative 2

December 15, 2004. The Board authorized PowerStream's Ewil to pursue Alternative 2

173 (a head office and two existing service centres) as the preferred option and directed it to

174 commence negotiations with the Town of Markham and the City of Vaughan for longterm leases of the existing service centres.<sup>1</sup> The Board also directed LNR to evaluate 175 176 the inventory of existing buildings and new building sites that had been included in the 177 Strategic Facility Plan and develop a short-list of suitable choices. Finally, the 178 PowerStream's EMT and Board of Directors directed LNR to develop a "design/build" 179 Request for Proposal for a new, consolidated head office. This step was taken as a "fail 180 safe", in case no existing suitable buildings were available, although this was not a 181 foregone conclusion.

# 182 EXISTING BUILDING VS. NEW BUILDING

In accordance with the directions received from PowerStream's Board of Directors, LNR screened the inventory of available existing buildings and new building sites against a set of criteria that included: space adequate to accommodate a building that would house 270 employees, appropriate access for customers and employees and a purchase price that falls within the budgetary limits established in the Strategic Plan.

188 LNR short-listed three existing and proposed office buildings that could accommodate a 189 new head office. Upon further examination, the EMT concluded that none of these met 190 PowerStream's objectives and requirements for a consolidated head office. Specifically, 191 none of the buildings offered a cost advantage relative to a purpose-built facility, and 192 moreover, none had the necessary combination of adequate space for current and future 193 requirements, contiguous floors and acceptable accessibility for customers and 194 Several of the buildings would have required co-tenancy with other emplovees. 195 companies which would have impaired the development of a PowerStream "culture" for 196 the newly formed entity. An evaluation process was undertaken to ensure that all 197 prospective options, even those with potential drawbacks, were thoroughly considered 198 and analyzed to determine viability.

<sup>&</sup>lt;sup>1</sup> The Town of Markham completed their own Long-term Facility Plan and subsequent to PowerStream's decision to maintain its two existing service centres, the Town of Markham received a third-party offer to lease the service centre location. The offer the Town received was considerably higher than the lease payments PowerStream was paying. As a result, PowerStream's lease at the Markham site was not renewed and the company began its search for an alternative operations center.

199 As part of its investigation of existing building options, PowerStream also examined the 200 possibility of expanding its Town of Markham facility. Upon review, however, it was 201 concluded that an expansion was not economically feasible because the building was 202 designed in such a way that expansion was not practical and would offer no cost 203 advantage. Temporary facilities would have to be leased during the construction phase 204 of the project in order to accommodate the administrative and operations staff at the 205 Markham location. Additional costs associated with moving and accessing a new 206 location would reduce any savings that may have been achieved through the expansion 207 of the existing site. Moreover, expanding the building would have required demolition 208 of the existing building, creating a development site. The market price of such site would 209 not have resulted in any significant cost advantage compared to the development of a 210 purpose-built facility. Finally, the facility was owned by the Town of Markham which was 211 not eager to redevelop the site for PowerStream's exclusive use as the Town was 212 anticipating increasing its own use of the site.

In the result, the EMT concluded that none of the "existing building" options were acceptable. On January 26, 2005, the EMT directed LNR to identify a list of available development sites that could be leased or purchased by PowerStream. The EMT also directed LNR to administer a general Request for Proposal on the basis of PowerStream's office requirements as developed in the Strategic Facility Plan. The objective of the RFP was to solicit both pricing and design concepts from prospective design builders.

#### 220 ACQUISITION OF LAND

221 Two viable development sites were short-listed, Vaughan 400 Business Park and the 222 Cityview location. The two sites were each evaluated on the basis of price, size, shape, 223 potential ability to accommodate future expansion and accessibility. The Vaughan 400 224 Business Park site was rectangular in shape with limited options for siting the building. It 225 was marginally acceptable in size, but would not be able to accommodate future 226 expansion. Moreover, there was no direct access to the 400 series highways or public 227 transit access on the street. The Cityview site could accommodate multiple siting 228 options and future parking or expansion. It provided accessibility to the 400 series 229 highways and Vaughan transit service on the street. The site was well located for both 230 customers and employees. The cost of acquiring the Cityview site compared favourably 231 to all other alternatives. Comparable locations had a market value of approximately 232 \$1,000,000 per acre, about 20% greater than the negotiated price for the Cityview site.

233 PowerStream proceeded to negotiate with the owner of the subdivision, History Hill, for 234 the acquisition of approximately six acres of land, which was deemed to be an 235 appropriate size based upon previously defined criteria and specifications. Although six 236 acres of land was optimal to accommodate 92,000 square feet of office with associated 237 parking, ultimately a purchase agreement of four acres was negotiated at \$825,000 per 238 acre. Through an agreement with the City of Vaughan, PowerStream was able to obtain 239 an easement with respect to the adjacent land to the south of the purchased acreage 240 which incorporates a storm water management pond. This gave PowerStream the 241 additional site area required for the building.

It was presumed that if the site was acquired, a design/build contractor would ultimately be engaged to construct the building and once completed, PowerStream or its shareholders could decide whether to retain ownership of the building or sell it to a professional landlord/investor and lease it back. The design/build estimate along with the anticipated purchase price of the land justified, in all financial respects, that this transaction could be accomplished well within the parameters of market leasing or purchase values. Table 5 outlines the comparative analysis done to evaluate the options between market leasing of existing space versus constructing a specific purpose building. The analysis considered land and building costs in isolation of all other occupancy costs which would be incurred under either scenario.

253

# Table 5: Comparative Analysis of Purchase and Market Options

Options	Note	Annual Cost	Total
Base Case			
Original 2004 Lease costs escalated for inflation			3,607,000
Proposed Option			
A. New head office building lease	1	1,856,976	
Maintenance		920,000	
Lease for service centres in Markham & Vaughan		1,000,000	3,776,976
B. New head office building purchase	2	2,103,000	
Maintenance		920,000	
Lease of service centres in Markham & Vaughan		1,000,000	4,023,000
Market Option			
Lease of existing building @ \$30.18 PSF		2,776,560	
Lease of service centres in Markham & Vaughan		1,000,000	3,776,560

254

1. Assumptions: Space of 92,000 square feet, price of \$23,212,200 and lease rate 8%

2. Assumptions: Depreciation at a rate of 25 years, cost of capital 7.20% and purchase price of \$23,212,200. Regulatory rates of return and debt are based on regulated rates at the time of analysis which was completed in 2004.

255

#### 256 **NEW BUILDING**

#### 257 Size and Configuration

258 The original concept assumed 72,000 square foot building which would accommodate 259 approximately 213 staff. In February and March 2005, at meetings with the Board of 260 Directors and Building Committee, it was determined that the building capacity should be 261 increased to 270 staff, to accommodate an increased estimate for required space and 262 allowing for some future projected growth. In addition, it was determined that the control 263 room function, (approximately 4,000 square feet) should be consolidated and located in 264 the head office. Existing control room functions were split between the Vaughan and 265 Markham locations. Each of these sites would have required extensive renovation, and 266 it was not clear whether they would be available to PowerStream over the long term. In 267 the result, the space specification for the new building was increased from 72,000 to 268 approximately 92,000 square feet.

269 Space benchmarks were reviewed to ensure that the building was sized appropriately to 270 industry standards. Based on information received from The International Facility 271 Management Association ("IFMA"), the average gross square foot per occupant is 396 272 and the average usable square foot per occupant is 318. PowerStream's new head 273 office gross area is approximately 92,000 square feet with 80,000 square feet of usable 274 area. Based on 2008 office head count of 250 employees the gross square footage per 275 employee is 368, below the IFMA average. The usable square footage per employee is 276 320, at the industry average. The building is designed to accommodate 270 staff. 277 Based on the designed capacity the gross area per employee is 341 and the usable area 278 per employee is 296, both well below the IFMA average. Further refining the space by 279 industry type the average gross square footage per occupant for utilities is 425 and the 280 usable square footage per occupant is 342. PowerStream is well below the benchmarks 281 identified. Table 7 & 8 below summarize PowerStream's area per employee.

282	Table 7: Gross Square Footage per Employee				
		Gross Area	Headcount	Square Footage per Employee	
	Pre-merger	155,243	256	606	
	Head Office Actual	92,000	250	368	
283	Head Office Programmed Capacity	92,000	270	341	

283 284

#### 285

#### Table 8: Useable Square Footage per Employee

			Square Footage per
	Usable Area	Headcount	Employee
Head Office Actual	80,000	250	320
Head Office Programmed Capacity	80,000	270	296
7			

#### 288 Design/Build RFP

289 A design/build RFP was issued in March 2005 to five proponents and the conclusion 290 was brought to the April 2005 Board Meeting. An amendment to the RFP was issued to 291 incorporate the possibility of constructing to a "Leadership in Energy and Environmental 292 Design (LEED)" standard. Each response to the RFP was evaluated in detail on the 293 basis of cost, design and specification. A decision on the design/build RFP was made at 294 the June 2005 Board Meeting based on a detailed decision matrix.

#### 295 LEED

296 During the design/build RFP process it was determined that consideration for a LEED 297 building should be added to the specification. In order to attain LEED certification, 298 PowerStream would have to construct its new head office in accordance with five main 299 environmental categories which included site sustainability, water efficiency, energy and 300 atmosphere, materials and resources, and indoor environmental quality. The decision to 301 pursue LEED certification was made for a number of reasons. Most new office buildings 302 slated for construction were incorporating LEED and there was a concern that by not 303 doing so the value of the new building would be impaired. As a leading utility in Ontario 304 and good community citizen, setting an example by complying with the highest possible environmental standards while remaining within reasonable cost parameters wasconsidered justified.

307 All design/build RFP responses included a premium to construct a LEED facility. 308 Working with Enermodal (a LEED consultant), a detailed LEED scorecard was prepared 309 to determine what points should be pursued. All items were evaluated on the basis of 310 environmental impact and cost/payback period. Items deemed too expensive or with too 311 long a payback period were eliminated. Other items were pursued and monitored by 312 LNR and the LEED consultant. This was presented to the Board and authorized in June 313 2005. The LEED Plan as implemented anticipated that the majority of LEED related 314 items would be cost justified with a payback period of seven years or less.

# 315 Financial Analysis: Lease versus Own

316 In 2005 PowerStream's EMT began evaluating "build-to-lease" versus "build-to-own" 317 options. The build-to-lease option would require PowerStream to purchase land and 318 enter into an agreement with a third party, who would construct and own the building and 319 lease it back to PowerStream for an extended period of time. A sub-set of the build-to-320 lease option was Municipal ownership. The Board of Directors and Shareholders decided to explore the option of Municipal ownership rather than 3<sup>rd</sup> party ownership with 321 322 lease arrangements to PowerStream. Further evaluation of this option revealed that it 323 was not viable since it would be complex to administer and would likely require the 324 creation of another holding company.

Based on the NPV analysis performed and the evaluation of all the financing options, in
September 2006 it was decided to proceed with the "build-to-own" option. Table 6 below
shows the NPV comparison of lease versus own.

# Table 6: Net Present Value Analysis

Option	Net Present Value
Build to Lease	\$30,173,538
Build to Own	\$22,131,759

329

#### 330 FURNISHINGS, FIXTURES AND INFRASTRUCTURE

After the decision was made to consolidate the administrative functions to a new head office, it was necessary to review PowerStream's requirements for furniture, a telephone system, and a data network. Management's review and decisions on these three issues are discussed below:

# 335 Furniture

Although PowerStream had made a decision to relocate administrative staff to a new corporate head office, the 2800 Rutherford Road and 8100 Warden Avenue sites would continue to be utilized as operations centres. A review of the existing furniture concluded that many items could be retained for an operating centre environment where staff divides their time between the office and the field. Few items met the modern ergonomic needs of an administrative office where staff spend most of their time at desks, often in front of computer screens, or in meeting rooms.

343 It was decided that furniture that was specialized in nature such as filing cabinets and 344 fire-proof vaults would be relocated to the new head office building. However, most of 345 the furniture for the head office would need to be replaced.

328

The vendor for the new head office furniture was selected through a competitive bid
process. HOK Canada, an interior design company assisted PowerStream in this
process. A budget of \$2.6M was established for the new furniture.

In May 2006, a request for information (RFI) was sent to furniture manufacturers and suppliers that were known to be reputable. This RFI outlined PowerStream's requirements and asked for the vendors to provide company information, service capabilities, ergonomic approach, environmental approach and references.

Eight companies responded to the RFI: Alsteel, Global, Haworth, Herman Miller,
Inscape, Knoll, Steelcase and Teknion. The companies were evaluated based on the
prequalification criteria and the vendors were "shortlisted" to: Haworth, Herman Miller,
Steelcase and Teknion.

A staff team visited local sites where the short-listed vendors had supplied furniture. The
 short-listed vendors also set up sample workstations using the furniture that was
 proposed for PowerStream.

360 After reviewing the pricing offered by the four vendors, it was decided to split the order 361 between Steelcase and Teknion. The cost of furniture was \$3,500,000. The budget was 362 exceeded by \$834,000. The principal cause for this overage was a decision to furnish 363 areas that would accommodate future increases in PowerStream's staffing complement. 364 Approximately 50 additional workstations were purchased. In the long run this will 365 ensure consistency in design, quality and appearance. Moreover, the original interior 366 design offered very little privacy to office areas based on the glass office fronts designed 367 to meet LEED requirements. Privacy walls were added to improve the overall privacy of the offices. Items such as Room Wizard (a meeting room booking tool), Smart Boards, 368 369 extra chairs, shelving, dry erase whiteboards were added to improve the functionality of 370 meeting rooms, offices and the common work areas.

#### 371 **Telephone**

The existing telephone system at the Rutherford Road and Warden Avenue sites was Nortel technology originally introduced in 1976 and upgraded in 1991. The upgrades 374 provided modern features such as voice recognition, integrated fax and voice messaging 375 from the desktop. The system itself however, was based on older underlying technology 376 and could not be leveraged to provide the level of flexibility and scalability offered by 377 more current systems. Management considered a number of potential solutions 378 including moving the existing systems to the new building, implementing a net new Plain 379 Old Telephone System (POTS), a mix of Voice over Internet Protocol (VoIP) and POTS 380 or moving to a more current VoIP system.

381 VoIP technology offers a number of advantages including lower cost, ease of cabling,382 use of a single network, fewer hardware components and better security.

383 In the evaluation process three manufacturers were initially considered and they offered 384 five technology solutions. Potential vendors were also assessed. Vendors considered 385 and/or contacted were Bell, Telus, Brant Tel, Sygnal and FCI. After further screening 386 and based on references or past performance, the list of vendors was short-listed to two. 387 Brant Tel and Telus were invited to respond to PowerStream's telephone requirements 388 as outlined in a Request for Information (RFI). Brant Tel's "Avaya" system was selected 389 as it offered lower cost, greater functionality, a broader range of products and a better 390 warranty.

The budget for the phone system, including changing the equipment at the two operatingcentres was \$855,000. The actual installation cost \$711,000.

#### 393 Data Network

After PowerStream was formed and staff was relocated to the Rutherford Road or Warden locations this resulted in two separately designed data networks (Nortel and Cisco systems) with separate hardware and design standards. The system was also not suited to the continually increasing volume of voice and data traffic. The decision to consolidate to a new head office exacerbated the need to look at system upgrades. A budget of \$645,000 was established for the head office data network that would link the two operations centres. 401 A design was developed to re-use the existing equipment, where possible, at the two 402 operation centres. This was feasible given the lower staff and hardware requirement of 403 these locations and would ensure that the head office and the devices required to 404 connect the operations centres were both up to date and adaptable to technology 405 change.

406 Management determined that the Cisco hardware was optimal based on the high level of 407 in-house knowledge of the hardware. Cisco is the current market leader in network 408 technology that offer fully featured enterprise solutions that match PowerStream's 409 requirements.

410 A RFP was issued to IBM, Bell and Telus and after further clarification to vendor 411 inquiries bids were submitted by Bell and Telus. The Telus bid was excluded since it did 412 not meet RFP requirements. The total cost of the installation was \$538,000.

# 413 CONCLUSION

414 Overall, PowerStream is confident that the new head office facility will provide greater 415 future efficiencies to its ratepayers than operating two separate administrative locations. 416 Moreover, the consolidation of the administrative offices will also reduce inefficiencies 417 caused by geographic separation and assist with developing a team culture within the 418 organization which in turn will result in a higher standard of service quality to the 419 PowerStream customer. 1

# **MARKHAM TRANSFORMER STATION #4**

# 2 OVERVIEW

PowerStream embarked on the design and construction of Markham Transformer
Station #4 ("TS4") in December 2006. Markham TS4 will be located in an industrial area
southwest of the intersection of Rodick Road and Yorktech Drive – north of Highway 407
– in Markham with access from Addiscott Court. The site is proximate to Hydro One's
230kV transmission lines in the Parkway-to-Buttonville corridor.

8 Markham TS4 will comprise two 75/125MVA power transformers, 28kV switchgear, and 9 associated protective and ancillary equipment. Markham TS4 will be a Dual Element 10 Spot Network ("DESN") station; in this station configuration, the loss of a transmission 11 line or a station transformer will not result in an interruption to downstream customer 12 loads. The project also involves the installation of 12 distribution feeder lines over time 13 on road allowances in Markham; however, complete feeder integration - to deliver 14 ultimate capacity to the distribution system - will not occur until 2012. The total cost of 15 the project is estimated to be \$47M. The in-service date is scheduled for December 2009. 16

#### 17 **NEED**

PowerStream performs annual load forecasts to project the peak demand needs and compares these to the available capacity. This comparison is based on PowerStream's approved planning limits for both feeder and transformer station loading. The year in which the forecasted peak demand exceeds the available planning capacity is when new transformation and distribution facilities are required.

PowerStream completed a comprehensive peak load forecast for the three southern
 municipalities – Markham, Richmond Hill, and Vaughan – in its service area in March
 2006.<sup>1</sup> The forecast included a 5% reduction of demand due to conservation and

<sup>&</sup>lt;sup>1</sup> The northern municipality – Aurora – is primarily served at 44 kV via positions on four of Hydro One's feeders emanating from its Armitage Transformer Station in Newmarket.

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26 demand management ("CDM") programs and was based on a hot 1-in-10 year summer 27 weather scenario. It was also predicated on PowerStream's existing transformer stations 28 operating within their respective 10-day limited time ratings and Hydro One's feeders 29 operating at their planning limits. The system coincident peak load forecast for 2009 was 30 1,576MW compared to available capacity of 1,591MW in 2009 for the three southern municipalities.<sup>2</sup> The difference between the two was accordingly *de minimus*, thereby 31 32 demonstrating the need for more transformation capacity, and so PowerStream 33 undertook a Transformer Station Needs Assessment Study ("TSNA Study") that was 34 completed in June 2006. A breakdown of transformation capacity is provided in the table 35 below.

Municipality	Station	Capacity (MVA)	Planned Capacity (MVA)
Richmond Hill	TS1	2 X 75/100/125	170 MVA
Richmond Hill	TS2	2 x 50/67/83	112 MVA
Vaughan	TS1 TS2 TS3 TS1E	2 X 75/100/125	170 MVA 170 MVA 170 MVA 170 MVA
Markham	TS1	2 x 50/67/83	90 MVA
Markham	TS2 TS3 TS3E	2 x 50/67/83	112 MVA 112 MVA 112 MVA
Hydro One Feeds	Finch Fairchild Woodbridge Kleinberg Agincourt Leslie	2 fdrs 3 fdrs 4 fdrs 2 fdrs 1 fdrs 2 fdrs	30 MVA 45 MVA 60 MVA 30 MVA 15 MVA 30 MVA
Hydro One Complete Stations	Buttonville		170 MVA
	TOTAL		1,768 MVA (1,591 MW)

36

<sup>&</sup>lt;sup>2</sup> The capacity planning for a transformer station is done in MVA based on ratings for equipment. Billing and forecasting are done in MW. The MVA value was converted to an MW value using a power factor of 0.9 for planning purposes.

PowerStream's TSNA Study reflects the requirements of the *Class Environment* Assessment for Minor Transmission Facilities ("Class EA").<sup>3</sup> Such a study typically
 performs the following tasks:

- Documents "the need" and establishes where the system will become inadequate
- 41 by examining the difference between future system capability and future loads;
- Examines the transmission capabilities within the service area;
- Assesses the environmental process with respect to potential sites;
- Develops and assesses alternatives for future system facilities;
- Looks for an optimum mix of growth and potential transmission connectivity;
- 46 Determines a preferred course of direction for constructing transformation
   47 capacity;
- 48 Prepares and agrees on a course of action including any actions with Hydro One;
  49 and
- Recommends a course of action to acquire land for new stations if the preferred direction indicates this as the best option.

# 52 **POTENTIAL OPTIONS**

53 Potential options to provide additional transformation must represent technically feasible 54 methods to overcome or defer the deficit between existing capacity and future load 55 requirements. The following constraints must be considered when developing potential 56 options:

- the availability of adequate 230kV transmission supply;
- the availability of land, preferably close to the area of expected load growth, and
- 59 adjacent or near existing 230 kV transmission lines; and
- 60

<sup>&</sup>lt;sup>3</sup> The current version is Revision 6 approved by Order-in Council No. 1173/92 dated April 23, 1992.

the suitability of the option based on the Class EA, including an Environmental • 62 Study Report ("ESR")and the consequential public and stakeholder involvement.<sup>4</sup>

63 The first option was the "do nothing" option. This option would result in deteriorating 64 service quality and would constrain PowerStream's ability to reliably service new load. 65 PowerStream accordingly rejected it and considered 10 other potential options: four 66 were "Hydro One Based Solutions" and six were "PowerStream Based Solutions." 67 PowerStream also examined conservation and local generation as "Alternative Energy 68 Solutions."

#### 69 **Hydro One Based Solutions**

70 The following were the four Hydro One based solutions that were examined in the TSNA 71 Study.

72 Extend 230kV Line North (Underground) from Buttonville: The controversy stemming from the York Region Supply Study's proposal to extend Hydro One's 73 74 transmission line north from its Buttonville Transformer Station to its Armitage 75 Transformer Station in Newmarket ruled out an overhead line. The Ontario 76 Power Authority had rejected a variation of this option - extend the line to a 77 potential transformer station in Gormley – as a short-term solution to the supply 78 problem in the event new generation could not readily support load growth. 79 PowerStream accordingly considered an alternative: a 230kV underground 80 transmission line to an as-yet unidentified site in northern Markham or Richmond 81 Hill subject to examining the following: ownership, transmission line design, line 82 tap design, construction, and site location.

83 Additional Hydro One 28kV Feeders: PowerStream had positions on two existing 84 feeders from Hydro One's Kleinburg Transformer Station. These feeders could 85 be loaded once PowerStream constructed distribution lines and installed 86 switches in order to access the additional capacity; otherwise, the capacity would

61

<sup>&</sup>lt;sup>4</sup> An exception exists for an existing transformer station with room for expansion that was previously the subject of a Class EA ie new sites require an EA.

displace capacity from another transformer station. PowerStream planned to do
so by 2009, however, and so it included supply from these two feeders in the
load forecast starting in 2009. This option was discarded because there were no
additional feeder positions, beyond the existing two from Kleinberg, available to
PowerStream.

- Buttonville Expansion: The site of Hydro One's Buttonville Transformer Station
   had room for a second DESN-size station. Hydro One would not allow
   PowerStream to construct its own station on the site, though, and so this option
   would have Hydro One do so for PowerStream's account.
- 96 Additional 230kV Lines: Hydro One had space in two sections of the • 97 Woodbridge-to-Parkway corridor where an additional 230kV transmission line 98 could be constructed and, if so, where a new transformer station could be 99 connected to the new circuits. One was between Hydro One's Woodbridge 100 Transformer Station and PowerStream's Vaughan TS1. The other section was 101 between PowerStream's Richmond Hill TS2 and Hydro One's Parkway 102 Transformer Station. There were two significant drawbacks to this option, 103 however, and so PowerStream discarded it. One was timing; it was unlikely that 104 the time required to obtain the requisite approvals and to construct the lines 105 would comport with PowerStream's need for a solution by 2009. The other 106 drawback was cost; a double circuit 230kV transmission line would cost \$1.3 -107 \$1.6M/km to construct, which would be recovered by Hydro One in its connection 108 charges, in addition to the cost of PowerStream's transformer station and 109 distribution feeder lines.

# 110 **PowerStream Based Solutions**

The following were the six PowerStream based solutions that were examined in theTSNA Study.

Expand Markham TS1: The site of this station could not accommodate the
 construction of a second DESN-type station. This option was discarded.

- 115 Expand Markham TS2: This was an attractive option. The site could 116 accommodate the construction of a second DESN-type station, thereby avoiding 117 land acquisition costs, and a Class EA would not be required. An expansion 118 would also be consistent with surrounding land usage. One drawback was likely 119 feeder congestion that would require the construction of additional 28kV feeder 120 lines at significant cost. The TSNA Study nevertheless recommended that this 121 option be reserved for future use (beyond 2015) unless no other option was 122 available.
- 123 New Station at Rodick Road/Miller Avenue: This option was a site that Markham 124 Hydro (one of PowerStream's predecessors) identified in 1989 when planning for 125 its second transformer station. The site was located in an industrial area, was 126 proximate to Hydro One's 230kV transmission lines in its Parkway-to-Buttonville 127 corridor, and had good vehicular and feeder egress access via municipal 128 roadways. A station would be consistent with surrounding land use, although 129 acquisition of the site – or another site in close proximity – was not certain, and a 130 Class EA would be required.
- New Station on Ninth Line near Highway 407: The site was proximate to Hydro
   One's 230 kV transmission lines; however, it was already leased on a long-term
   basis for use as a golf course. Land acquisition was accordingly problematic
   and, if acquired, a Class EA would be required.
- New Station in Leslie and Highway 407 Area: The site would be located in the southwest quadrant of the Leslie Street/Highway 407Interchange area supplied by Hydro One's Parkway-to-Buttonville corridor to the east. Land acquisition was uncertain, however, and a Class EA would be required if this site was available.
- New Station at Unidentified Site: This option would involve retaining a realtor to
   investigate site availability from Hydro One's Parkway Transformer Station to the
   site of the Leslie and Highway 407 area option.

### 142 Alternative Energy Solutions

PowerStream examined conservation and local generation. Neither were viable options,for the reasons set out below.

145 Conservation: This option is part of PowerStream's strategy for longer range 146 management of load growth. The load forecast in the next decade includes the impact 147 of conservation programs (typical unit load growth expectations have been reduced by 148 5% to compensate for increased customer awareness and participation in conservation 149 activities). Aggressive CDM programs could not, however, overcome the deficit in the 150 capacity compared to peak load in 2009.

151 Local Generation: Markham District Energy Inc. ("MDE") planned to construct a gas-152 fired, 5MW combined heat and power facility – at the time of the TSNA Study – that 153 would be located near the intersection of Warden Avenue and Highway 407.<sup>5</sup> This 154 facility would supply electricity to PowerStream's distribution system and thermal energy to heat and cool buildings in Markham Centre.<sup>6</sup> MDE planned to construct three more 155 156 facilities, over a 10-year period, and the four together would supply a total of 27MW. 157 This timeline and limited capacity impact did not comport with PowerStream's needs, 158 however, and so this option was discarded.

### 159 **COMPARISON OF OPTIONS**

- 160 The TSNA Study shortlisted six viable options the first and the third Hydro One options
- and the second through the fifth PowerStream options for comparison based on the
- 162 following factors:<sup>7</sup>
- availability of an 80 m X 100 m (approx.) site 0.8 hectares (two acres) and a
   willing vendor;

<sup>&</sup>lt;sup>5</sup> MDE was then, and still is, wholly owned by the Town of Markham.

<sup>&</sup>lt;sup>6</sup> MDE's website describes Markham Centre as "Markham's new smart growth downtown" in a planning area of nearly 1,000 acres that ultimately would be home to over 25,000 residents and 17,000 employees.

<sup>&</sup>lt;sup>7</sup> The sixth PowerStream option was excluded because it was not site-specific at the time.

- economics based on capital cost, OM&A expenses, and line losses;
- proximity to growth areas because fully loaded 28 kV distribution feeder lines are
   typically no longer than 6-10 km;
- access to existing 230 kV transmission lines;
- access to future transmission lines;

transmission diversity by balancing the number of stations on the nine existing
 230kV circuits that supply transformer stations – Hydro One's as well as
 PowerStream's – within PowerStream's service area or by increasing the number
 of available 230kV circuits.

- feasibility of transporting major equipment by road;
- 175 an ESR as required; and
- 176 public opinion.

177 It was premature, at the time of the TSNA Study, to determine the comparable effects of

178 all factors on all options; for example, public opinion was unknown for all six options.

- 179 The TSNA Study indicated that some options were better than others but, nevertheless it
- 180 concluded that all six options were viable and should be examined further.
- 181 The TSNA Study was presented to PowerStream's Executive Management Team 182 ("EMT") in June 2006.<sup>8</sup> The EMT gave its approval for the work required to examine the 183 six options in detail and to recommend a preferred option.
- 184 PowerStream examined the Hydro One options and discarded them for the following185 reasons:

<sup>&</sup>lt;sup>8</sup> Presentations were also made to staff at the Town of Markham (August 2006), Hydro One (September 2006), the Ontario Power Authority (October 2006), staff at the City of Vaughan (October 2006), and staff at the Town of Richmond Hill (December 2006).

- Extend 230kV Line North (Underground) from Buttonville: PowerStream
   discarded this option because the timing required to determine ownership of the
   lines, to determine the design of the line, and to construct the transmission line
   plus finding a suitable site would not comport with the required in-service date.
- Buttonville Expansion: PowerStream discarded this option. Hydro One's expansion of its Buttonville Transformer Station for PowerStream's account, unlike a new or expanded PowerStream station, would not enhance PowerStream's operating control of its distribution system. The other reason was that having Hydro One construct the station would be contrary to PowerStream's policy of owning and operating its own transformer stations.

196 PowerStream examined the PowerStream options and, in the process, retained the 197 second option notwithstanding the TSNA Study's recommendation to reserve an 198 expansion of Markham TS2 for future use (beyond 2015). PowerStream's examination 199 of the third option - "New Station at Rodick Road/Miller Avenue" - led to the selection of 200 three sites for a comparative evaluation (see below). Its examination of the fourth option 201 - "New Station on Ninth Line near Highway 407" - led to the conclusion that the site 202 would not be available due to the long-term lease by the existing user. Its examination of 203 the fifth option – "New Station in Leslie and Highway 407 Area" – revealed that no site 204 would be available. The Ministry of Transportation had reserved the land in the area for 205 transitway purposes vis-à-vis Highway 407 corridor. This option was accordingly 206 discarded.

207 PowerStream then conducted a comparative evaluation of the following four sites:

- Site 1 Rodick Road/Yorktech Drive (801 Rodick Road) owned by Landport
   Developments Inc.;
- Site 2 Rodick Road/Yorktech Drive (access from Rodick Road) owned by
   1127713 Ontario Inc.;
- Site 3 Rodick Road/Highway 407 (access from Addiscott Crescent after
   severance) owned by Atlas Corporation; and

Site 4 – PowerStream's Markham TS2 (7970 Highway 48) near Markham
 Road/Highway 407.

### 216 **PREFERRED OPTION**

PowerStream applied the following set of technical, environmental and socio-economicfactors to select the preferred site:

219 availability of property (presence of a willing seller); • 220 proximity to transmission lines and tap line connection requirements; • 221 proximity to load growth areas; ٠ 222 length and location of associated distribution (feeder egress) lines; • 223 proximity to area residences; • 224 effects on natural environment; • 225 effects on socio-economic environment; 226 effects on cultural heritage environment (e.g., archaeological potential); • 227 technical and maintenance considerations: and • 228 costs. •

Each site was rated under these factors. The "most preferred" rating was 5. The "least preferred" rating was 1. Sites were then ranked by totalling the rating scores assigned to each factor. The site with the highest numerical score was considered to be ranked #1 and, therefore, considered the preferred site for Markham TS4. The detailed evaluation and comparison of the four sites is presented on pages 13 to 21 of this schedule.<sup>9</sup>

The preferred site was Site 3; it is located southwest of the intersection of Rodick Road and Yorktech Drive – north of Highway 407 – in Markham with access from Addiscott Court. Site 3 was rated best in three of the 10 factors and second in three of the other seven factors; moreover, it was not rated the lowest in any of the 10 factors. Site 3 has better soil characteristics than the closely-ranked Sites 1 and 2 or, put another way, those two sites may have unsuitable soil characteristics that would require the removal

<sup>&</sup>lt;sup>9</sup> Site 4 was evaluated on the basis of the area available to expand Markham TS2.

- 240 of unsuitable soil, at significant cost, and the replacement of it with suitable soil, as well
- 241 additional engineering and environmental investigations (e.g., foundation design).<sup>10</sup>

### 242 **PROJECT STATUS**

The project to construct Markham TS4 began when PowerStream issued a request for proposals – an RFP – for engineering services in December 2006. Powerstream has conditionally purchased Site 3.<sup>11</sup> and has placed an order for the two 75/125 MVA power transformers and the 28kV switchgear. The site layout and preliminary design have been substantially completed and the design of the protection and control systems is nearing completion.

PowerStream is also nearing completion of the Class EA documentation, including the ESR, and in this regard PowerStream has hosted two public information centre ("PIC") in which the public was invited to participate. Power Stream hosted PIC #1 in June 2007 to introduce the project to the public: the need for the new station, the study area, and the selection criteria. PowerStream hosted PIC #2 in July and August 2008 to provide the public with information on the preferred site.

PowerStream filed an application with the Independent Electricity System Operator
("IESO") on June 23, 2008. This application commenced the Connection Assessment
and Approval ("CAA") process; that is, a System Impact Assessment by the IESO and a
Customer Impact Assessment by Hydro One.

- PowerStream needs to complete the following work by the following dates in order toachieve an in-service date of December 2009:
- complete the EA Class, including the ESR, by October 2008;

<sup>&</sup>lt;sup>10</sup> "A level, well-drained area with good soil bearing characteristics is desirable for the station site" (Class EA at p. 4-7).

<sup>&</sup>lt;sup>11</sup> The conditions pertain to the authorizations – local, provincial, and regional – that PowerStream requires to construct Markham TS4, the easements that PowerStream requires for vehicular access to the site and for feeder egress lines, and the easements that Hydro One requires for 230kV connection lines.

- design the 230kV tap connection and obtain Hydro One's approval of it by
   November 2008;
- secure contracts for civil construction and electrical installation by December
   265 2008;
- obtain approval of the site plan from the Town of Markham by December 2008;
- construct the tap connection by July 2009;
- procure the remaining equipment in September 2009 ;
- design and construct the initial four distribution feeder lines by November 2009;
   and
- commission the station by December 2009.

### 272 CAPITAL COST

The capital cost of Markham TS#4 is estimated at \$47 million with \$21.5 million to be spent in 2009. The remainder will be spent as new feeders are installed to serve the load as it develops.

- Design: costs include preliminary and detailed design, approvals by
   Hydro One, the IESO, various provincial Ministries and
   local government agencies;
- Major Equipment: transformers, switchgear, protection and control systems;
- Other Hardware: remaining equipment such as grounding reactors,
   insulators, station service transformers, battery system,
   capacitor banks, and cables;
- Installation: costs include civil construction, electrical construction, and
   commissioning; and

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• Miscellaneous: provincial taxes, construction extras.

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	SITE 2 Rodick Road / Yorktech Drive	SITE 3 Rodick Road / Highway 407	SITE 4 Markham Road/Highway 407	
Availability of property (willing seller)	<ul> <li>Property owner is prepared to sell or enter long term lease for entire property (5 ha), but is not willing sell or lease portion of property needed for transform station (TS) (approximately 1 hectare). Owner insists that purchase/lease agreement include whole property (5 hectare).</li> </ul>	<ul> <li>Property owner is willing to hold long term lease or sell entire property.</li> </ul>	<ul> <li>Property owner is willing to sever the property and sell a parcel (1 ha) required to accommodate the TS.</li> </ul>	<ul> <li>Willing seller is not a factor as PowerStream is the owner of the subject lands.</li> </ul>	
	1	4	4	5	
Proximity to transmission line and tap line connection requirements	Transmission line is in close proximity to the site (approximately 80 m) and can be directly connected through an overhead tap line supported by 1 steel lattice tower.	• Transmission line is in close proximity (approximately 300 m) to the site and can be directly connected through an overhead tap line spanning the floodplain of Beaver Creek, supported by 2 towers. One of the towers would need to be located in the floodplain of Beaver Creek.	Transmission line is in close proximity (approximately 300 m) to the site and can be directly connected through an overhead tap line spanning Beaver Creek and its floodplain. Tap line would be supported by 2 towers that are to be located outside the floodplain/valley feature associated with Beaver Creek.	Transmission line is in close proximity to the site. Power connection would be achieved from tapping into the existing A.M. Walker Transformer Station on the property.	
	4	3	3	4	

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	SITE 2 Rodick Road / Yorktech Drive 407		SITE 4 Markham Road/Highway 407	
Proximity to load growth areas	Site is optimal to service primary growth area (Central - Town of Markham) and minimizes extent of distribution lines required.	Site is optimal to service primary growth area (Central - Town of Markham) and minimizes extent of distribution lines required.	Site is optimal to service primary growth area (Central - Town of Markham) and minimizes extent of distribution lines required.	<ul> <li>Site is adequate to service primary growth area (Central - Town of Markham). Disadvantage - extensive feeder distribution lines are required to service growth area.</li> </ul>	
	4	4	4	3	

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	SITE 2 Rodick Road / Yorktech Drive	SITE 3 Rodick Road / Highway 407	SITE 4 Markham Road/Highway 407	
Length and location of associated distribution (feeder egress) lines	<ul> <li>An estimated 20.6 Km of overhead distribution feeder lines are required.</li> <li>An estimated 1.5 Km of underground distribution feeder lines are required.</li> <li>Overhead lines are routed along Rodick Road, Miller Avenue, Woodbine Avenue and Highway 7 corridors with abutting land use primarily commercial/industrial.</li> </ul>	<ul> <li>An estimated 20.6 Km of overhead distribution feeder lines are required.</li> <li>An estimated 1.5 Km of underground distribution feeder lines are required.</li> <li>Overhead lines routes are the same as Site 1.</li> </ul>	distribution es are required. ted 1.5 Km of ind distribution es are required. Ind distribution ines routes are ines routes are ines are ind distribution es are required. ines are ines		
	4	4	5	2	
Proximity to area residences or other sensitive land uses such as schools, nursing/retirement homes, places of worship, hotels, etc. (noise/visibility)	<ul> <li>Closest residences (north of Highway 7 and west of Rodick Road) are located approximately 800 m away from the site. All other sensitive land uses (i.e., schools, places of worship, etc.) are located a minimum of 1 Km from the site with exception of a hotel (Comfort Inn, approximately 700 m away).</li> <li>No visual/aesthetic or noise</li> </ul>	<ul> <li>Closest residences (north of Highway 7 and west of Rodick Road) are located approximately 800 m away from the site. All other sensitive land uses (i.e., schools, places of worship, etc.) are located a minimum of 1 Km from the site with exception of a hotel (Comfort Inn,</li> </ul>	<ul> <li>Closest residences (north of Highway 7 and west of Rodick Road) are located approximately 850 m away from the site. All other sensitive land uses (i.e., schools, places of worship, etc.), are located a minimum of 1 Km from the site.</li> </ul>	Site is located approximately 200 m away from residences (Ribston Street). Nearest school is 830 m (Sir Richard W. Scott) and church 675 m (Chinese Alliance Church).	

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	SITE 2 Rodick Road / Yorktech Drive	SITE 3 Rodick Road / Highway 407	SITE 4 Markham Road/Highway 407
	effects are anticipated to residences or other sensitive land uses, as surrounding land use is commercial/industrial.	<ul> <li>approximately 525m m away).</li> <li>No visual/aesthetic or noise effects are anticipated to residences or other sensitive land uses, as surrounding land use is commercial/industrial.</li> </ul>	<ul> <li>with exception of a hotel (Comfort Inn, approximately 600 m away).</li> <li>No visual/aesthetic or noise effects anticipated to residences or other sensitive land uses, as surrounding land use is commercial/industrial with abutting regional highway facility (Highway 407).</li> </ul>	Potential public concerns with visual and noise effects are expected. However, mitigation (landscaping, noise control measures) could eliminate or minimize effects.
	4	4	4	2

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	Rodick Road / Yorktech Drive Rodick Road / Highway Markhar		SITE 4 Markham Road/Highway 407
Effects on natural environment	<ul> <li>The site for the station (1 ha.) is a fenced parking facility (pavement) with a vegetated berm (non-native grasses).</li> <li>No effects to terrestrial or aquatic ecosystems (i.e., vegetation, fish, wildlife) are anticipated.</li> <li>No direct impacts to the abutting natural feature (i.e., Beaver Creek, its flood plain or valley) and its ecological functions, including supporting habitats (i.e. vegetation, fish, wildlife), are anticipated.</li> <li>Tower required for connection of new overhead line from the 230 KV line to the station would require clearing of small area of open meadow type vegetation.</li> </ul>	<ul> <li>The site for the station are previously disturbed lands with no vegetation present. No direct impacts to the abutting natural feature (i.e., Beaver Creek, its flood plain or valley) or its ecological function, including habitat (i.e. vegetation, fish, wildlife), are anticipated.</li> <li>Towers (2) required for connection of overhead line from the 230 kV line to the station would require clearing of a small area of open meadow vegetation and removal of some newly planted trees and shrubs in the floodplain of Beaver Creek.</li> </ul>	<ul> <li>The site for station would require clearing of open meadow type vegetation with some small individuals scattered trees, such as Manitoba maple, Russian olive and balsam poplar.</li> <li>The clearing of vegetation at site will result in a very small localized effect to wildlife (i.e., squirrel, cottontail rabbit, raccoon and birds) due to disturbance and displacement of habitat.</li> <li>No direct impacts to the abutting natural feature (i.e., Beaver Creek, its flood plain or valley) or its ecological functions, including supporting habitats (i.e. vegetation, fish, wildlife), are anticipated.</li> <li>One of the towers required for connection</li> </ul>	<ul> <li>A combination of manicured grasses, limited number of trees (i.e., sugar maple along hedgerow, scattered corkscrew willow, spruce, silver maple), old field meadow and small wetland area will be effected due to required vegetation clearing. (1 ha area).</li> <li>Small localized effects to wildlife observed (i.e. cottontail rabbit, raccoon and birds - English sparrow, redwing blackbird, starling, and Canada goose) due to disturbance and displacement of habitat. Area is considered attractive for bird</li> </ul>

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	SITE 2 Rodick Road / Yorktech Drive	SITE 3 Rodick Road / Highway 407	SITE 4 Markham Road/Highway 407
			of overhead line from the 230 Kv line to the station would require clearing of a small area of open meadow vegetation and removal of some newly planted trees and shrubs in the floodplain of Beaver Creek.	nesting (active goose nest observed).
	4	3	3	2
Effects on socio-economic environment	<ul> <li>No noise effects to nearby residences and other sensitive noise receptors (i.e. schools, places of worship, etc.) are expected.</li> <li>No aggregate or agricultural resources will be affected.</li> <li>No significant visual/aesthetic effects are anticipated as the station is compatible with the surrounding industrial/commercial land use. However, the elevated grade on the property would make the station have a greater visually effect compared to other developments in the area.</li> </ul>	<ul> <li>No noise effects to nearby residences and other sensitive noise receptors (i.e. schools, places of worship, etc.) are expected.</li> <li>No aggregate or agricultural resources will be affected.</li> <li>No significant visual/aesthetic effects are anticipated as the station is compatible with the surrounding industrial/commercial land use.</li> <li>Towers (2) in floodplain and overhead connection line from the existing 230 kV line to the station, spanning the valley feature, will have a visual/aesthetic</li> </ul>	<ul> <li>No noise effects to nearby residences and other sensitive noise receptors (i.e. schools, places of worship, etc.) are expected.</li> <li>No aggregate or agricultural resources will be affected.</li> <li>No significant visual/aesthetic effects are anticipated as the station is compatible with the surrounding industrial/commercial land use.</li> <li>Tower (1) in floodplain and overhead connection line from the existing 230 kV line to the station, spanning the valley feature, will</li> </ul>	<ul> <li>Potential noise effects to nearby residences.</li> <li>No aggregate resources will be affected.</li> <li>A small parcel of active agricultural land (150 m<sup>2</sup>) located in the northwest corner of property will be effected. The loss of these lands is not considered significant with respect to production.</li> <li>Some nearby residences may perceive station as having</li> </ul>

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	SITE 2 Rodick Road / Yorktech Drive	SITE 3 Rodick Road / Highway 407	SITE 4 Markham Road/Highway 407
		effect.	have a visual/aesthetic effect.	<ul> <li>negative visual/aesthetic effect or impact to property values.</li> <li>Overhead distribution feeder lines for site have the highest visual/aesthetic effects, as some lines are routed along local roads in residential areas as compared to Sites 1, 2 and 3 that are through commercial/ industrial areas.</li> </ul>
	4	4	4	3
Archaeological potential and effects to cultural heritage resources (i.e., built heritage features or cultural landscapes)	<ul> <li>No archaeological potential at the site due to past land disturbance/development (parking lot).</li> <li>No built heritage features or significant cultural heritage landscapes will be affected.</li> </ul>	<ul> <li>No archaeological potential at the site location due to past grading and disturbance.</li> <li>No built heritage features or significant cultural heritage landscapes will be affected.</li> </ul>	<ul> <li>Site displays archaeological potential. Further investigation (Stage 2) is recommended prior to any future land development.</li> <li>No built heritage features or significant cultural heritage landscapes will be affected.</li> </ul>	<ul> <li>Archaeological potential was identified in the northwest corner of the property. Further investigation (Stage 2) is recommended prior to any future land development.</li> <li>No built heritage features or</li> </ul>

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	SITE 2 Rodick Road / Yorktech Drive 407		SITE 4 Markham Road/Highway 407
	5	5	4	significant cultural heritage landscapes will be affected. <b>4</b>
Technical and maintenance considerations	<ul> <li>Good access from Rodick Road.</li> <li>Connects to Buttonville line for optimal transmission diversity.</li> <li>Soil/fill characteristics at the site may be unsuitable (former truck/auto maintenance yard) and therefore require removal/replacement with additional engineering and environmental investigations and possible more robust foundation design. Contaminated soils are known to be present on site and are currently encapsulated with clean fill material. The site is subject to the policies and required studies under Section 2.1 of the Town's OP regarding "Formal Waste Disposal Sites" and their potential influence areas.</li> <li>No unusual maintenance issues.</li> </ul>	<ul> <li>Good access from Rodick Road.</li> <li>Connects to Buttonville line for optimal transmission diversity.</li> <li>Soil characteristics at the site may be unsuitable and therefore require removal/replacement with additional engineering and environmental investigations. The site is subject to the policies and required studies under Section 2.1 of the Town's OP regarding "Formal Waste Disposal Sites" and their potential influence areas.</li> <li>No unusual maintenance issues.</li> </ul>	<ul> <li>Good access from Addiscott Court.</li> <li>Connects to Buttonville line for optimal transmission diversity.</li> <li>No unusual maintenance issues.</li> </ul>	<ul> <li>Good access from Markham Road.</li> <li>Adds another station to a transmission line with 3 stations already connected – no improvement to diversity.</li> <li>Ground conditions (low lying wet area) at the site may be unsuitable and therefore require additional engineering investigations and more robust foundation design.</li> <li>No unusual maintenance issues.</li> </ul>
	3	3	4	3

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FACTOR	SITE 1 Rodick Road/ Yorktech Drive (801 Rodick Road)	SITE 2 Rodick Road / Yorktech Drive	SITE 3 Rodick Road / Highway 407	SITE 4 Markham Road/Highway 407
Cost	<ul> <li>Preliminary estimated capital cost is 43.3 million dollars. This figure does not include potential additional costs to address the above assumed technical issues associated with unknown soil characteristics at the site.</li> <li>Ongoing annual maintenance cost for station and 28 kV line is approximately 295 K.</li> </ul>	<ul> <li>Preliminary estimated capital cost is comparable (within 4%) and is therefore considered equal to Site 1. This figure does not include potential additional costs to address the above assumed technical issues associated with unknown soil characteristics at the site.</li> <li>Ongoing annual maintenance cost for station and 28 kV line is the same as Site 1.</li> </ul>	<ul> <li>Preliminary estimated capital cost is comparable (within 4%) to Sites 1 and 2 and is therefore considered equal. However, has advantage over Sites 1 and 2 as Site 3 has no known technical issue with soil conditions.</li> <li>Ongoing annual maintenance cost for station and 28 kV line is the same as Site 1.</li> </ul>	<ul> <li>Site has the highest preliminary capital cost (approx.</li> <li>\$73.5 million). The high cost is due to the extensive 28 kV feeder distribution lines required for integration to the system.</li> <li>Ongoing annual maintenance cost for station and 28 kV line are the highest at \$580 thousand due anticipated greater length of line (line losses) to maintain and operate.</li> </ul>
	3	3	4	2
Total Score	36	36	39	30
OVERALL RANKING	3	2	1	4

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14	Five Year Capital Plan
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# 60 A Growing Community: A Growing Company

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# 63 Our Community

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PowerStream's service region is defined by the municipalities of Markham, Aurora, Richmond Hill and Vaughan. The region includes a diverse population of over 750,000 people and 22,000 commercial establishments spread across 450 sq. km's of urban and rural landscape. Three of the four municipalities PowerStream services are consistently within the top ten fastest growing communities in Canada. The growing commercial sector includes over 500 corporate head offices and nationally strategic industrial clusters in the high-technology and the life-sciences sectors<sup>1</sup>.

73

The region is marked by population growth, commercial and industrial development, and a large suburban landscape. Before PowerStream was established, the area was serviced by four separate LDC's and was marked by four separate business cultures, electricity distribution systems and service infrastructures.

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# 80 Our Company

82 PowerStream was established through the amalgamation of three LDCs in 2004, and 83 the purchase of a fourth in 2005. Now owned by the City of Vaughan and the Town of 84 Markham, PowerStream strives to be an innovative and socially responsible leader in 85 power distribution and related services in Ontario. PowerStream is committed to delivering reliable power and related services safely and efficiently, to support our 86 87 customers' quality of life, and to provide value to the Shareholders. PowerStream's staff support electricity distribution to over 237,000 residential and commercial/industrial 88 89 customers.

<sup>&</sup>lt;sup>1</sup> Municipal websites

Through amalgamation and growth PowerStream has emerged as the third largest LDC in Ontario, and has faced challenges as it integrated four utilities while managing customer growth. In the four years since amalgamation PowerStream has largely succeeded in harmonizing the diverse corporate cultures, business processes and financial systems of the original utilities.

95

96 PowerStream is committed to providing its customers with safe, reliable and efficient 97 service. This goal is achieved by focusing on operational efficiencies and processes that 98 will reduce operating costs and maximize the use of company assets. Efforts to 99 streamline operations and find efficiencies of scale have resulted in cost savings for the 100 company, shareholders and customers. In 2007 PowerStream harmonized distribution 101 rates throughout the service area and also re-engineered the new customer connection 102 process. PowerStream continues to explore opportunities to improve operational and 103 service efficiencies, maximize use of assets, and to expand its service area and 104 customer base. To that end PowerStream is in merger discussions with a number of 105 LDC's.

106

To meet the needs of a growing customer base and the increased demand for no change power, PowerStream is investing in system upgrades and improving the effective use of equipment and system capacity. Key elements of this investment include new transformer stations, data network upgrades, and conservation and demand management programs.

112

PowerStream is a responsible steward of the resources entrusted to it, with a clear vision of its corporate direction. Guided by a strategic plan, which builds on recent successes and current initiatives, PowerStream has clearly defined its overall vision, mission and strategic priorities<sup>2</sup>. The strategic plan sets out specific, measurable, actionable goals with clear outcome expectations. The plan is reviewed regularly and subject to an annual formal review and revision by PowerStream's Board of Directors and executive management team. All current and planned corporate initiatives are

<sup>&</sup>lt;sup>2</sup> Appendix 2 –PowerStream Vision, Mission and Strategic Goals

aligned with the strategic plan. A critical component of this strategic and planningprocess is PowerStream's Five Year Capital Plan.

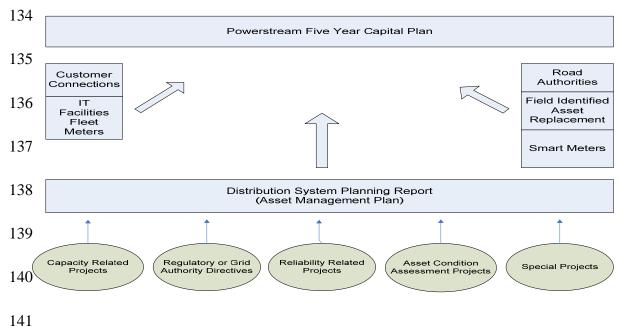
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### 124 Our Five Year Capital Plan

125 PowerStream's Five Year Capital Plan is the culmination of several evaluation and 126 assessment processes, as shown below in Diagram 1. Careful ongoing consideration is given to the current and future requirements of PowerStream's customers, facilities, IT, 127 128 and equipment. Since much of PowerStream's service area is of newer construction, 129 and regional growth is relatively high, a large portion of capital investment planning has been devoted to the distribution system. PowerStream conducts reviews of its 130 131 distribution system, asset condition, system reliability and transformer station capacity 132 and line losses.



### **Diagram 1: Capital Planning Evaluation and Assessment Elements**



1 1 1

142

143 The Asset Condition Assessment is one of the more important evaluations being 144 undertaken. Assets are being selected for review on the basis of the relative 145 importance in providing reliable supply. PowerStream has completed or is continuing reviews of transformer stations, circuit breakers, primary underground cables and
municipal distribution station transformers. The review of all major asset classes will be
complete by the end of 2008.

149

To meet the growth in demand and the current and projected requirements of the distribution system, as identified within the Distribution System Planning Report, PowerStream is committed to investing in infrastructure maintenance, renewal and modernization. Between 2008 and 2012 PowerStream will invest close to \$407 million to ensure the safe and reliable supply of electricity across its service area, and to fulfil its legal statutory requirements.

156

### 157 Table 1: Capital Expenditure Budget 2008-2012 (Amounts in 000's)

BUDGET DESCRIPTION	2008	2009	2010	2011	2012
1 Sustainment Capital	19,401	19,618	23,638	31,050	24,930
2 Development Capital	23,728	41,019	32,614	24,124	59,225
3 Operations Capital	10,080	7,674	6,906	6,271	6,949
4 Other Miscellaneous Capital	6,243	3,955	11,585	8,079	7,021
5 Smart Meters Program	6,994	12,975	12,616	0	0
Total Capital Expenditure	66,446	85,241	87,359	69,525	98,125

PowerStream divides its capital expenditures in line with the OEB capital expenditure categories, as shown. Figures are net of capital contributions.

158

Powerstream expects to spend between \$66-98 million annually for its various capital projects. Capital requirements are the highest in 2010 and 2012. Capital requirements in 2010 include \$8.9 million for planned asset replacement (Sustainment Capital), as well as \$2.9 million for new CIS initiative, which is part of Other Miscellaneous Capital. In 2012, the capital requirement is high due to the installation of new Transformer Stations in Vaughan. These expenditures are part of Development Capital.

165

166 Sustainment Capital accounts for approximately 29% of the total capital expenditures in

all years except 2011, when it accounts for 45% of total capital, mainly due to the lower

168 overall capital requirement. Development capital generally accounts for 35% of capital

169 expenditures, but rises to 48% in 2009, when a Markham transformer station (Markham 170 TS#4) goes into service. Development capital is the highest (60%) in 2012 as a new 171 transformer station goes into service (Vaughan TS #4) and additional CIS/EBT 172 enhancements are completed. Operations capital is high in 2008 as PowerStream 173 begins implementation of outage management system and continues the installation of 174 SCADA Mate Switches. In subsequent years, it is expected to stabilize at around \$6.9 175 million per year. The provincially mandated Smart Meters program will be completed in 176 2010, and no capital is budgeted under this category in subsequent years.

177

178 PowerStream is charting a prudent course and actively managing its assets. While 179 discretionary capital expenditures are initiated by PowerStream, under a carefully 180 considered capital and asset management plan, they are all driven in the final analysis 181 by growth in customer and electricity demand. In order to maintain a reliable, robust 182 and sustainable distribution system able to meet the needs of our customers, 183 PowerStream's sustainment capital investments are targeted to match or slightly 184 exceed asset depreciation. Spending in this area is expected to increase in future years 185 due to higher costs typically incurred to construct in a mature neighbourhood as 186 compared to a "greenfield" situation.

187

Capital expenditures are budgeted in detail for 2008 and 2009. From 2010-2012 the planned capital expenditures are less known in detail and largely based on assumptions from prior years. Further refinement of the capital requirement in future budget years occurs on a rolling basis.

192

193 The Five Year Capital Plan expenditures are summarized in Appendix 3.

# 194 Capital Expenditures 2008-2012

### 195 196

198

# 197 Sustainment Capital

Sustainment capital is defined to include projects that replace depleted infrastructure to maintain reliability of the distribution system so that it will continue to function as intended. Broadly, this includes the replacement of overhead and underground lines, reconfigurations, voltage conversions, upgrading of equipment (not primarily for expansion of capacity), planned distribution asset replacements (poles, transformers, insulators etc.) and the purchase of spare transformers.

205

### 206 Table 2: Sustainment Capital Expenditures 2008-2012 (Amounts in 000's)

BUDGET DESCRIPTION	2008	2009	2010	2011	2012
1 Sustainment Capital					
1.1 System Reliability (New Installations,					
Upgrades and Spare Equipments)	9,640	11,499	11,900	19,724	13,646
1.2 Long Term Load Transfer Projects	651	0	0	0	0
1.3 Planned Distribution Asset Replacements	9,110	8,119	11,738	11,326	11,284
Total Sustainment Capital	19,401	19,618	23,638	31,050	24,930

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208

## 209 **1.1 System Reliability**

210

211 PowerStream actively tracks and measures its distribution system reliability and 212 participates in the Canadian Electrical Association Service Continuity Report (CEA-213 SCR), a ranking of the industry standard CAIDI, SAIFI and SAIDI indices. SAIFI 214 measures how often a customer can expect to experience an outage, SAIDI 215 measures average outage duration per customer, and CAIDI measures average outage duration if an outage is experienced, or average restoration time. The target 216 217 benchmark for PowerStream is to be in the top quartile of Canadian utilities of similar 218 size that participate in CEA-SCR.

PowerStream is investing in system improvements, upgrades and spare equipment in line with efforts to meet this benchmark. The largest portion of these investments over the next five years is in spare transformers, transformer station upgrades, voltage conversion and feeder extensions.

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# 1.2 Long Term Load Transfer Projects

This expenditure is a one-time initiative, under an OEB directive to align customers that cross over LDC borders to the relevant LDC. PowerStream is investing the capital required to ensure that it meets the OEB's requirements associated with geographic and physical distributors.

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# 1.3 Planned Distribution Asset Replacements

PowerStream is investing \$51.6 million over five years into the ongoing replacement of deteriorated poles, adding load interrupter switches, switchgears, load break elbows, underground cables and transfer trip protection. Replacement requirements and priorities are determined by field staff and through the Asset Condition Assessment process implemented with the assistance of an independent third party expert, Kinetrics.

#### **Development Capital** 242

243

244 Development capital is defined to include projects that involve system expansion and 245 relocation due to growth and/or are undertaken to satisfy external demands. This 246 category of expenditure includes new customer connections, relocation of distribution system plant (typically due to road widenings), new subdivisions, commercial 247 248 developments, new or expanded Transformer Stations, new lines and individual suite 249 metering programs for condominiums, the York Region Transit relocation and the 407 250 Transitway.

251

#### 252 Table 3: Development Capital Expenditures 2008-2012 (Amounts in 000's)

BUDGET DESCRIPTION	2008	2009	2010	2011	2012
2 Development Capital					
2.1 System Expansion (Due to Growth)	20,425	34,615	18,756	16,115	47,027
2.2 System Relocation (Due to Road Authority)	3,303	6,404	13,857	8,009	12,198
Total Development Capital	23,728	41,019	32,613	24,124	59,225

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### 2.1 System Expansion (Due to Growth)

258 PowerStream will invest close to \$138 million over the next 5 years in infrastructure 259 improvements driven by regional municipal growth. Approximately one-third of this is 260 expenditures related to the extension of service to subdivisions, including overhead 261 and underground wires and new feeders.

262

263 PowerStream will require one new Transformer Station every three years from 2009 264 in order to keep pace with projected growth in customers and demand, and to 265 ensure the consistent and reliable future supply of electricity. Driven by this demand 266 PowerStream is investing \$60 million to purchase new transformers, construct new transformer stations, and into related land purchases, equipment installation, 267 268 construction and other associated costs. The new Markham transformer station (Markham TS #4) is being completed in 2009. The proposed Vaughan station is 269

- scheduled for service in 2012. In addition PowerStream will invest approximately
  \$14 million in critical growth driven enhancements to the current Vaughan
  transformer station (TS#2), and the CIS/EBT system.
- 273 274

275

# 2.2 System Expansion (Due to Road Authority)

PowerStream is spending approximately \$45 million over five years (net of 276 277 contributions), in order to meet legal statutory requirements related to infrastructure 278 changes and improvements undertaken by regional municipalities within its service 279 area. The largest part of this is being spent over the plan period to support the 280 requirements related to the rapid transit system being developed by the Region of 281 York. Beyond 2012 it is anticipated that additional expenditures will be driven by this project for at least 10 more years. \$4.0 million is budgeted towards 407 Transitway 282 283 work slated to begin in 2012.

284

\$0.5 million is budgeted for approved projects in 2008 for the relocation of existing
overhead and underground wires and other distribution system equipment to adjust
to the changing requirements of road widening and related infrastructure projects
undertaken by the regional municipalities. \$3.0 million is allocated from 2009 to 2012
for expected future projects, based on historic statutory expenditures and projections
of future growth.

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# 294 **Operations Capital**

Operational capital is defined to include infrastructure capital projects that support the day-to-day operation of the distribution system, including unplanned distribution replacements (storm damage and other breakdown replacements), the outage management system, distribution operations (GIS, the control room and SCADA, the Smart Grid, major tools and fleet vehicles and equipment.

301

295

### 302 Table 4: Operations Capital Expenditures 2008-2012 (Amounts in 000's)

BUDGET DESCRIPTION	2008	2009	2010	2011	2012
3 Operations Capital					
3.1 Emerging Distribution Replacements	1,609	1,678	1,710	1,742	1,747
3.2 Fleet/Tools/Warehouse	2,929	1,814	1,081	1,024	1,037
3.3 System Management and Control Programs	3,449	2,449	2,561	2,380	3,014
3.4 Meter Programs (Excluding Smart Meters)	2,093	1,733	1,554	1,125	1,151
Total Operations Capital	10,080	7,674	6,906	6,271	6,949

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### **305 3.1 Emerging Distribution Replacements**

Based on experience PowerStream anticipates that there will be a certain degree of ongoing equipment failure. The specific items and cost of repair and replacement are uncertain, and partially related to uncontrollable severe weather events. Considering the average annual expense incurred historically, PowerStream projects current and future replacement costs at \$1.6 million in 2008 growing to \$1.7 million in 2012.

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315

### 314 **3.2 Fleet / Tools / Warehouse**

PowerStream's Five-Year Capital Plan is based on the ongoing assessment and evaluation of key corporate areas of responsibility. PowerStream's fleet, tools and warehouse are critical assets and under constant review and assessment to ensure they are able to meet current and projected needs in support of the reliable and safe supply of electricity. The capital investment planned over the next five years will go towards the planned replacement of aging, obsolete or damaged equipment and
 vehicles. \$2.9 million is being invested in vehicle replacement in 2008. Expenditures
 average of \$1.0 to \$1.8 million over the following four years.

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### **326 3.3 System Management and Control Programs**

PowerStream is investing \$13.8 million over the next five years in distribution system management and control programs in order to improve the reliability of electricity distribution, increase repair process efficiency, improve response times and enhance the quality and timeliness of information given to customers concerning interruptions and repairs to the system.

333

334 PowerStream is investing \$2.1 million over the next five years in an Outage 335 Management System (OMS) to replace the current processes. The OMS will provide 336 real-time data, enable PowerStream to remotely and more accurately determine the 337 source and location of unplanned outages, log customer trouble calls, and assist 338 system controllers' with event management and prioritizing response dispatching. 339 These sophisticated OMS features are expected to enable PowerStream to increase 340 operational efficiency, improve the quality of information given to customers and 341 improve response times.

342

Load interruption, related to outage and planned system repairs, is a costly and timeconsuming process, involving dispatch, on-site crews and the manual operation of switches. SCADA Mate Switches are remotely operated by control room staff and allow PowerStream to respond very quickly to emergency situations involving load transfer or power restoration, and improve the overall efficiency, cost and customer satisfaction of the current manual approach. PowerStream is investing \$5.8 million to install 12 new SCADA Mate switches per year over the next 5 years.

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### 352 **3.4 Meter Programs (Excluding Smart Meters)**

353

PowerStream is spending \$7.7 million on meter programs from 2008 to 2012. The 354 355 installation of new individual suite metering systems will account for \$5.7 million of 356 this expense. The remainder will be invested by PowerStream in its ongoing program of wholesale meter installation, failed meter equipment replacement, 357 358 revenue meter re-verifications and meter seal extensions. Meter programs are a service provided by PowerStream to improve administrative and operational 359 360 efficiency, and to ensure the efficient function of customer meters. Variances in 361 expenditures over the five year period correlate to the planning schedule of long-362 term project activities.

# 363 Other Miscellaneous Capital

365 Other miscellaneous capital is defined to include all other miscellaneous expenditures,

including, office equipment, new computer systems and upgrades, software, warehouse

367 equipment, office and buildings.

368

364

# 369Table 5: Other Capital Expenditures 2008-2012(Amounts in 000's)

BUDGET DESCRIPTION	2008	2009	2010	2011	2012
4 Other Miscellaneous Capital					
4.1 Administration Projects	5,449	3,573	11,191	7,675	6,611
4.2 Head Office Building (Administration)	794	382	394	404	409
Total Other Miscellaneous Capital	6,243	3,955	11,585	8,079	7,021

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### 372 **4.1 Administration Projects**

374 PowerStream is investing \$34.5 million in other miscellaneous projects over the next 375 five years related to efficiency and customer service improvements. These 376 investments are being made to ensure compliance with OEB customer service 377 benchmarks. \$22 million is being expended to replace aging IT and telephony 378 hardware, provide additional IT and telephony functionality, and to expand the 379 capabilities of the financial software by implementing time entry, HR and 380 documentation modules. \$1.8 million is being invested in business process 381 evaluation, and process improvement initiatives. \$10.7 million is invested in the 382 implementation of new CIS, including system review, integration and data 383 conversion costs.

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387

## 4.2 Head Office Building (Administration)

Executive, administrative and distribution control functions which had been previously divided amongst several locations were consolidated by PowerStream in 2008 within a new purpose built head office building. Consolidation of business and control functions within this new purpose built facility have promoted business synergy, improved administrative and operational efficiency, enhance operational
 capacity, improved customer service, and is geared to accommodate future growth
 requirements. PowerStream has budgeted \$2.4 million between 2008-2012 for
 projects related to the efficient administration of this facility.

# 397 Smart Meters Program

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400 This program is provincially mandated and contains largely statutory expenditures. In

401 line with recent OEB interrogatories requesting to examine this expenditure separately

- 402 from other OEB defined categories. PowerStream presents this information below.
- 403

## 404 Table 5: Smart Meter Capital Expenditures 2008-2012 (Amounts in 000's)

BUDGET DESCRIPTION	2008	2009	2010	2011	2012
5 Smart Meters Program					
5.1 Smart Meters Program	6,994	12,975	12,616	0	
Total Capital Expenditure on Smart Meters					
Program	6,994	12,975	12,616	0	0

<sup>405</sup> 

407

### 406 **5.1 Smart Meters**

408 The Smart Meter program is a statutory expense mandated by the Government of 409 Ontario, which is proceeding with time-of-use electricity pricing and the installation of 410 smart meters throughout Ontario by 2010. 411 The government's overall initiative, technical and functional requirements, and the 412 execution of mass deployment of smart meter solutions are defined within the 413 Energy Conservation Leadership Act, and recent changes to the Electricity Act and 414 the OEB Act. PowerStream collaborated with the Coalition of Large Distributors, the 415 Ontario Utilities Smart Meter Working Group, and other parties to research and 416 develop its Smart Meter Program, conduct pilots, and undertake a smart meter 417 system procurement process.

418

PowerStream has completed procurement for the installation of the first 80,000
meters. The IESO is project-managing the development of the province-wide
centralized Meter Data Management and Meter Data Repository (MDM/R) system.
This system will receive meter reading data from LDCs, produce billing quality
consumption data, and include all interfaces with the LDCs' AMI and CIS systems.

424 PowerStream is participating in the development of this system as well as
425 developing its own back office processes and system changes to accommodate the
426 smart meter initiative.

427

PowerStream's Smart Meter Implementation Program encompasses system procurement, installation, billing system changes, process reengineering, staff training, and customer communications. The entire PowerStream customer base will be converted to smart meters by 2010. In 2007 PowerStream installed over 80,000 residential meters. In 2008, 2009 and 2010 the installation of more expensive commercial and industrial meters will escalate capital costs in that period. The Smart Meter program will end in 2010.

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- 436

# 437 Appendices

438		
439 440 441 442	Appendix 1	- Glossary of Common Acronyms
443	CAIDI	Customer Average Interruption Duration Index
444	CEA-SCR	Canadian Electric Association Service Continuity Report
445	CIS	Customer Information System
446	COV	City of Vaughan
447	EBT	Electronic Business Transactions
448	IESO	Independent Electricity System Operator
449	LDC	Local Distribution Company
450	OM&A	Operating, Management and Administrative (expenses)
451	SAIDI	System Average Interruption Duration Index
452	SAIFI	System Average Interruption Frequency Index
453	SCADA	Supervisory Control and Data Acquisition
454	ТОМ	Town of Markham

455 456	
430 457	Appendix 2 - PowerStream Vision and Mission
458	
459	
460	POWERSTREAM MISSION STATEMENT
461	
462	To deliver reliable power and related services safely and efficiently to support
463	our customers' quality of life and to provide value to our shareholders.
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470	POWERSTREAM VISION STATEMENT
471	
470	We will be an improveding and accielly represented beday in
472 473	We will be an innovative and socially responsible leader in power distribution and related services in Ontario.

Appe	ndix 3: Five Year Capital Expenditure Summary		Period: Fiscal Year ( 2008 - 2012 )				
lote:	all amounts in thousand's						
1010.	BUDGET DESCRIPTION	2008	2009	2010	2011	2012	
1	Sustainment Capital						
	System Reliability (New Installations, Upgrades and Spare Equipment)	9,640	11,499	11,900	19,724	13,646	
	Long Term Load Transfer Projects	1,139	0	0	0	0	
	Planned Distribution Asset Replacements	8,622	8,119	11,738	11,326	11,284	
1	Total on Sustainment Capital	19,401	19,618	23,638	31,050	24,930	
2	Development Capital						
-	System Expansion (Due to Growth)	20,425	34,615	18,756	16,115	47,027	
	System Relocation (Due to Road Authority)	3,303	6,404	13,857	8,009	12,198	
2	Total on Development Capital	23,728	41,019	32,614	24,125	59,225	
3	Operations Capital						
	Unplanned Distribution Replacements	1,609	1,678	1,710	1,742	1,747	
	Operation Center (New Building)	.,	.,	.,	.,	-,	
	Fleet/Tools/Warehouse	2,929	1,814	1.081	1,024	1,037	
	System Management and Control Programs	3,449	2,449	2,561	2,380	3,014	
	Meter Programs (Excluding Smart Meters)	2,093	1,733	1,554	1,125	1,151	
3	Total on Operations Capital	10,080	7,674	6,906	6,271	6,949	
4	Other Miscellaneous Capital						
	Administration Projects	5,450	3,573	11,191	7,675	6,611	
	Head Office Building (Administration)	794	382	394	404	409	
4	Total on Other Miscellaneous Capital	6,244	3,955	11,585	8,079	7,021	
5	Smart Meters Program						
	Smart Meters Program	6,994	12,975	12,616	0	0	
5	Total on Smart Meters Program	6,994	12,975	12,616	0	0	
	Total Capital Expenditure	66,446	85,241	87,359	69,525	98,125	

1

#### **DISTRIBUTION ASSETS VARIANCE ANALYSIS**

#### 2 OVERVIEW

3 Changes to Net Fixed Assets ("NFA") represent the largest portion of rate base and is

4 responsible for an increase of \$89M in rate base. This Tab explains the changes in

- 5 NFA.
- 6 NFA is Fixed Assets at Cost less Accumulated Amortization. Accumulated Amortization
- 7 represents the cumulative annual amortization charges to date on the assets.
- 8 Table 1 summarizes the change in NFA and the resulting contribution to rate base.

	2006 Board Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year	2009 Rate Base	Change in Rate Base
Fixed Assets at Cost	703,127	767,706	824,889	884,966	957,306	921,136	218,009
Accumulated Amortization:	(332,857)	(398,455)	(428,370)	(449,905)	(474,265)	(462,085)	(129,228)
Net Fixed Assets	370,270	369,251	396,519	435,061	483,041	459,051	88,781

Table 1: Net Fixed Asset Portion of Rate Base (\$000)

9 10 11

Notes: 2006 Board Approved and 2009 Rate Base are averages of opening and closing balances. 2006 Actual, 2007 Actual, 2008 Bridge Year and 2009 Test Year represent year end balances. 2006 Board Approved (EB-2007-0074) EDR 2006 Model Schedule 2-4 Adjusted Accounting Data

As Table 1 illustrates, the increase in NFA, and thereby rate base, is made up of netadditions to fixed assets of \$218M offset by an increase in accumulated amortization of

14 \$129M for a net increase of \$89M.

15 The net additions to Fixed Assets at Cost of \$218M are discussed on the next page.

16 The net additions to Accumulated Amortization of \$129M represents amortization 17 calculated on assets during the period (net of removal of accumulated amortization on 18 assets that have been fully amortized). PowerStream follows the OEB *Accounting* 19 *Procedures Handbook for Electric Distribution Utilities* guidance in calculating 20 amortization: see Exhibit D1. Tab 1. Schedule 5 for more details on amortization.

20 amortization; see Exhibit D1, Tab 1, Schedule 5 for more details on amortization. 2009 EDR Application

#### 21 Additions to Fixed Assets at Cost

Table 2 shows the year end Fixed Assets at Cost from the 2006 Board Approved amounts to the 2009 Test Year amounts, the dollar change from year to year and the percentage change.

	2006 Board Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year	2009 Rate Base	Total
Total Assets	703,127	767,706	824,889	884,966	957,306	921,136	
Year over Year Change		64,579	57,182	60,077	72,340	(36,170)	218,009
Percent change		9%	7%	7%	8%	-4%	

#### Table 2: Fixed Assets at Cost - Year End Balances (\$000)

25 Notes: 2006 Board Approved and 2009 Rate Base are averages of opening and closing balances.

Fixed Assets at Cost have increased by \$254,179,000 from the 2006 Board Approved amounts to the current filing. Half of the 2009 additions of \$72,340,000, \$36,170,000, goes into 2009 rate base (due to averaging of the opening and closing fixed asset balances), resulting in a net addition to rate base of \$218,009,000 or \$218M. These additions are summarized in Table 3.

	Total	1/2 Year on 2009	Addition to
	Additions	Additions	Rate Base
DEVELOPMENT/GROWTH	-		
New Transformer Station Capacity	37,024	8,976	28,348
Distribution Stations	4,143	17	4,126
New or Upgraded Feeder Lines	47,719	12,750	34,969
Residential Subdivisions	42,968	2,877	40,092
Distribution Transformers	47,694	4,996	42,699
Commercial Services	30,149	2,841	27,308
Capital Contributions	(96,987)	(8,225)	(88,763)
Subtotal	113,011	24,232	88,779
SUSTAINMENT			
Rebuild and Relocate Lines	26,711	6,236	20,476
Underground Conversions and Other	22,006	2,191	19,815
Load Transfers	1,251	-	1,252
Capital Contributions	(4,102)	(1,018)	(3,624)
Subtotal	45,326	7,408	37,919
OPERATIONS			
SCADA	2,653	144	2,509
Meters and Secondary Services	39,720	1,866	37,854
Subtotal	42,373	2,010	40,363
OTHER			
Head Office	26,309	-	26,309
IT	20,148	1,963	18,185
Equipment (e.g. vehicles, major tools)	7,012	558	6,454
Subtotal	53,469	2,521	50,948
GRAND TOTAL	254,179	36,170	218,009

# 31Table 3: Summary of Fixed Assets at Cost Additions –2006 Board Approved to322009 (\$000)

34 Table 4 shows the year end fixed assets at cost, group totals and year over year

35 change.

36

#### Table 4: Fixed Assets at Cost 2006-2009 (\$000)

Asset Group	2006 Board Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
Land and Buildings	4,232	10,388	10,663	10,663	14,163
\$ Increase (Decrease)		6,156	275	-	3,500
% Increase (Decrease)		145%	3%	0%	33%
TS Primary Above 50kV	72,815	82,384	88,055	89,892	104,344
\$ Increase (Decrease)		9,570	5,670	1,837	14,452
% Increase (Decrease)		13%	7%	2%	16%
DS	6,722	8,654	9,948	10,832	10,866
\$ Increase (Decrease)		1,932	1,295	884	34
% Increase (Decrease)		29%	15%	9%	0%
Poles, Wires	438,641	496,087	524,125	555,336	609,124
\$ Increase (Decrease)		57,446	28,038	31,211	53,788
% Increase (Decrease)		13%	6%	6%	10%
Line Transformers	168,067	190,433	199,648	205,340	215,331
\$ Increase (Decrease)		22,366	9,215	5,692	9,991
% Increase (Decrease)		13%	5%	3%	5%
Services and Meters	71,730	87,090	103,475	107,721	111,452
\$ Increase (Decrease)		15,360	16,385	4,246	3,731
% Increase (Decrease)		21%	19%	4%	3%
General Plant	1,362	3,171	2,837	25,956	25,956
\$ Increase (Decrease)		1,809	(334)	23,119	0
% Increase (Decrease)		133%	-11%	815%	0%
Equipment	19,495	19,799	21,149	25,393	26,509
\$ Increase (Decrease)		303	1,350	4,244	1,116
% Increase (Decrease)		2%	7%	20%	4%
IT Assets	6,577	12,388	16,679	22,747	26,672
\$ Increase (Decrease)		5,811	4,291	6,068	3,925
% Increase (Decrease)		88%	35%	36%	17%

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Asset Group	2006 Board Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
CDM Assets	1,620	-	-	-	-
\$ Increase (Decrease)		(1,620)	-	-	-
% Increase (Decrease)		-100%	0%	0%	0%
Other Distribution Assets	12,259	13,007	13,533	14,625	14,914
\$ Increase (Decrease)		748	526	1,093	288
% Increase (Decrease)		6%	4%	8%	2%
Contributions and Grants	(100,394)	(155,695)	(165,222)	(183,537)	(202,023)
\$ (Increase) Decrease		(55,301)	(9,527)	(18,315)	(18,486)
% (Increase) Decrease		55%	6%	11%	10%
TOTAL	703,127	767,706	824,889	884,966	957,306
\$ Increase (Decrease)		64,579	57,182	60,077	72,340
% Increase (Decrease)		9%	7%	7%	8%

37 These increases reflect several factors.

PowerStream has increased system capacity to meet the demand growth. Since the last
cost of service application, PowerStream has doubled the capacity at Vaughan
Transformer Station #1 and is in the process of adding a new Markham Transformer
Station #4 (Exhibit B1, Tab 5, Schedules 2 and 5).

42 There is an ongoing need to replace older assets at their end of life. Additions and 43 replacements are at current cost which tends to be considerably higher than the 44 historical cost of assets already in service.

Land is getting scarce and prices have risen sharply in PowerStream's service area.
During this period, PowerStream secured long term facilities for its head office (Exhibit
B1, Tab 5, Schedule 3).

48 The changes in the fixed asset group balances are discussed below. Note that the 49 materiality threshold used is 1 percent of 2009 (Board Approved) net fixed assets, or 50 \$3.7M. See Exhibit B1, Tab 7, Schedule 2 for the associated continuity schedules.

#### 52 VARIANCE ANALYSIS

#### 53 2006 Actual vs. Board Approved

54 PowerStream filed its 2006 rates based on an historical test year. Board Approved 55 values are 2004 balances with minor adjustments.

		2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) \$
	Land and Buildings	\$ 4,232,000	\$ 10,388,000	\$ 6,156,000	145%
56	The increase consists of the foll	lowing:			
57	Land purchased for Hea	d Office		3,375,000	
58	Vaughan Transformer S	tation #1 expa	ansion	\$2,295,000	
59	<ul> <li>Other projects</li> </ul>		Ş	6 486,000	

	2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %
TS Primary Above 50kV	\$ 72,815,000	\$ 82,384,000	\$ 9,570,000	13%

60 This group contains PowerStream's transformer stations ("TS"). The increase consists61 of:

62 63	<ul> <li>Markham TS #3 expansion completed in 2004 (50% of 2004 expenditure)</li> </ul>	\$4,246,000
64	<ul> <li>Vaughan TS #1 expansion completed in 2006</li> </ul>	\$4,830,000
65	<ul> <li>Other betterment projects to existing TSs</li> </ul>	\$ 494,000

Both of these expansion projects were needed to support load growth in PowerStream'sservice area.

	2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %
Distribution Stations	\$ 6,722,000	\$ 8,654,000	\$ 1,932,000	29%

68 Distribution (or Municipal) stations are used in areas where the primary voltage is 69 supplied from a Hydro One transformer station at 44kV and the station reduces the 70 voltage to 13.8kV or lower for local distribution. Additions were station expansions or 71 major repairs.

		2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %
	Poles, Wires	\$ 438,641,000	\$ 496,087,000	\$ 57,446,000	13%
72	The increase consists main	ly of:			
73	New feeder lines ar	d upgrades		\$12,917	,000
74	Vaughan TS#1 feed	ler – Islington to .	lane	\$ 1,500	,000
75	Feeder upgrade - R	utherford Road –	Weston to Jan	e \$ 1,200	,000
76	Vaughan TS#1 feed	ler			
77	- Langstaff from D	ufferin to Keele		\$ 2,563	,000
78	Vaughan TS#1 feed	ler – Hwy 7 to Ke	ele	\$ 1,080	,000
79	Richmond Hill TS#2	feeder – Langsta	aff & Bathurst	\$ 1,403	,000
80 81	<ul> <li>Vaughan TS#1 feed to Keele; 407 crossi</li> </ul>			\$ 1,248	,000
82	Vaughan TS#1 feed	ler – station to Hv	vy 7	\$ 1,617	,000
83	Other smaller project	cts		\$ 2,306	,000
84	Residential subdivision	ions		\$21,466	,000
85	Commercial / Indus	trial development	S	\$10,330	,000
86	Overhead pole reloc	cations and other	projects	\$ 6,616	,000
87	and includes:				
88	- Teston Road	d – relocate pole I	ine	\$ 830,000	
89	- 9 <sup>th</sup> Line Hwy	7 to $16^{th}$ – reloca	te pole line	\$1,119,000	
90	- Warden Ave	. – Apple Creek t	o Markham	\$ 525,000	
91	- Weston Roa	d		\$ 490,000	
92	- Other smalle	er projects		\$3,652,000	
93	<ul> <li>Underground convergence</li> </ul>	ersions and other	projects	\$6,117,0	000
94	and includes:				

95	-	Voltage conversions	\$	625,000
96	-	Kleinberg rear lot rebuild	\$	862,000
97	-	Cable replacement – John St. & Woodbine	\$	524,000
98	-	U/G upgrade – John St.	\$	630,000
99	-	Various switchgear replacements	\$1	,469,000
100	-	Loop split projects in Markham	\$	334,000
101	-	Other smaller projects	\$1	,673,000

The increase is largely growth related with \$44,713,000 or 78% for increased feeder
capacity to distribute electricity to the areas of new residential and commercial
development and new plant to connect new customers.

Feeder lines are the "back-bone" of the electrical distribution system. These high voltage lines carry electricity from transformer and distribution stations to the secondary system where customers are connected. New residential and commercial development has created increased system loads requiring the need to construct new feeders or upgrade existing feeder circuits in PowerStream's service area. Powerstream added 17,443 residential customers and 1,807 commercial/ industrial customers in this period.

111 Overhead pole and lines capital work is required annually for replacement of overhead 112 systems that have reached the end of their useful life, road authority requirements to 113 relocate plant for road widening and emergency replacements due to storm or vehicle 114 damage.

Underground voltage conversions, planned and unplanned replacements, and upgradesto underground infrastructure are required to maintain system reliability.

		2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %	
	Line Transformers	\$ 168,067,000	\$ 190,433,000	\$ 22,366,000	13%	
117	117 This increase was in the following areas:					
118	New resident	ial subdivisions	\$	8,396,000		
119	<ul> <li>New Commercial /Industrial services</li> </ul>			8,436,000		

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120	Pole line upgrades and relocations	\$1,176,000
121	Planned and unplanned replacements	\$2,305,000
122	• Other	\$2,053,000

123 The increase is largely driven by growth with new services accounting for \$16,832,000124 (75%) of the increase.

	2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %	
<ul> <li>Services and Meters</li> </ul>	\$ 71,730,000	\$ 87,090,000	\$ 15,360,000	21%	

The increase is the result of the addition of 17,443 residential customers and 1,807commercial/ industrial customers.

Services cost represents the labour, material and vehicle costs to run conductor from a transformer or pole to the meter base of a customer's premises and energize the service. The meter costs are the charges to supply, install and test a new meter on a customer's service.

	2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %
General Plant	\$ 1,362,000	\$ 3,171,000	\$ 1,809,000	133%

This group consists of buildings and fixtures and leasehold improvements, excluding
transformer and distribution stations. The increase is due to the initial planning,
consulting and construction stages of the new head office completed in 2008.

	2006 Board		Increase	Increase
	Approved 2006 Act		(Decrease) \$	(Decrease) %
Equipment	\$ 19,495,000	\$ 19,799,000	\$ 303,000	2%

This category mainly consists of service vehicles with the increase representing the netcost of replacements and new additions.

		2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %
	IT Assets	\$ 6,577,000	\$ 12,388,000	\$ 5,811,000	88%
136	Information Technol	ogy ("IT") increases	consist of:		
137	<ul> <li>JD Edwa</li> </ul>	rds migration to Pov	verStream-owned	l platform	\$1,337,000
138	<ul> <li>JD Edwards financial system upgrade to version 8.9</li> </ul>				\$ 708,000
139	<ul> <li>Geographical Information System ("GIS") upgrade</li> </ul>			\$1,123,000	
140 141				\$1,244,000	
142	<ul> <li>Compute</li> </ul>	ers, printers and othe	er computer hard	vare	\$1,117,000
143	<ul> <li>Other col</li> </ul>	mputer hardware an	d software		\$ 282,000

As a result of the merger to form PowerStream in 2004, there was a need to improve the IT capability of this much larger and more complex organization. The financial, billing and GIS systems required attention. To achieve this PowerStream purchased its own computer server to house the financial system, upgraded the JD Edwards/PeopleSoft (JDE) financial software and expanded and upgraded the GIS to meet engineering and operational requirements.

The merger in 2004 and acquisition of Aurora Hydro in 2005 left PowerStream with a need to standardize employee work stations, printers and network systems, accelerating the replacement of older computers and printers. Increased regulatory and business requirements required more resources, and more computer equipment was required to support this growth.

	2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %
CDM Assets	\$ 1,620,000	\$ -	\$ (1,620,000)	-100%

This is a grouping that existed only for the 2006 rate filing. There are no additions to this group in any of the years. Any assets purchased as part of the approved CDM plans have been recorded in the appropriate asset account.

	2006 Board Approved	2006 Actual	Increase (Decrease) \$	Increase (Decrease) %
Other Distribution     Assets	\$ 12,259,000	\$ 13,007,000	\$ 748,000	6%

This group consists of Systems Supervisory Equipment. This equipment is used tomanage, control and monitor PowerStream's distribution system.

	2006 Board Approved	2006 Actual	(Increase) Decrease \$	(Increase) Decrease %
<ul> <li>Contributions and Grants</li> </ul>	\$ (100,394,000)	\$(155,695,000)	\$(55,301,000)	55%

160 Capital contributions are charged and collected from customers in accordance with the 161 *Distribution System Code* and as outlined in PowerStream's *Conditions of Service*. 162 Customers or developers that request a new connection are provided with an Offer to 163 Connect. An economic evaluation model is used to calculate the portion of costs that 164 are the responsibility of the utility and the balance of the costs to be paid by the 165 customer. The amount paid by the customer is contributed capital.

PowerStream had a 9% growth in the number of customers in this period. The
underlying assets, which are directly related to contributed capital, increased by
\$95,200,000 during this same period.

#### 170 **2007 Actual vs. 2006 Actual**

	2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Land and Buildings</li> </ul>	\$ 10,388,000	\$ 10,663,000	\$ 275,000	3%

#### 171 Additions were not material.

	2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>TS Primary Above 50kV</li> </ul>	\$ 82,384,000	\$ 88,055,000	\$ 5,670,000	7%

### 172 The increase consisted of:

173	<ul> <li>Vaughan TS#1 Expansion and Improvements</li> </ul>	\$3,207,000
174	New Markham TS#4 – planning costs	\$1,021,000
175	230 kV remote trip (switch)	\$ 621,000
176	<ul> <li>Aurora Municipal Station #4 improvements</li> </ul>	\$ 171,000
177	<ul> <li>Sonic Ring installation</li> </ul>	\$ 185,000
178	Replace radiators at transformer station	\$ 259,000
179	<ul> <li>Other</li> </ul>	\$ 207,000

The addition to the value of the Vaughan TS#1 consists mainly of \$2,997,000 for the expansion that was incorrectly set up as work in progress at the 2006 year end and should have been included in 2006 additions. The balance of \$210,000 was to rebuild a firewall at Vaughan TS#1.

	2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %	
Distribution Station	\$ 8,654,000	\$ 9,948,000	\$ 1,294,000	15%	

184 The increase was mainly to add distribution station capacity in the Aurora portion of the185 service area.

		2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %
	Poles, Wires	\$ 496,087,000	\$ 524,125,000	\$ 28,038,000	6%
187	The increase o	consists of:			
188	■ Nev	w residential subdiv	visions	\$8,59	95,000
189	■ Ne	w Commercial / Ind	dustrial services	\$7,99	91,000
190	• Und	derground conversi	ions and other proj	ects \$4,9 <sup>2</sup>	13,000
191	in	cluding:			
192	-	Graham DS voltag	e conversion	\$1,828,000	
193	-	Switchgear replace	ements	\$1,103,000	
194	-	Other smaller proje	ects	\$1,982,000	
195	• Ove	erhead pole relocat	tions and replacem	ents \$3,69	94,000
196 197		Pole line relocation to Aurora boundary	n Bathurst – Welling /	gton \$ 583,000	
198	-	Other smaller proje	ects	\$3,111,000	
199	■ Nev	w feeder lines and	upgrades	\$2,73	34,000
200 201		Pole line rebuild B Bloomington to Mu		\$1,438,000	
202	-	Other smaller proje	ects	\$1,296,000	
203	<ul> <li>Oth</li> </ul>	er		\$ 1 <sup>^</sup>	11,000
		2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %

Line				
Transformers	\$ 190,433,000	\$ 199,648,000	\$ 9,215,000	5%

Line Transformers increased \$9,215,000 with underground transformers accounting for \$7,723,000 of the total. Additions are largely due to new subdivision and commercial services activity and to a lesser degree unplanned replacements due to end of useful life and vehicle accidents.

208

	2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Services and Meters</li> </ul>	\$ 87,090,000	\$ 103,475,000	\$ 16,385,000	19%

The increase is due mainly to the deployment of new Smart Meters along with new and upgraded commercial connections. The following new activities added incremental spending in 2007:

213	Installation of Smart Meters	\$9,360,000
214 215	<ul> <li>Smart Meter CDM pilot program completed in 2007</li> </ul>	\$ 394,000
216	Condominium suite-metering	\$ 656,000

PowerStream has included Smart Meters installed up to December 31, 2007 in rate
base. Condominium suite-metering is not part of the Smart Meter program and has been
recorded like any other fixed asset addition.

	2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %
General Plant	\$ 3,171,000	\$ 2,837,000	\$ (334,000)	-11%

In 2006 and 2007, this group consisted mainly of leasehold improvements. Thedecrease is not material.

	2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Equipment</li> </ul>	\$ 19,799,000	\$ 21,149,000	\$ 1,350,000	7%

222 This category consists mainly of service vehicles with the increase representing the net

223 cost of replacements and any new additions.

	2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %
• IT Assets	\$ 12,388,000	\$ 16,679,000	\$ 4,291,000	35%

Information Technology had an increase in the asset class by \$4,291,000 from 2006 to

225 2007. The major projects undertaken in 2007 were as follows:

226	<ul> <li>Computer infrastructure for New Head Office Building</li> </ul>	\$ 869,000
227	<ul> <li>Purchases of PC's and printers</li> </ul>	\$ 326,000
228	<ul> <li>JD Edwards new modules implemented</li> </ul>	\$ 540,000
229 230	<ul> <li>Customer Information System software upgrades/enhancements</li> </ul>	\$ 461,000
231	<ul> <li>File Nexus project (records retention software)</li> </ul>	\$ 114,000
232	<ul> <li>Financial system integration and development</li> </ul>	\$ 279,000
233	<ul> <li>Packaged software</li> </ul>	\$ 197,000
234	<ul> <li>Miscellaneous other hardware and software additions</li> </ul>	\$1,505,000

	2006 Actual	2007 Actual	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Other Distribution Assets</li> </ul>	\$ 13,007,000	\$ 13,533,000	\$ 526,000	4%

235 This group consists of Systems Supervisory Equipment Additions were not material.

	2006 Actual	2007 Actual	(Increase) Decrease \$	(Increase) Decrease %
<ul> <li>Contributions and Grants</li> </ul>	\$(155,695,000)	\$(165,222,000)	\$ (9,527,000)	6%

236 The increase of \$9,527,000 is much lower than \$55,301,000 that was recorded in 2005 237 to 2006. The main reason is a change in accounting treatment to better recognize the 238 capital contributions on developer-built subdivisions. At energization of the subdivision 239 and using the results of the economic evaluation model, the asset value, capital 240 contributions and amount due to the developer are recorded. In prior years the capital 241 contributions were recorded initially at 100% of the asset values and reduced as 242 payments for PowerStream's share of the costs were made to the developers as lots 243 were connected. This created an overstatement of capital contributions until all 244 payments to developers were completed when all lots had been connected.

#### 246 2008 Bridge Year to 2007 Actual

	2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) %	_
<ul> <li>Land and Buildings</li> </ul>	\$ 10,663,000	\$ 10,663,000	\$-	0%	

247 There were no additions in 2008.

	2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>TS Primary Above 50kV</li> </ul>	\$ 88,055,000	\$ 89,892,000	\$ 1,837,000	2%

248 The increase is additions for station improvements to increase reliability.

	2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) \$
<ul> <li>Distribution Stations</li> </ul>	\$ 9,948,000	\$ 10,832,000	\$ 884,000	9%

249 The increase is due mainly to new distribution station capacity in the Aurora area to 250 support new development.

		2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) %
	Poles, Wires	\$ 524,125,000	\$ 555,336,000	\$ 31,211,000	6%
251	The increase is f	rom the following	items:		
252	■ Load	Transfers		\$1,2	251,000
253	<ul> <li>New feeders and upgrades</li> </ul>			\$6,5	567,000
254	-	Vandorf from B	Bayview to Lesie	\$1,540,000	)
255	-	Leslie from Va	ndorf to Wellingto	n <b>\$1,442,000</b>	)
256	-	Subdivision dip	poles	\$ 402,000	)
257	-	Other feeder p	rojects	\$3,183,000	)
258	■ Subd	ivisions		\$6,7	723,000

259	<ul> <li>Underground conversions and other projects \$6,594,000</li> </ul>
260	- Conversion of Amber distribution station
261	to 13.8kV \$1,416,000
262	<ul> <li>Annual replacement of switchgears \$ 919,000</li> </ul>
263 264	<ul> <li>Martingrove – Langstaff and Woodbridge \$ 592,000</li> </ul>
265	- Other underground smaller projects \$3,667,000
266	<ul> <li>Overhead pole relocation and replacements \$3,930,000</li> </ul>
267	- York Region Rapid Transit \$1,390,000
268	- 14 <sup>th</sup> Avenue at GO Train \$1,120,000
269	- Yearly replacement of decayed poles \$ 400,000
270	- Other smaller projects \$1,788,000
271	Commercial / Industrial services \$6,146,000

	2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) %
• Line Transformers	\$ 199,648,000	\$ 205,340,000	\$ 5,692,000	3%

272 The increase of 3% is lower than recent years reflecting less subdivision growth in 2008.

	2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Services and Meters</li> </ul>	\$ 103,475,000	\$ 107,721,000	\$ 4,246,000	4%

The increase is mainly new services. The increase is significantly lower than in recent years. 2008 new residential meters are Smart Meters which are recorded in a deferral account in accordance with OEB guidelines rather than in this asset group.

	2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) %
General Plant	\$ 2,837,000	\$ 25,956,000	\$ 23,119,000	815%

276 The increase is due to the new head office building. The building came into service in

early 2008.

		2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) %
	Equipment	\$ 21,149,000	\$ 25,393,000	\$ 4,244,000	20%
278	78 The increase consists of the following:				
279	<ul> <li>New building head office equipment \$2,530,000</li> </ul>				
280	<ul> <li>Lease buyout on 13 vehicles</li> <li>\$ 397,000</li> </ul>				
281	<ul> <li>New phone system</li> <li>\$ 606,000</li> </ul>				
282	Major tools \$ 303,000				303,000
283	Replace DC cable test system with AC system			system \$	118,000
284	• Other \$ 290				290,000

		2007 Actual	2008 Bridge Year	Increase (Decrease) \$		Increase ecrease) %
	IT Assets	\$ 16,679,000	\$ 22,747,000	\$ 6,068,000		36%
285	The increase cor	nsists of:				
286	■ JD E	dwards financial	enhancements ar	nd new modules	\$1	,178,000
287	<ul> <li>Outa</li> </ul>	ge Management	System		\$	900,000
288	Infras	structure and end	d-user hardware		\$	893,000
289 290					\$	632,000
291	Packaged software for computers and network				\$	475,000
292	<ul> <li>Technology driven productivity improvements</li> </ul>				\$	430,000
293	<ul> <li>Process improvement initiatives</li> </ul>				\$	525,000
294	■ GIS a	and cyber securit	ty		\$	246,000
295	<ul> <li>Othe</li> </ul>	r system hardwa	re and software		\$	789,000
296						
297						
298						
299						

2009 EDR Application

	2007 Actual	2008 Bridge Year	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Other Distribution Assets</li> </ul>	\$ 13,533,000	\$ 14,625,000	\$ 1,093,000	8%

301	This group consists of	Systems Supervisory	Equipment.	Additions were not material.

	2007 Actual	2008 Bridge Year	(Increase) Decrease \$	(Increase) Decrease %
<ul> <li>Contributions and Grants</li> </ul>	\$(165,222,000)	\$(183,537,000)	\$ (18,315,000)	10%

302 Contributed Capital is budgeted for 2008 at \$18,315,000. The following is a list of the303 2008 projected major projects with expected capital contributions:

304	<ul> <li>Subdivisions</li> </ul>	\$4,668
305	New Commercial services	\$7,392
306	Residential services	\$1,289
307	Road Authority projects	\$ 741
308	2 new distribution stations in Aurora – upstream funding	\$ 599
309 310 311	<ul> <li>2 Feeder Installations at Dufferin – Vaughan TS#1 to Centre St. – upstream funding</li> <li>Contributions from other capital projects</li> </ul>	\$ 300 \$3,326

#### 2009 Test Year to 2008 Bridge Year

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Land and Buildings</li> </ul>	\$ 10,663,000	\$ 14,163,000	\$ 3,500,000	28%

The increase consists of land purchased for the Markham TS#4. See Exhibit B1, Tab 5, Schedule 5 for details of the new Transformer Station.

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>TS Primary Above 50kV</li> </ul>	\$ 89,892,000	\$104,344,000	\$ 14,452,000	16%

The increase is primarily due to a new Transformer Station required in Markham to meet current and future load demands. Refer to Exhibit B1, Tab 5, Schedule 5 for details.

New Markham TS#4	\$13,077,000
<ul> <li>Transformer temperature monitoring</li> </ul>	\$ 330,000
Other transformer station work	\$ 1,045,000

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Distribution Station</li> </ul>	\$ 10,832,000	\$ 10,866,000	\$ 34,000	0%

The increase is for minor improvements to existing distribution stations.

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
• Poles, Wires	\$ 555,336,000	\$ 609,124,000	\$ 53,788,000	10%

### This increase consists of the following:

■ Fee	ders and Upgrades	\$25,499,000
-	2 3-phase circuits at Denison in Markham	\$3,121,000
-	Markham TS#4-4 Feeders	\$4,970,000
-	Rearrange feeder configuration – Armitage TS	\$5,198,000
-	Vaughan TS feeders – various stations	\$3,722,000
-	Aurora 44kv line – Armitage TS feeder	\$5,824,000
-	Other feeder and upgrade projects	\$2,664,000
∎ Un	derground conversions	\$4,382,000
-	Rainbow municipal station conversion	\$ 719,000
-	Annual switchgear replacements	\$ 970,000
-	Annual Load Interrupter Switch replacements	\$ 427,000
-	Other smaller underground projects	\$2,266,000
• Ov	erhead relocations and replacements	\$12,471,000
-	York Region Transit Rapid	\$11,000,000
-	Annual pole replacements	\$ 414,000
-	Other smaller overhead projects	\$1,057,000
<ul> <li>Co</li> </ul>	mmercial services	\$5,682,000
■ Re	sidential Subdivisions	\$5,753,000

_	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
Line     Transformers	\$ 205,340,000	\$ 215,331,000	\$ 9,991,000	5%

The increase in distribution transformer cost for 2007 is due to the following:

<ul> <li>Commercial services</li> </ul>	\$3	3,770,000
<ul> <li>Residential subdivisions</li> </ul>	\$1	,982,000
<ul> <li>Breakdown and contingency replacements</li> </ul>	\$1	,638,000
<ul> <li>Planned transformer replacements</li> </ul>	\$	437,000
<ul> <li>York Region Rapid Transit</li> </ul>	\$	404,000
<ul> <li>Refurbish and major repairs to transformers</li> </ul>	\$	315,000
<ul> <li>Other Road Authority Projects</li> </ul>	\$	392,000

Other small or unforeseen projects \$ 1,053,000

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Services and Meters</li> </ul>	\$ 107,721,000	\$ 111,452,000	\$ 3,731,000	3%

The increase in this asset class is mainly from new services. Metering will be Smart Meters. These Smart Meter costs are recorded in the Board-approved regulatory account and are therefore not included in rate base.

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
General Plant	\$ 25,956,000	\$ 25,956,000	\$ O	0%

No additional general plant capital expenditures are expected to be in service in 2009

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
Equipment	\$ 25,393,000	\$ 26,509,000	\$ 1,116,000	4%

2009 EDR Application

This consists mainly of vehicle replacements and additions. The increase is not material.

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
• IT Assets	\$ 22,747,000	\$ 26,672,000	\$ 3,925,000	17%

Increase is not material.

	2008 Bridge Year	2009 Test Year	Increase (Decrease) \$	Increase (Decrease) %
<ul> <li>Other Distribution Assets</li> </ul>	\$ 14,625,000	\$ 14,914,000	\$ 288,000	2%

This group consists of Systems Supervisory Equipment. Additions were not material.

	2008 Bridge Year	2008 Test Year	(Increase) Decrease \$	(Increase) Decrease %
Contributions     and Grants	\$ (183,537000)	\$ (202,023,000)	\$ (18,486,000)	10%

The increase in capital contributions in 2009 is due to the following list of major projects or general project activities:

Reside	ential S	ubdivisions		\$5,433

- New and Upgraded Commercial Services \$7,553
- York Region Transit Plant Relocation
   \$5,500

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit B1 Tab 7 Schedule 2 Page 1 of 4

### Fixed Asset Continuity Schedules

- 2 This schedule contains continuity schedules of Fixed Assets at Cost, Accumulated
- 3 Depreciation and Net Fixed Assets.



POWERSTREAM - Future Test Year Rate model

#### **Gross Fixed Assets - continuity schedule**

	2006 Board Approved	20	05 & 2006			2007			2008			2009	
Asset Group	Ending Balance	Additions	Retirements / FMV Removal	Ending Balance	Additions	Retirements	Ending Balance	Additions	Retirements	Ending Balance	Additions	Retirements	Ending Balance
Land and Buildings	4,232,333	6,643,936	(488,200)		274,683	-	10,662,752	-	0	10,662,752	3,500,000	0	14,162,752
TS Primary Above 50	72,814,566	9,569,587	-	82,384,153	5,670,436	-	88,054,589	1,837,260	0	89,891,849	14,451,697	0	104,343,546
DS	6,721,910	2,073,116	(141,473)	8,653,553	1,294,536	-	9,948,089	883,638	0	10,831,727	34,167	0	10,865,894
Poles, Wires	438,641,470	57,082,678	363,069	496,087,217	31,449,486	(3,411,640)	524,125,063	42,085,756	(10,875,000)	555,335,819	65,315,482	(11,527,500)	609,123,801
Line Transformers	168,067,275	22,440,853	(75,188)	190,432,940	9,214,612	-	199,647,552	9,816,953	(4,125,000)	205,339,505	14,364,550	(4,372,500)	215,331,555
Services and Meters	71,730,351	15,600,549	(240,641)	87,090,259	16,384,505		103,474,764	4,245,944	0	107,720,708	3,731,008	0	111,451,716
General Plant	1,362,010	1,809,316	-	3,171,326	(334,236)	-	2,837,090	23,118,666	0	25,955,756	-	0	25,955,756
Equipment	19,495,367	1,751,375	(1,447,919)	19,798,822	2,619,349	(1,269,322)	21,148,849	5,190,854	(947,000)	25,392,703	2,063,240	(947,000)	26,508,943
IT Assets	6,576,991	5,794,901	16,417	12,388,309	4,291,030	-	16,679,339	6,067,702	0	22,747,041	3,925,000	0	26,672,041
CDM Assets	1,619,500	(1,619,500)	-		-	-		-	0		-	0	-
Other Distribution Assets	12,259,322	618,292	129,256	13,006,869	525,885	-	13,532,754	1,092,564	0	14,625,318	288,421	0	14,913,739
Contributions and Grants	(100,393,977)	(48,638,583)	(6,662,527)	(155,695,087)	(9,527,112)	-	(165,222,199)	(20,865,099)	2,550,000	(183,537,298)	(21,189,101)	2,702,983	(202,023,416)
							-			-			-
TOTAL	703,127,118	73,126,520	(8,547,206)	767,706,430	61,863,175	(4,680,962)	824,888,643	73,474,238	(13,397,000)	884,965,881	86,484,464	(14,144,017)	957,306,328



POWERSTREAM - Future Test Year Rate model Net Fixed Assets - Continuity Schedule

		2006				2007			2008		2009		
Asset Group 2	2006 Board Approved	Additions	Retirements / FMV Removal	Ending Balance	Additions	Retirements	Ending Balance	Additions	Retirements	Ending Balance	Additions	Retirements	Ending Balance
Land and Buildings	3.797.794	6,559,152	(488,200)	9.868.746	198.613	(18,252)	10.049.107	(76,091)		9,973,016	3.423.909		13,396,926
			(488,200)			(18,252)			-			-	
TS Primary Above 50	55,298,485	5,043,246	-	60,341,731	3,425,019	-	63,766,750	(502,003)	-	63,264,747	11,908,822	-	75,173,569
DS	3,321,394	1,589,800	(141,473)	4,769,721	1,060,943	-	5,830,664	613,742	-	6,444,406	(251,026)	-	6,193,380
Poles, Wires	242,716,945	17,507,694	363,069	260,587,708	12,511,584	(3,002,972)	270,096,321	22,183,282	-	292,279,602	43,725,358	-	336,004,960
Line Transformers	90,853,951	7,669,934	(75,188)	98,448,697	1,926,824	-	100,375,521	2,314,633	-	102,690,154	6,553,225	-	109,243,380
Services and Meters	37,887,976	9,288,521	(240,641)	46,935,856	12,876,898	-	59,812,754	200,922	-	60,013,676	(473,553)	-	59,540,122
General Plant	817,261	1,394,076	(135,467)	2,075,870	(509,551)	153,720	1,720,039	22,715,277	-	24,435,316	(634,576)	-	23,800,740
Equipment	5,579,521	713,168	(127,145)	6,165,543	1,164,367	(715,528)	6,614,382	3,390,053	(537,000)	9,467,434	(27,641)	(537,000)	8,902,794
IT Assets	1,682,031	3,613,919	16,417	5,312,367	1,548,092	-	6,860,459	1,794,081	-	8,654,540	(1,818,534)	-	6,836,006
CDM Assets	1,619,500	(1,619,500)	-	-	-	-		-	-		-	-	-
Other Distribution Assets	5,803,183	15,521	129,256	5,947,959	(203,190)	-	5,744,769	309,541	-	6,054,310	(540,635)	-	5,513,674
Contributions and Grants	(79,107,581)	(45,432,362)	(6,662,527)	(131,202,470)	(3,134,420)	(15,175)	(134,352,065)	(13,864,563)	-	(148,216,628)	(13,347,481)	-	(161,564,108)
TOTAL	370,270,459	6,343,169	(7,361,899)	369,251,727	30,865,179	(3,598,207)	396,518,700	39,078,874	(537,000)	435,060,573	48,517,869	(537,000)	483,041,442

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#### POWERSTREAM - Future Test Year Rate model Accumulated Amortization - continuity schedule

		20	005 & 2006			2007			2008			2009	
Asset Group	2006 Board Approved	Depreciation	Retirements / FMV Removal	Ending Balance	Depreciation	Retirements	Ending Balance	Depreciation	Retirements	Ending Balance	Depreciation	Retirements	Ending Balance
Land and Buildings	434,539	84,784	-	519,323	76,070	18,252	613,645		-	689,736	76,091	-	765,826
TS Primary Above 50	17,516,081	4,526,341	-	22,042,422	2,245,417	-	24,287,839	2,339,263	-	26,627,102	2,542,875	-	29,169,977
DS	3,400,516	483,316	-	3,883,832	233,593	-	4,117,425	269,896	-	4,387,321	285,193	-	4,672,514
Poles, Wires	195,924,525	39,574,984	-	235,499,509	18,937,902	(408,668)	254,028,743	19,902,474	(10,875,000)	263,056,217	21,590,124	(11,527,500)	273,118,840
Line Transformers	77,213,324	14,770,919	-	91,984,243	7,287,788		99,272,031	7,502,320	(4,125,000)	102,649,351	7,811,325	(4,372,500)	106,088,176
Services and Meters	33,842,375	6,312,028	-	40,154,403	3,507,607	-	43,662,010	4,045,022		47,707,032	4,204,561		51,911,593
General Plant	544,749	415,240	135,467	1,095,456	175,315	(153,720)	1,117,051	403,389	-	1,520,441	634,576	-	2,155,017
Equipment	13,915,846	1,038,207	(1,320,774)	13,633,279	1,454,983	(553,794)	14,534,468	1,800,801	(410,000)	15,925,269	2,090,881	(410,000)	17,606,150
IT Assets	4,894,960	2,180,982	-	7,075,942	2,742,938	-	9,818,880	4,273,621	-	14,092,501	5,743,534	-	19,836,035
CDM Assets	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Distribution Assets	6,456,139	602,771	-	7,058,910	729,075	-	7,787,985	783,023	-	8,571,008	829,056	-	9,400,065
Contributions and Grants	(21,286,396)	(3,206,221)	-	(24,492,617)	(6,392,692)	15,175	(30,870,134)		2,550,000	(35,320,670)		2,702,983	(40,459,307)
TOTAL Accum. Amortization	332,856,659	66,783,351	(1,185,307)	398,454,703	30,997,996	(1,082,755)	428,369,944	34,395,364	(12,860,000)	449,905,308	37,966,595	(13,607,017)	474,264,886

#### 1

#### WORKING CAPITAL ALLOWANCE

#### 2 OVERVIEW

3 Exhibit B2 provides details on the calculation of the working capital allowance.

4 PowerStream's working capital allowance in the test year is \$83,345,324. This amount

- 5 is 15% of PowerStream's forecast cost of power and controllable distribution expenses,
- 6 excluding depreciation and PILS. The cost of power forecast is explained in detail in
- 7 Exhibit B2, Tab 1, Schedule 2.
- 8 The details on forecasted distribution expenses are provided in Exhibit D1.
- 9 Table 1 summarizes PowerStream's working capital for 2006 to 2009.
- 10

#### Table 1: PowerStream Working Capital (\$000's)

	2006 OEB Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
Cost of Power	\$430,820	\$475,661	\$489,777	\$515,068	\$510,537
Operating Expenses	38,283	38,795	42,665	39,649	45,098
Total for Working Capital calculation	469,103	514,456	532,442	554,717	555,635
Working Capital Allowance (at 15%)	\$70,365	\$77,168	\$79,866	\$83,208	\$83,345
% change to	o 2006 EDR				18.4%
\$ ch	ange (YOY)	\$6,803	\$2,698	\$3,342	\$137
% ch	ange (YOY)	9.7%	3.5%	4.2%	0.2%

11 The working capital requirement has increased by 18.5% as compared to 2006 Board

12 Approved level. The increase in the forecasted cost of power accounts for 92% of the

13 increase in the working capital requirement.

15

#### COST OF POWER FORECAST

16 PowerStream's cost of power forecast for 2009 was derived by applying the appropriate

17 unit cost of power, IESO related charges and Hydro One charges to the 2009 forecast

18 energy sales and demand. More specifically, the following steps were followed:

#### 19 Energy Purchases

- The forecast monthly purchases in kWh, produced by the load forecasting
   model and adjusted for the impact of CDM activities were used (Exhibit C, Tab
   1, Schedule 2).
- The monthly forecast kWh purchases are multiplied by the monthly forecast
   commodity price provided by the OEB.

#### 25 IESO Related Charges

- The average ratio (based on three years of billing data) between total energy purchases in kWh and total system demand in kW was calculated. This historic ratio was then applied to the total energy purchases forecast to derive Transmission Network demand forecast.
- The average ratios between Transmission System Line Connection demand and system demand and between Transmission System Transformer Connection demand and system demand were calculated. These historic ratios were then applied to the forecast system demand to obtain Transmission System Line Connection and Transmission System Line Transformer Connection demand projections.
- The Ontario Uniform Transmission rates approved by the OEB on August 28,
   2008 (EB-2008-0113) were applied to the calculated transmission quantities to
   obtain the IESO Transmission component of cost of power.
- 39
- 40

- The Wholesale Market charge was determined by applying OEB approved rates
   (currently \$0.052/kWh plus \$0.010/kWh for Rural-rate Assistance) to the
   forecast of total kWh purchases
- 44 HydroOne Related Charges
- Ratios, similar to those described above for *IESO Related Charges*, were
   calculated based on historic cost of power statistics from Hydro One.
- Average ratios between Transmission System Line Connection demand and system demand, between Transmission System Transformer Connection demand and system kW and between Low Voltage demand and system demand were calculated. These historic ratios are then applied to the forecast system demand to obtain Transmission System Line Connection, Transmission System Line Transformer Connection, and Low Voltage projections.
- Hydro One Sub-Transmission (ST) class rates are applied to the relevant
   transmission quantities noted above to obtain the Hydro One Transmission
   component of cost of power.

As a final step, the overall 2009 cost of power expense was entered into the workingcapital calculation in the 2009 Rate Model.

The Board Minimum Filing Requirements indicate that when filing "*the electricity price will be that available from the most recent Board approved RPP, at the time of filing*". The most recent source document by Navigant Consulting was presented to the OEB on April 11, 2008. According to the report, Navigant is projecting an average HOEP of \$0.0610/kWh for May, 2008 to April, 2009, and \$0.0537/kWh from May, 2009 to October, 2009.

The full month-by-month development of the COP is provided in Table 2 (2008) and
Table 3 (2009). In Exhibit C2, Tab 1, Schedule 3, Table 4 shows the calculation of
working capital and Table 5 is a rate base continuity schedule.

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				Table 2:	2008 Co	st of Pov	ver						
	-		MAR	_	_	_	-	_		_	-	_	_
Components	JAN Actual	FEB Actual	Actual	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Energy Purchased (kWh)				581,826,193	572,190,096	622,855,337	681,201,065	653,018,025	593,202,098	580,516,778	578,381,574	605,258,126	5,468,449,292
CDM Impact				3,082,039	3,030,995	3,299,377	3,608,445	3,459,155	3,142,299	3,075,102	3,063,792	3,206,162	28,967,366
Total Purchases (kWh)	613,079,919	578,709,137	584,978,696	578,744,154	569,159,102	619,555,960	677,592,619	649,558,871	590,059,799	577,441,676	575,317,782	602,051,964	7,216,249,679
Historic Ratios (kW)													
System kW/Energy Purchased kWh - IESO	0.15%	0.15%	0.15%	0.17%	0.17%	0.17%	0.17%	0.17%	0.17%	0.17%	0.17%	0.17%	
System Line/System kW - IESO	105.51%	105.51%	105.51%	105.63%	105.63%	105.63%	105.63%	105.63%	105.63%	105.63%	105.63%	105.63%	
System Transformer/System kW - IESO	16.68%	16.68%	16.68%	15.85%	15.85%	15.85%	15.85%	15.85%	15.85%	15.85%	15.85%	15.85%	
System kW/Energy Purchased kWh - HONI	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	
System Line/System kW - HONI	102.71%	102.71%	102.71%	100.68%	100.68%	100.68%	100.68%	100.68%	100.68%	100.68%	100.68%	100.68%	
Low Voltage/System kW - HONI	108.27%	108.27%	108.27%	103.21%	103.21%	103.21%	103.21%	103.21%	103.21%	103.21%	103.21%	103.21%	
kW Quantities													
Transmission Network - IESO	944,529	891,577	901,236	991,548	975,127	1,061,470	1,160,903	1,112,874	1,010,935	989,317	985,678	1,031,481	12,056,676
Transmission Line - IESO	996,552	940,683	950,874	1,047,388	1,030,041	1,121,247	1,226,280	1,175,545	1,067,866	1,045,031	1,041,187	1,089,569	12,732,262
Transmission Transformation - IESO	157,545	148,713	150,324	157,134	154,531	168,214	183,972	176,361	160,206	156,780	156,203	163,462	1,933,446
Transmission Network - HONI	155,667	146,940	148,532	184,462	181,407	197,470	215,968	207,033	188,069	184,047	183,370	191,891	2,184,858
Transmission Line - HONI	159,889	150,925	152,560	185,713	182,638	198,810	217,433	208,437	189,345	185,295	184,614	193,193	2,208,851
LV Charges - HONI	168,539	159,090	160,814	190,377	187,224	203,802	222,893	213,671	194,099	189,948	189,250	198,044	2,277,749
Rates													
Commodity (HOEP)	0.0430	0.0552	0.0591	0.0550	0.0564	0.0564	0.0564	0.0620	0.0620	0.0620	0.0638	0.0638	0.0579
Transmission Network - IESO	2.3100	2.3100	2.3100	2.3100	2.3100	2.3100	2.3100	2.3100	2.3100	2.3100	2.3100	2.3100	
Transmission Line - IESO	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	0.5900	
Transmission Transformation - IESO	1.6100	1.6100	1.6100	1.6100	1.6100	1.6100	1.6100	1.6100	1.6100	1.6100	1.6100	1.6100	
Transmission Network - HONI	2.5200	2.5200	2.5200	2.5200	2.0100	2.0100	2.0100	2.0100	2.0100	2.0100	2.0100	2.0100	
Transmission Line - HONI	0.7400	0.7400	0.7400	0.7400	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	0.5000	
Transmission Transformation - HONI	1.3500	1.3500	1.3500	1.3500	1.3800	1.3800	1.3800	1.3800	1.3800	1.3800	1.3800	1.3800	
LV Charges - HONI	0.6330	0.6330	0.6330	0.6330	0.5800	0.5800	0.5800	0.5800	0.5800	0.5800	0.5800	0.5800	
Wholesale Market Charge	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	0.0062	

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			MAR										
Components	JAN Actual	FEB Actual	Actual	APR	MAY	JUN	JUL	AUG	SEP	ОСТ	NOV	DEC	Total
Cost of Power Expense													
Commodity	\$31,407,098	\$32,774,566	\$34,029,149	\$31,830,928	\$32,089,190	\$34,930,565	\$38,202,672	\$40,253,163	\$36,566,006	\$35,784,061	\$36,693,768	\$38,398,874	\$422,960,041
Transmission Network - IESO	\$2,140,788	\$2,148,549	\$2,008,025	\$2,290,477	\$2,252,542	\$2,451,996	\$2,681,686	\$2,570,738	\$2,335,261	\$2,285,322	\$2,276,917	\$2,382,722	\$27,825,024
Transmission Line - IESO	\$575,215	\$578,752	\$547,325	\$617,959	\$607,724	\$661,536	\$723,505	\$693,572	\$630,041	\$616,568	\$614,300	\$642,846	\$7,509,342
Transmission Transformation - IESO	\$254,982	\$248,737	\$230,217	\$252,985	\$248,795	\$270,825	\$296,195	\$283,940	\$257,932	\$252,416	\$251,488	\$263,174	\$3,111,687
Transmission Network - HONI	\$358,697	\$347,007	\$302,642	\$464,845	\$364,629	\$396,915	\$434,096	\$416,136	\$378,019	\$369,935	\$368,574	\$385,701	\$4,587,197
Transmission Line - HONI				\$137,428	\$91,319	\$99,405	\$108,716	\$104,219	\$94,672	\$92,648	\$92,307	\$96,596	\$917,310
Transmission Transformation - HONI*	\$432,496	\$390,872	\$361,658	\$250,713	\$252,040	\$274,357	\$300,057	\$287,643	\$261,295	\$255,708	\$254,767	\$266,606	\$3,588,214
LV Charges - HONI	\$113,097	\$111,911	\$100,043	\$120,508	\$108,590	\$118,205	\$129,278	\$123,929	\$112,577	\$110,170	\$109,765	\$176,665	\$1,434,738
Wholesale Market Charge	\$2,866,087	\$3,239,166	\$3,304,435	\$3,588,214	\$3,528,786	\$3,841,247	\$4,201,074	\$4,027,265	\$3,658,371	\$3,580,138	\$3,566,970	\$3,732,722	\$43,134,477
Total Cost of Power	\$38,148,461	\$39,839,561	\$40,883,495	\$39,554,058	\$39,543,616	\$43,045,052	\$47,077,280	\$48,760,606	\$44,294,173	\$43,346,966	\$44,228,856	\$46,345,907	\$515,068,029

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#### Table 3: 2009 Cost of Power JAN FEB MAR APR MAY JUN JUL AUG SEP ост NOV DEC Components Total Energy Purchased (kWh) 615.751.676 601.372.469 608.391.351 577.246.302 575.038.334 639.350.849 691.477.432 663.898.885 604.082.958 585.178.493 597.295.055 617.347.970 7.376.431.773 CDM Impact 89,551,526 7,475,363 7,300,796 7,386,007 7,007,899 6,981,094 7,761,862 8,394,690 8,059,880 7,333,702 7,104,197 7,251,295 7,494,742 Total Purchases (kWh) 594,071,674 568,057,241 655,839,004 590,043,760 609,853,228 7,286,880,247 608,276,314 601,005,344 570,238,403 631,588,987 683,082,742 596,749,256 578,074,295 Historic Ratios (kW) System kW/Energy Purchased kWh - IESO 0.17% 0.17% 0.17% 0.17% 0.17% 0.17% 0.17% 0.17% 0.17% 0.17% 0.17% 0.17% System Line/System kW - IESO 105.63% 105.63% 105.63% 105.63% 105.63% 105.63% 105.63% 105.63% 105.63% 105.63% 105.63% 105.63% System Transformer/System kW - IESO 15.85% 15.85% 15.85% 15.85% 15.85% 15.85% 15.85% 15.85% 15.85% 15.85% 15.85% 15.85% System kW/Energy Purchased kWh - HONI 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% 0.03% System Line/System kW - HONI 100.68% 100.68% 100.68% 100.68% 100.68% 100.68% 100.68% 100.68% 100.68% 100.68% 100.68% 100.68% Low Voltage/System kW - HONI 103.21% 103.21% 103.21% 103.21% 103.21% 103.21% 103.21% 103.21% 103.21% 103.21% 103.21% 103.21% kW Quantities Transmission Network - IESO 1.042.145 1.017.809 1.029.688 976.976 973.239 1.082.086 1,170,309 1.123.633 1.022.396 990.401 1,010,908 1.044.847 12.484.437 Transmission Line - IESO 1.100.834 1.075.127 1.087.675 1.031.994 1.028.047 1.143.024 1.236.215 1.186.911 1.079.973 1.046.175 1.067.837 1.103.688 13.187.501 Transmission Transformation - IESO 165.152 161.295 154.824 154.232 178.066 162.022 156.952 160.202 165.580 1.978.447 163.178 171.482 185.463 Transmission Network - HONI 2,322,537 193,875 189,348 190,201 184,249 188,064 191,558 181,751 181,056 201,305 217,718 209,035 194,378 Transmission Line - HONI 2,338,290 195,190 190,632 192,857 182,984 182,284 202,671 219,195 210,452 191,491 185,498 189,339 195,696 LV Charges - HONI 2,397,003 200,091 195,419 197,699 187,579 186,861 207,760 224,699 215,737 196,299 190,156 194,094 200,610 Rates Commodity (HOEP) 0.0638 0.0607 0.0607 0.0607 0.0535 0.0535 0.0535 0.0540 0.0540 0.0540 0.0540 0.0540 0.0564 2.5700 2.5700 2.5700 2.5700 2.5700 2.5700 2.5700 2.5700 Transmission Network - IESO 2.5700 2.5700 2.5700 2.5700 Transmission Line - IESO 0.7000 0.7000 0.7000 0.7000 0.7000 0.7000 0.7000 0.7000 0.7000 0.7000 0.7000 0.7000 Transmission Transformation - IESO 1.6200 1.6200 1.6200 1.6200 1.6200 1.6200 1.6200 1.6200 1.6200 1.6200 1.6200 1.6200 Transmission Network - HONI 2.0100 2.0100 2.0100 2.0100 2.0100 2.0100 2.0100 2.0100 2.0100 2.0100 2.0100 2.0100 Transmission Line - HONI 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 0.5000 Transmission Transformation - HONI 1.3800 1.3800 1.3800 1.3800 1.3800 1.3800 1.3800 1.3800 1.3800 1.3800 1.3800 1.3800 LV Charges - HONI 0.5800 0.5800 0.5800 0.5800 0.5800 0.5800 0.5800 0.5800 0.5800 0.5800 0.5800 0.5800 Wholesale Market Charge 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062 0.0062

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Components	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Total
Cost of Power Expense													
Commodity	\$38,795,863	\$36,036,388	\$36,456,984	\$34,590,662	\$30,374,021	\$33,771,063	\$36,524,434	\$35,441,540	\$32,248,330	\$31,239,135	\$31,885,965	\$32,956,468	\$410,320,852
Transmission Network - IESO	\$2,678,313	\$2,615,768	\$2,646,298	\$2,510,828	\$2,501,224	\$2,780,962	\$3,007,695	\$2,887,737	\$2,627,558	\$2,545,330	\$2,598,033	\$2,685,257	\$32,085,003
Transmission Line - IESO	\$770,584	\$752,589	\$761,373	\$722,396	\$719,633	\$800,117	\$865,351	\$830,838	\$755,981	\$732,323	\$747,486	\$772,581	\$9,231,250
Transmission Transformation - IESO	\$267,546	\$261,298	\$264,348	\$250,815	\$249,856	\$277,800	\$300,449	\$288,466	\$262,476	\$254,262	\$259,527	\$268,240	\$3,205,085
Transmission Network - HONI	\$389,689	\$380,589	\$385,031	\$365,320	\$363,923	\$404,624	\$437,613	\$420,160	\$382,304	\$370,340	\$378,008	\$390,699	\$4,668,300
Transmission Line - HONI	\$97,595	\$95,316	\$96,428	\$91,492	\$91,142	\$101,335	\$109,597	\$105,226	\$95,746	\$92,749	\$94,670	\$97,848	\$1,169,145
Transmission Transformation - HONI*	\$269,362	\$263,072	\$266,142	\$252,518	\$251,552	\$279,686	\$302,489	\$290,424	\$264,258	\$255,988	\$261,288	\$270,061	\$3,226,840
LV Charges - HONI	\$116,053	\$113,343	\$114,666	\$108,796	\$108,379	\$120,501	\$130,325	\$125,127	\$113,854	\$110,291	\$112,574	\$178,154	\$1,452,062
Wholesale Market Charge	\$3,771,313	\$3,683,244	\$3,726,233	\$3,535,478	\$3,521,955	\$3,915,852	\$4,235,113	\$4,066,202	\$3,699,845	\$3,584,061	\$3,658,271	\$3,781,090	\$45,178,658
Total Cost of Power	\$47,156,318	\$44,201,607	\$44,717,504	\$42,428,305	\$38,181,685	\$42,451,939	\$45,913,067	\$44,455,720	\$40,450,351	\$39,184,478	\$39,995,823	\$41,400,398	\$510,537,195

# Table 4: CALCULATION OF WORKING CAPITAL

	Board Approved	Historic	Actual	Bridge Year	Test Year
	2006 Approved	2006 Actual	2007 Actual	2008	2009
of Power			I		
Power Supply Expenses (Working Capital)	430,819,538	475,661,104	489,776,902	515,068,029	510,537,195
TOTAL COST OF POWER	430,819,538	475,661,104	489,776,902	515,068,029	510,537,195
ises					
Operation (Working Capital)	5,587,039	7,057,372	8,860,483	8,237,328	8,215,421
Maintenance (Working Capital)	6,738,446	6,318,656	6,819,250	5,508,106	6,002,070
Billing and Collection (Working Capital)	5,640,547	5,144,774	5,984,246	5,250,051	7,106,600
Community Relations (Working Capital)	526,218	706,201	516,150	625,076	645,500
Community Relations - CDM (Working Capital)	0	1,834,362	2,102,537	650.000	126,000
Administrative and General Expenses (Working Capital)	17,684,847	15,128,416	14,859,153	16,651,181	19,567,500
Insurance Expense (Working Capital)	671,472	642,026	773,284	834,027	778,196
Bad Debt Expense (Working Capital)	668,444	1,295,141	2,039,806	862,500	1,146,000
Advertising Expenses	(110,961)	(0)	(0)	(0)	((
Charitable Contributions	(79,514)	15.000	30.000	15.000	41.000
Other Distribution Expenses	956.348	652,556	680.318	1,016,112	1,470,013
TOTAL EXPENSES	38,282,888	38,794,503	42,665,227	39,649,381	45,098,300
TOTAL FOR WORKING CAPITAL CALCULATION	469,102,426	514,455,607	532,442,129	554,717,410	555,635,495
Working Capital Allowance	70.365.364	77.168.341	79,866,319	83,207,612	83.345.324

	2006 Approved	2006 Actual	2007 Actual	2008	2009
Materiality calculation					
Net Fixed Assets	370,270,458	367,978,196	382,885,213	415,789,637	459,051,009
% treshold 1%	3,703,000	3,680,000	3,829,000	4,158,000	4,591,000

# Table 5: Rate Base - Continuity Schedule

	Board Approved Historic Actual		Bridge Year	Test Year	
	2006 Approved	2006 Actual	2007 Actual	2008	2009
Net Fixed Assets	370,270,458	367,978,196	382,885,213	415,789,637	459,051,009
Working Capital Allowance					
Cost of Power and Distribution Expenses	469,102,426	514,455,607	532,442,129	554,717,410	555,635,495
Working Capital Allowance @ 15%	70,365,364	77,168,341	79,866,319	83,207,612	83,345,324
RATE BASE	440,635,822	445,146,537	462,751,532	498,997,248	542,396,333

# THROUGHPUT REVENUE

# 2 OVERVIEW

- 3 In Exhibit C1 the "revenue at current rates" is calculated.
- 4 PowerStream has forecast the number of customers and sale of energy for 2009. The
- 5 impact of weather and energy consumption on energy sales has been taken into
- 6 account. The load forecast methodology and assumptions are described in Exhibit C1,
- 7 Tab 1, Schedule 2.
- 8 Current rates (May 1, 2008) are applied to the forecast outputs to calculate the revenue
- 9 that would be anticipated in 2009, if there were no change in rates. This is contrasted
- 10 against 2006 to 2008 distribution revenue in Table 1.
- 11

# Table 1: Distribution Revenue at Current Rates

	2006 OEB Approved	2006 Normalized Actual	2007 Normalized Actual	2008 Bridge Year	2009 Test Year
Total Distribution Revenue	100,758,267	105,225,356	107,812,023	110,898,889	112,768,879
% Change Year over Year		4.4%	2.5%	2.9%	1.7%
\$ Change Year over Year		4,467,089	2,586,667	3,086,866	1,869,990

- 12 Table 2 shows the 2009 forecast energy sales (KWh), demand (KW) and customers
- 13 contrasted against 2006 to 2008 values.

# Table 2: Consumption, Demand and Customers

	2006 OEB Approved	2006 Normalized Actual	2007 Normalized Actual	2008 Bridge Year	2009 Test Year
Consumption, KWH	6,425,946,366	6,710,324,626	6,832,453,515	7,031,323,910	7,060,331,849
Demand, KW	9,415,073	10,111,363	10,403,720	10,498,818	10,598,793
Customer Count		228,666	236,377	243,780	251,638
Variance Analysis (units)	2006A vs. 2006 OEB	2007 vs. 2006	2008 vs. 2007	2009 v. 2008	
Consumption, KWH	284,378,260	122,128,889	198,870,395	29,007,939	
Demand, KW	696,290	292,357	95,098	81,518	
Customer Count		7,711	7,403	7,858	
Variance Analysis (%)	2006A vs. 2006 OEB	2007 vs. 2006	2008 vs. 2007	2009 v. 2008	
Consumption, KWH	4.4%	1.8%	2.9%	0.4%	
Demand, KW	7.4%	2.9%	0.9%	0.8%	
Customer Count		3.4%	3.1%	3.2%	

PowerStream anticipates an average annual growth rate in purchases of 2.14 percent for the bridge and test years which is in line with an actual average growth rate in purchases of 2.16 percent in the recent five years of actual experience from 2003 to 2007. This outcome demonstrates that the results of PowerStream's load forecasting methodology are reasonably consistent with the recent historical experience and with reasonable expectations for future changes in electricity use.

- 21 PowerStream has Other Revenue forecast at \$6.6M for 2009. This consists mainly of
- 22 specific service charges, late payment charges and other income and deductions. Other
- 23 Revenue is taken as an offset when calculating distribution revenue. Other Revenue is
- 24 discussed more fully in Exhibit C2.

# LOAD FORECAST

# 2 LOAD FORECASTING PROCESS OVERVIEW

PowerStream has developed a load forecasting model that is used for revenue
estimation purposes. In addition to use in rate proceedings, this forecast model is used
for revenue projection purposes in the annual budgeting process.

6 PowerStream's load forecast is developed through the following process:

A total PowerStream energy <u>purchases</u> forecast is developed based on multiple
regression analysis that estimates the relationships between energy
consumption and factors influencing consumption. The model was developed
using a statistical analysis software program called SPSS. The following
historical monthly data were used as inputs into the model:

- monthly system load (i.e. purchases) data for January 1998 to
  March 2008;
- weather data: heating degree-days (HDD) and cooling degreedays (CDD);
- Real Gross Domestic Product (GDP) for Ontario; and
- Peak hours (16 \* Number of business days in any given month (excluding weekends and holidays)).
- 19 2. The total energy purchases forecast is adjusted to account for the impact of20 conservation and demand management (CDM).
- 21 3. In order to forecast energy sales to customers an adjustment is made for22 estimated distribution losses.
- 4. Energy sales projections, by rate class, are generated from the forecast
  distribution consumption based on the historical percentage allocation obtained
  from billing data.

Some customer classes use KW demand as a billing determinant. Total kW
demand estimates were derived from the total energy sales projection by rate
class using the historical volumetric relationship between kWh and kW.

# **30 Developing the Total Energy Purchases Forecast**

The load forecast model was populated with the available energy purchase data from January 1998 through March 2008. Table 1 provides historical actual and historical normalized annual energy purchased data for PowerStream. The heading "weather normalized actuals" shows the purchases adjusted to reflect "normal" weather conditions. PowerStream considered "normal" weather conditions to be the average of the weather characteristics for the ten year time period, 1998 to 2007.

PowerStream normalizes energy purchases using a "use per degree" methodology. This methodology uses the weather related coefficients in the regression equation to estimate normalized volumes. The difference between actual and normal degree-days is determined. The weather related coefficients are applied to that difference to derive weather-sensitive volume. Actual volumes are adjusted by the weather sensitive volume.

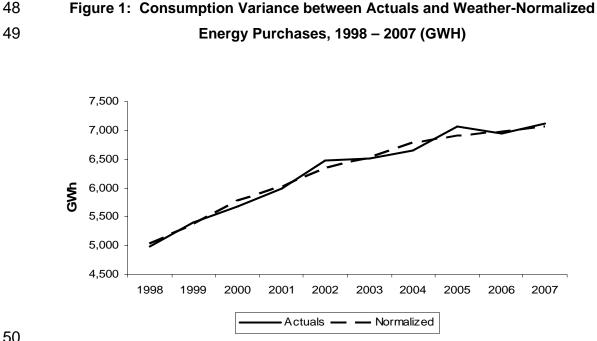
42 The formula is:

43 Normalized Volume = Actual Volume - (Actual HDD *or/and* CDD - Normal HDD *or/and* 44 CDD) x Corresponding Regression Coefficient

	Table 1: Historic Annual Energy Purchases (GWH)									
Year	Actuals	Weather- Normalized	Normalized Change	% Change	Cumulative Average Growth					
1998	4,981	5,036								
1999	5,401	5,362	327	6.5%	6.5%					
2000	5,674	5,777	415	7.7%	7.1%					
2001	5,998	6,017	240	4.2%	6.1%					
2002	6,480	6,356	339	5.6%	6.0%					
2003	6,506	6,537	181	2.8%	5.3%					
2004	6,653	6,796	259	4.0%	5.0%					
2005	7,072	6,916	120	1.8%	4.5%					
2006	6,951	6,983	68	1.0%	4.0%					
2007	7,124	7,071	87	1.3%	3.6%					
Average 1	998 - 2002		330	6.0%						
Average 2	2003 -2007		143	2.2%						

# 46 Figure 1 graphically depicts variances between actual and weather-normalized energy

47 purchases for 1998 to 2007.



51 The purpose of a multiple regression equation is to predict a single dependent variable 52 from multiple independent variables. Many variables (e.g., electricity prices, changes in 53 gross domestic product, per capita incomes, employment levels, population and weather 54 patterns) and the interactions among these variables, affect overall electricity purchases. 55 Given the complexity of load forecasting the task is to find a specific set of explanatory 56 (independent) variables that reflect PowerStream's circumstances and that can be used 57 to generate the most accurate load forecast.

58 Different explanatory variables were tested using a stepwise regression technique. 59 Stepwise regression is a procedure that adds and deletes one independent variable at a 60 time. The decision to add/delete a variable is made on the basis of whether that variable 61 improves the accuracy of the model. A variable is added as long as it meets the 62 significant level of the test. The variables listed in Table 2 were used as initial inputs for 63 the purpose of regression analysis.

# Table 2: Initial Set of Explanatory Variables

Dependent Variable	Y	Monthly energy purchases (kWh)
Explanatory (Independent)	X <sub>1</sub>	Heating Degree-Days
Variables	X <sub>2</sub>	Cooling Degree-Days
	X <sub>3</sub>	Real Gross Domestic Product for Ontario
	$X_4$	Monthly Peak Hours
	$X_5$	Personal Disposable Income
	$X_6$	Number of Customers
	X <sub>7</sub>	Energy Price
	$X_8$	York Region Population

66 Several monthly models of energy purchases were specified, estimated and tested to

67 derive the energy purchases forecast. The statistical software generated the coefficients

68 that were used in the variables suitability assessment. York Region Population (X<sub>8</sub>) and

69 Energy Price (X<sub>7</sub>) variables were excluded as they were statistically insignificant. The

70 detailed results of the model testing are presented in Table 3. Model 4 was selected as

the most accurate.

# Table 3: Load Forecast Model Evaluation

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
Constant	-4.81	-9.01	-14.32	-12.90	-6.58	-4.04	32.421
	L	Ind	ependent Var	iables	1	L	
HDD			11.66	13.33	13.94	15.63	3.879
CDD		15.78	24.45	27.04	28.58	31.78	7.124
GDP Index	16.10	27.97	39.81	44.39	6.01	7.99	
Peak Hours				5.38	5.77	6.00	
Number of Customers					3.94	6.83	
Personal Disposable Income						-5.26	
York Population							
Energy Price							
	L	1	Model Statist	ics	1	L	
R-Squared	68.2%	89.7%	95.2%	96.1%	96.6%	97.2%	30.9%
Adjusted R-Squared	67.9%	89.5%	95.1%	96.0%	96.4%	97.1%	29.7%
ST. Error of Estimate	39,968,432	22,889,875	15,700,773	14,126,685	13,330,855	12,031,300	59,161,785
F-Test	259.37	519.861	781.966	731.70	660.441	680.29	26.802
Sign. F-Test	0.000	0.000	0.000	0.000	0.000	0.000	0.000

75 The most significant independent variable for the model is GDP, which was obtained

from Statistics Canada. The forecast of Ontario GDP is based on a survey of long-term
 forecasts prepared by six major chartered banks of Canada.

Heating Degree Days (HDD) are summations of negative differences between the mean daily temperature and the 18 °C base; Cooling Degree Days (CDD) are summations of positive differences from the same base. The number of HDDs influences electricity use for space heating, while the number of CDDs influences electricity use for space cooling. The HDD variable also picks up some of the increased lighting load that results from shorter winter days. PowerStream uses the degree-days count for the Toronto Lester B. Pearson International Airport Data Point as published by Environment Canada.

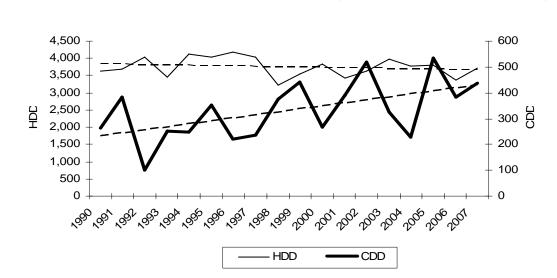
85 For purposes of PowerStream's load forecast, weather is not forecasted. Weather inputs 86 are based on monthly normal HDD and CDD data. The decision was made to move 87 from traditional 30-year to 10-year (1998 – 2007) weather time series for defining normal 88 weather. In analyzing the outputs generated by the model varying only the HDD and 89 CDD inputs for 30-year and for 10-year weather data PowerStream determined that the 90 10-year data more accurately predicted consumption. By doing so, PowerStream was 91 able to better incorporate the most current weather patterns - lower HDD and higher 92 CDD across the PowerStream service territory. This decision was based on the analysis 93 of the fitted (predicted) values during the forecast validation when forecasts were 94 generated using 10 and 30-year averages for comparison purposes. The generated 95 predicted values based on 10-year weather average showed a better fit when compared 96 to actuals (see Table 4).

Year	Actual Purchases (GWH)	Fitted (10-year Average)	Variance (GWH)	Variance (%)	Predicted (30-year average)	Variance (GWH)	Variance (%)
2002	6,480	6,314	166	2.6%	6,238	242	3.7%
2003	6,506	6,480	26	0.4%	6,404	102	1.6%
2004	6,653	6,647	6	0.1%	6,571	82	1.2%
2005	7,072	6,832	240	3.4%	6,756	316	4.5%
2006	6,951	7,003	-52	-0.7%	6,927	24	0.4%
2007	7,124	7,143	-19	-0.3%	7,067	57	0.8%
Average			61	0.9%		137	2.0%

# 98 Table 4: Historic Annual Energy Purchases (GWH) Weather Impact 10 vs. 30 year

Winters in PowerStream's service area are generally mild with annual HDDs averaging
3,630 from 1998 through 2007. The extremely cold winters of 1996-1997 were followed
by very mild winters through 2002. From 1998 through 2007, HDDs have ranged from
3,220 in 1998 to 3,982 in 2003. The general trend has been downward, i.e. winters
generally are getting warmer.

Summers in PowerStream's service area are generally hot and humid with average annual CDDs of 390 in the period 1998 through 2007. The cool summers in 1996 to 1997 were followed by extremely hot summers in 1999, 2002, and 2005. From 1998 to 2007, cooling degree-days have ranged from 229 in 2004 to 536 in 2005. The general trend is upward, i.e. summers generally are getting warmer (see Table 5).



# Table 5: Historic HDD & CDD, 1990 – 2007 (source: Environment Canada)

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109

The last variable used in the load forecasting model is Peak Hours which captures the effect of time related to purchase habits and patterns. There are important differences in the energy purchases between weekday and weekend/holidays. Peak hours are indicative of the sharper rise in load during a 16 hour period versus weekend, holidays and late night/dawn hours.

The load forecasting model, using HDD, CDD, GDP and Peak Hours variables, has tracked historic experience quite well in terms of both levels and peaks. Moreover, it captures the historical pattern of energy purchases with respect to economic and weather conditions. Figure 2 shows the selected equation's ability to capture historic monthly energy purchases. It shows the historic time series ("Energy Purchases") and presents the current forecast ('Predicted Values").

# 125 The selected equation for forecasting total energy purchased is summarized in Table 7.

126

# 123 Figure 2: Monthly Actual vs. Predicted Energy Purchases Forecast (GWh)

127 Table 7: Summary of M	Ionthly Load Fo	precast Econometric Model (K	Wh)
Dependent Variable: Monthly Er	nergy Purchases	6	
Form: Multiple Regression			
Sample: 01/1998 - 03/2008			
Included observations: 123			
Variable	Coefficient	t-Statistics	Sig.
(Constant)	-411,058,129	-12.9	0.000
Real GDP	6,044,922	44.4	0.000
CDD	972,606	27.0	0.000
HDD	94,548	13.3	0.000
Monthly Peak Hours	426,477	5.4	0.000
R-squared	96%	Mean dependent variable	525,355,792
Standard Error of regression	14,126,685	S.D. dependent variable	70,573,318
F-test	731.70	Durbin-Watson statistics	1.561

Regression coefficients generated by the model were used to predict future energy purchases. Coefficients describe the average amount of change to be expected in purchases given a unit change in the value of the particular independent variable while holding other variables constant. Combining the results of the coefficient table into a regression equation, we have our monthly purchases expressed as

 133
 Monthly kWh = (6,044,922\*Real GDP) + (972,606\*CDD) + (94,548\*HDD) +

 134
 (426,477\*Peak Hours) - 411,058,129

135 The key results of the monthly energy purchases forecast are summarized in Table 8. 136 Data from January 1998 to March 2008 was used to help select the model and to 137 estimate its parameters. Forecasts are made for time periods beyond the end of the 138 available data. The forecast for heating and cooling degree-days is based on a ten-year 139 historical average (1998 – 2007). The forecast of Ontario GDP is based on a survey of 140 publicly available long-term forecasts of GDP growth from the major financial institutions 141 of Canada. The forecast of the Monthly Peak Hours variable is based on the 2008 to 142 2009 calendars. To estimate the average energy purchases for any particular 143 combination of predictor variable values, the values of the predictor variables are simply 144 substituted in the estimated regression equation itself.

145

## Table 8: Monthly Energy Purchases Forecast (kWh)

Date	kWh Purchases	HDD	CDD	GDP	Monthly Peak Hours
January-08 <sup>1</sup>	613,079,919	626.0	0.0	133.9	352
February-08	578,709,137	674.7	0.0	134.0	320
March-08	584,978,696	610.2	0.0	134.1	352
April-08	581,826,193	321.2	1.2	134.2	352
May-08	572,190,096	143.1	15.0	134.3	336
June-08	622,855,337	31.7	77.3	134.4	336
July-08	681,201,065	2.4	132.5	134.5	352
August-08	653,018,025	4.8	116.7	134.6	320
September-08	593,202,098	50.7	43.1	134.7	336
October-08	580,516,778	237.1	4.3	134.8	352
November-08	578,381,574	396.7	0.0	134.9	320
December-08	605,258,126	602.4	0.0	135.0	336
January-09	615,751,676	700.6	0.0	135.2	352
February-09	601,372,469	607.9	0.0	135.4	336
March-09	608,391,351	531.4	0.0	135.5	304
April-09	577,246,302	321.2	1.2	135.7	352
May-09	575,038,334	143.1	15.0	135.9	336
June-09	639,350,849	31.7	77.3	136.0	336
July-09	691,477,432	2.4	132.5	136.2	352
August-09	663,898,885	4.8	116.7	136.4	320
September-09	604,082,958	50.7	43.1	136.5	336
October-09	585,178,493	237.1	4.3	136.7	352
November-09	597,295,055	396.7	0.0	136.9	320
December-09	617,347,970	602.4	0.0	137.0	320

<sup>&</sup>lt;sup>1</sup> January/08 – March/08 contains actual data

Table 9 presents actual and normalized energy purchases for 1998 through 2007 and
forecasts for 2008 and 2009. In 2007 the total weather-normalized energy was 7,071
GWH. The forecast for 2008 (bridge year) is 7,239 GWH, an increase of 2.4%. For
2009 (test year), the forecast predicts a 1.9% increase over 2008.

150

# Table 9: Annual Energy Purchases(GWH) 1998 to 2009

Year	Actuals	Weather- Normalized	Change(GWH)	Growth Rate (%)
1998	4,981	5,036		
1999	5,401	5,362	327	6.50%
2000	5,674	5,777	415	7.70%
2001	5,998	6,017	240	4.20%
2002	6,480	6,356	339	5.60%
2003	6,506	6,537	181	2.80%
2004	6,653	6,796	259	4.00%
2005	7,072	6,916	120	1.80%
2006	6,951	6,983	68	1.00%
2007	7,124	7,071	87	1.25%
2008 Forecast <sup>2</sup>	7,245	7,239	168	2.38%
2009 Forecast		7,376	137	1.89%
Average 2008 - 2	009			2.14%

151 In general, PowerStream anticipates an average annual growth rate in purchases of 152 2.14% for the Bridge and Test years which is in line with an actual average growth rate 153 of 2.16%<sup>3</sup> in the recent five years of actual experience from 2003 to 2007. This outcome 154 demonstrates that the load forecasting methodology is reasonably consistent with the 155 recent historical experience.

The following analysis compares the forecast outcomes to a reasonable expectation for outcomes of load forecasts generally. Forecasts will normally vary from actual (error), either higher or lower, and it is reasonable to expect that the load forecasting methodology is unbiased, if the average error of many forecasts (Mean Percentage Error) is close to zero. Table 10 provides a summary of the outcomes of forecasted energy purchases compared to actual energy purchases for the period 1998 to 2007.

<sup>&</sup>lt;sup>2</sup> Includes Jan-Mar/08 normalized actuals plus Apr-Dec/08 forecasts before CDM adjustment

<sup>&</sup>lt;sup>3</sup> See Table 1: Historic Annual Energy Purchases (GWH)

162 Column 1 ("Actual") is the actual electricity that PowerStream and/or its predecessor 163 utilities purchased in each year. Column 2 ("Forecast") is the forecasted annual energy 164 purchased. Column 3 (Error %) is the percentage difference between the actual 165 outcome and the forecast. This percentage error is expressed as a fraction of the actual 166 load. The mean percentage error of all past forecasts on the annual basis is -0.03%.

167

Table 10: Annual Energy Purchases Actual vs. Forecast (KWH)

Year	Actual	Forecast	Error %	
1998	4,981,372,142	4,901,762,035	-1.60%	
1999	5,400,971,323	5,433,392,925	0.60%	
2000	5,674,268,252	5,793,384,479	2.10%	
2001	5,998,430,370	6,142,905,730	2.41%	
2002	6,479,933,001	6,439,475,540	-0.62%	
2003	6,506,478,497	6,450,625,542	-0.86%	
2004	6,653,174,916	6,505,189,683	-2.22%	
2005	7,045,409,490	6,990,238,124	-0.78%	
2006	6,951,225,280	6,971,685,096	0.29%	
2007	7,124,043,584	7,196,306,398	1.01%	
	Mean Percentage Error			

168 The monthly forecasts of total electricity purchases were aggregated to obtain the 169 annual forecast. Aggregation of the monthly forecasts is not expected to increase the 170 forecast error since the expected errors in the monthly models are close to zero. Table 171 11 provides separate in-sample forecast error estimates for the last three years (2005 to 172 2008 YTD). Errors (variance between Fitted and Actual values) are random and they 173 don't follow any particular pattern. A total of 123 forecast error estimates were 174 evaluated; 63 (51%) of which were negative and 60 (49%) of which were positive. The 175 average error of all past forecasts was close to zero (-0.1%). These outcomes suggest 176 that the load forecast is not biased in favour of under- or overestimating the load.

	Actual Energy	Predicted	Variance from Actual	Variance from Actual
Year	kWhs	kWh	kWhs	%
Jan-05	603,104,728	567,734,753	35,369,975	5.86%
Feb-05	539,958,139	555,025,732	-15,067,593	-2.79%
Mar-05	573,163,831	569,144,520	4,019,311	0.70%
Apr-05	523,195,648	534,995,429	-11,799,780	-2.26%
May-05	535,216,502	526,487,112	8,729,390	1.63%
Jun-05	667,073,555	658,968,052	8,105,503	1.22%
Jul-05	666,138,685	686,926,776	-20,788,090	-3.12%
Aug-05	665,203,815	655,702,448	9,501,368	1.43%
Sep-05	579,130,353	566,051,695	13,078,658	2.26%
Oct-05	550,482,277	535,838,672	14,643,605	2.66%
Nov-05	558,735,947	559,810,510	-1,074,563	-0.19%
Dec-05	584,006,009	573,552,426	10,453,583	1.79%
Jan-06	590,573,211	570,853,905	19,719,306	3.34%
Feb-06	546,189,560	569,598,504	-23,408,944	-4.29%
Mar-06	580,804,467	582,986,583	-2,182,116	-0.38%
Apr-06	514,682,678	535,788,560	-21,105,882	-4.10%
May-06	561,278,323	567,364,484	-6,086,160	-1.08%
Jun-06	608,461,587	603,769,626	4,691,961	0.77%
Jul-06	691,243,629	680,016,332	11,227,297	1.62%
Aug-06	646,746,810	631,369,488	15,377,322	2.38%
Sep-06	534,435,954	539,912,858	-5,476,905	-1.02%
Oct-06	551,908,486	555,473,393	-3,564,907	-0.65%
Nov-06	558,035,541	571,314,159	-13,278,618	-2.38%
Dec-06	566,865,034	563,237,203	3,627,831	0.64%
Jan-07	605,117,993	598,409,640	6,708,354	1.11%
Feb-07	574,212,693	594,527,900	-20,315,207	-3.54%
Mar-07	588,678,067	590,494,178	-1,816,110	-0.31%
Apr-07	537,906,272	553,116,948	-15,210,676	-2.83%
May-07	562,993,757	575,905,673	-12,911,915	-2.29%
Jun-07	636,364,393	633,046,407	3,317,986	0.52%
Jul-07	639,545,887	639,708,890	-163,002	-0.03%
Aug-07	674,533,886	681,270,056	-6,736,170	-1.00%
Sep-07	572,889,996	574,066,643	-1,176,648	-0.21%
Oct-07	567,671,987	578,335,747	-10,663,760	-1.88%
Nov-07	572,425,593	590,391,676	-17,966,083	-3.14%
Dec-07	591,703,059	587,032,641	4,670,418	0.79%
Jan-08	613,079,919	607,663,670	5,416,249	0.88%
Feb-08	578,709,137	599,225,352	-20,516,215	-3.55%
Mar-08	584,978,696	586,907,893	-1,929,197	-0.33%
		,-0.,000	AVERAGE ERROR	-0.10%

# Table 11: Monthly Actuals vs. Forecast (KWH)

PowerStream has performed due diligence testing of its load forecast methodology using both internal and external resources. The evaluation and validation process included analytical assessment of the forecast results, one-step-ahead forecasts to actual, statistical measures, residual analysis and external review. We have determined that our current methodology produces reasonably accurate results.

# 184 CDM Impact on Load Forecast

The load forecast as described above does not explicitly take into account the impacts
on energy purchases arising from Conservation & Demand Management (CDM)
programs undertaken by PowerStream customers. In order to estimate the CDM impact
on energy purchases, the following steps were performed:

- 189 1. Develop a baseload forecast
- 1902.Estimate potential total electricity volume reductions resulting from CDM191initiatives using data from the Ontario Power Authority (OPA)
- 192 3. Express volume reductions as a percentage of a baseload forecast
- 193 4. Develop an adjusted forecast.

194 The baseload forecast is a forecast of the expected level of electricity purchases that 195 would occur over the specified period in the absence of new or incremental CDM 196 initiatives by PowerStream customers.

197 The baseload forecast assumes that some level of "natural conservation" will occur over 198 the specified period. The scope and rate of natural conservation is driven by such 199 factors as relative price effects, industrial plant growth and productivity improvements, 200 incremental technology improvements, changes in the economy that reduce energy 201 intensity, old energy-consuming assets being replaced with new and more efficient 202 technologies, and the availability and performance of energy management measures. 203 There is insufficient evidence to determine how each of these factors impacts the load 204 forecast.

PowerStream supports the Provincial Government's CDM initiatives and is currently delivering CDM programs funded by the OPA. The OPA funded programs are designed to be province-wide programs. Ontario's Integrated Power System Plan, prepared by the OPA, includes a forecast of CDM savings for the various regions of Ontario. By 2009, for the Greater Toronto Area (GTA), where PowerStream is located, the total planned energy savings is 700 GWH, with a peak savings of 201 MW. The breakdown by year is shown in Table 12.

212

 Table 12: OPA Proposed GTA Energy Conservation Savings (2008 – 2009)<sup>4</sup>

	2008	2009
MWH	300,000	700,000
MW	80	201

213 In the absence of PowerStream-specific data on the impact of CDM initiatives on 214 consumption, PowerStream has used the OPA forecast of CDM savings for the GTA to 215 derive an appropriate CDM-driven load adjustment factor. The GTA includes the 216 Regional Municipalities of York, Halton, Peel and Durham and encompasses 217 PowerStream's service area. The OPA has not specifically assessed the potential for 218 these programs in the municipalities that comprise PowerStream's service area. 219 Accordingly, PowerStream has estimated these savings to be 89,552 MWH in 2009. 220 This is derived based on a simple proration of the OPA's target for the GTA based on 221 population. The results of this proration exercise are shown below in Tables 13 and 14.

<sup>&</sup>lt;sup>4</sup> Source: OPA

2008	Population <sup>5</sup>	Weight	Share of MWH <sup>6</sup>	Share of MW
City of Toronto	2,503,281	45.06%	135,169	36
York Region	892,712	16.07%	48,203	13
Peel Region	1,159,405	20.87%	62,604	17
Durham Region	561,258	10.10%	30,306	8
Halton Region	439,256	7.91%	23,718	6
Total	5,555,912	100.00%	300,000	80
2009				
City of Toronto	2,503,281	45.06%	315,393	91
York Region	892,712	16.07%	112,474	32
Peel Region	1,159,405	20.87%	146,076	42
Durham Region	561,258	10.10%	70,714	20
Halton Region	439,256	7.91%	55,343	16
Total	5,555,912	100.00%	700,000	201

#### Table 13: Prorated York Region Energy Conservation Savings (2008 – 2009) 223

<sup>&</sup>lt;sup>5</sup> Data source: Statistics Canada, 2006 Census <sup>6</sup> Data source: OPA

225

 Table 14: Prorated PowerStream Service Area Energy Conservation

 Savings (2008 – 2009)

2008	Population	Weight	Share of MWH	Share of MW
Aurora	47,629	5.34%	2,572	0.7
East Gwillimbury	21,069	2.36%	1,138	0.3
Georgina	42,699	4.78%	2,306	0.6
King	19,487	2.18%	1,052	0.3
Markham	261,573	29.30%	14,124	3.8
Newmarket	74,295	8.32%	4,012	1.1
Richmond Hill	162,704	18.23%	8,785	2.3
Vaughan	238,866	26.76%	12,898	3.4
Whitchurch	24,390	2.73%	1,317	0.4
Total for York Region	892,712	100.00%	48,203	13
Total for PowerStream Service Area	710,772	79.62%	38,379	10
2009				
Aurora	47,629	5.34%	6,001	1.7
East Gwillimbury	21,069	2.36%	2,655	0.8
Georgina	42,699	4.78%	5,380	1.5
King	19,487	2.18%	2,455	0.7
Markham	261,573	29.30%	32,956	9.5
Newmarket	74,295	8.32%	9,361	2.7
Richmond Hill	162,704	18.23%	20,499	5.9
Vaughan	238,866	26.76%	30,095	8.6
Whitchurch	24,390	2.73%	3,073	0.9
Total for York Region	892,712	100.00%	112,474	32
Total for PowerStream Service Area	710,772	79.62%	89,552	26

227 York Region consists of nine municipalities — Vaughan, Richmond Hill,

228 Markham, King, Whitchurch-Stouffville, Aurora, Newmarket, East Gwillimbury

and Georgina.

The results show that for 2009, 89,552 MWHs will be saved and the MW demand will be reduced by 26 MWs. Accordingly, the energy purchases would decline by about 1.21% relative to the baseload forecast. In absolute terms, this is a reduction in 2009 from 7,376 GWH to 7,287 GWH as shown below in Table 15.

234

# Table 15: 2008 – 2009 CDM Reductions to Forecast

Year	Baseload Forecast Consumption	Project Consumption	Savings	Savings as Percentage of Baseload Forecast
2008	7,245,217,045	7,206,837,819	38,379,226	0.53%
2009	7,376,431,773	7,286,880,247	89,551,526	1.21%

# 235 Derivation of Demand (kW)

The 2008 and 2009 energy purchases forecasts are composites of monthly kWh forecasted volumes for all rate classes. Estimated distribution and specific supply factor (SSP) losses are subtracted from these forecasts to determine the distribution sales forecast. This distribution sales forecast is apportioned to various rate classes based on the historical relationships between energy and demand by rate class obtained from billing data.

242 There are different billing determinants for various classes: Residential and Small 243 Commercial accounts are billed based on kWh units, whereas charges for other 244 Commercial Accounts (GS>50, Large User, TOU, Street Lighting and Sentinel) are 245 based on kW units. The historical relationship between kWh and kW for each rate class 246 is used to translate forecasted kWh to kW for these accounts. Tables 16 and 17 show 247 the historic (3-year average) billed energy (kWh) allocation, by rate class, and a ratio of 248 historic kWs to historic kWh, by rate class, as an average for the period 2005 through 249 2007.

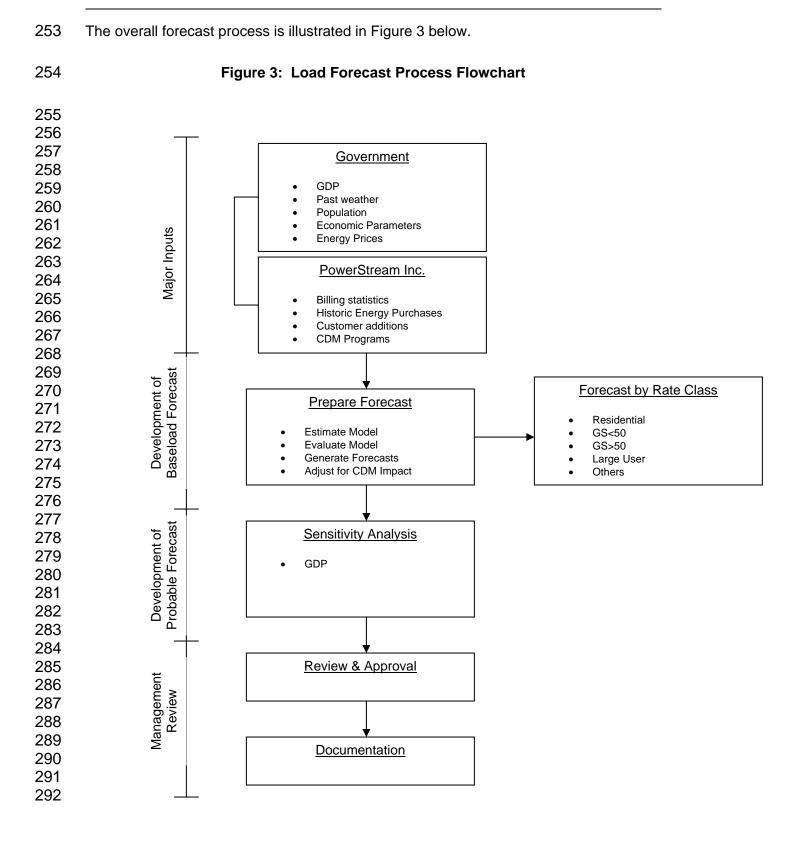
# Table 16: Historic kWh Allocation by Rate Class (2005 – 2007)

Rate Class	Percentage of Total
Residential	29.53%
GS <50 kW	11.76%
USL	0.12%
GS>50 kW	56.65%
TOU	0.84%
Large User	0.48%
Street-Lighting	0.61%
Sentinel	0.01%
Total	100.00%

251 252

# Table 17: Historic Relationship between Billed kWh and kW Demand byRate Class (2005 – 2007)

Class	Energy Sales kWh	Demand kW	Demand as Percentage of Energy Sales, %
GS>50 kW	3,780,888,416	9,678,092	0.26%
ΤΟυ	50,946,121	81,770	0.16%
Large User	32,100,718	86,442	0.27%
Street-Lighting	40,090,872	110,247	0.28%
Sentinel	458,618	1,179	0.25%
Total	3,904,484,745	9,957,730	0.26%



# 293 Variance Analysis

The 2009 versus 2008 variances are shown in Tables 18, 19, 20, and 21. Overall forecast purchases are 77,342,496 kWh higher in the Test Year than in the Bridge year. The variance is mainly attributable to two factors: increased purchases resulting from growth offset in part by the savings resulting from CDM initiatives.

298

# Table 18: Forecasted Energy Purchases (kWh)

	Bridge Year 2008	Test Year 2009	Variance
Year over Year Variance (kWh)	7,209,537,751	7,286,880,247	77,342,496
Year over Year Variance (%)	2.47%	1.07%	

299

# Table 19: CDM Impact (kWh)

	Bridge Year 2008	Test Year 2009	Variance
CDM Impact (%)	0.53%	1.21%	-0.68%
Resulted Load Reduction (kWh)	38,379,226	89,551,526	-51,172,300

300

# Schedule 20: Impact of Ontario GDP Growth

	Bridge Year 2008	Test Year 2009	Variance
Real GDP Index (model input)	135.0	137.0	2.0
Growth Rate	1.3%	2.0%	0.7%
GDP Regression Coefficient	6,044,922	6,044,922	0
Variance from GDP growth	9,752,877,025	9,873,775,463	120,898,438

	Bridge Year 2008	Test Year 2009	Variance
Peak Hours (model input)	4016	4016	0
Peak Hours Regression Coefficient	426,477	426,477	0
Variance from Peak hours	1,712,732,869	1,712,732,869	0

# Schedule 21: Impact of Change in the Number of Peak Hours

# **CUSTOMER FORECAST**

# 303 CUSTOMER FORECAST: RESIDENTIAL CLASS

304 PowerStream developed its baseline residential customer forecast based on statistical 305 data available for York Region. York Region Planning and Development Services 306 **Department** maintains historic and forecast population databases at the regional level 307 that provide useful in forecasting PowerStream residential customer additions. These 308 databases provide area specific information relevant to PowerStream's service territory. 309 PowerStream determined that the use of an energy purchases related variable, i.e. GDP 310 was not a good predictor of growth levels for customers. The indicator is too broad and 311 does not define growth in customer numbers as accurately as population related 312 statistics. The use of GDP would understate the customer growth forecast and produce 313 understated residential customer additions for the 2008 bridge year and 2009 test year.

314 PowerStream determined the relationship between customer additions and historical 315 population and dwelling unit increases. Based on the current economic outlook 316 PowerStream's residential customer baseline forecast is trending slightly downward. 317 The York Region's statistics and forecasts on population and dwelling units reflect 318 changes in future population estimates, changes in average household size and other 319 economic factors including housing starts and sewage treatment capacity issues to 320 2011. These statistics are considered to be relevant predictors of customer growth for 321 PowerStream's service territory. The statistics indicate the York Region growth 322 projection for population to be approximately 2.7% per year over the next five years. 323 This is substantially lower than population growth experienced in York Region over the 324 past 15 years.

Table 1 below summarizes the 2008 bridge and 2009 test year residential customer additions. Two ratios related to historic York Region population and dwelling unit additions compared with PowerStream customer additions were developed. These ratios were applied to forecasted York Region population and dwelling unit additions to derive the PowerStream customer residential forecast for the 2008 bridge and 2009 test
year. The relationship between residential additions and York Region population and
dwelling unit statistics used in our forecast methodology is defined by the following
equation:

333

NRA = (A\* NPI + B\* NDI) / 2

334 where,

335	NRA	-	PowerStream net residential additions
336	А	-	Historic ratio of population increases to residential customer increase
337	NDI	-	Projected net dwelling unit addition by York Planning Department
338	В	-	Historic ratio of dwelling additions to residential customer increase
339	NPI	-	Projected net population increase by York Planning Department

340

# Table 1: Net Residential Customer Additions

	Population	Dwelling Units	Net Residential		
Year	Addition (NPI)	Additions (NDI)	Additions (NRA)		
2002	35,646	8,165	9,845		
2003	34,676	8,165	9,312		
2004	32,110	8,165	7,337		
2005	25,705	8,165	5,662		
2006	25,287	8,165	8,088		
2007	26,638	6,021	6,989		
Total 2002 – 2007	180,062	46,846	47,233		
Customer Addition Ratio <sup>7</sup>	0.2623 (A)	1.0083 (B)			
2008	22,958	6,021	6,046		
2009	22,958	6,021	6,046		

<sup>&</sup>lt;sup>7</sup> Net Residential Additions divided by Net Population additions

PowerStream has adjusted its baseline 2009 customer forecast to incorporate its current
initiative to individually meter (suite meter) multi-residential units. PowerStream adjusted
its 2009 customer forecast by an additional 1000 customers related to the suite metering
initiative.

# 345 CUSTOMER FORECAST: COMMERCIAL CLASSES

The General Service classes were forecast for the 2008 bridge and 2009 test year based on historic trending. Commercial units and their particular loads are typically known only when the connection is requested. It is difficult to forecast or anticipate the type of occupancy/rate class required to support a customer in a commercial development. PowerStream considers the best method to forecast future commercial growth to be a 3-year historical average. PowerStream currently has only one large user and it is not anticipating any additional customers in this class for 2009.

# 353 SUMMARY: CUSTOMER FORECAST

354 Overall, the total number of customers for 2009 is expected to be 3.2% higher than 355 2008. The current trend for PowerStream's service territory is reduced growth rates over 356 time. PowerStream experienced total customer growth rates averaging 5.9% over a 5-357 year peak growth period 1999-2003. Since 2003 the total average growth rate has been 358 3.6%. Consistent with the population growth projections developed by York Region, 359 PowerStream will be adding customers at a slightly slower growth rate for the bridge and 360 External economic factors as well as York Region water and sewer test year. 361 infrastructure constraints until 2011 will contribute to the slowing trend. Table 2 362 summarizes the net customers' additions for the bridge and test years.

Year	Customer Count	Growth Volume	Growth Rate (%)	
1998	154,444	7437		
1999	163,739	9,295	6.00%	
2000	175,293	11,554	7.10%	
2001	185,558	10,265	5.90%	
2002	196,160	10,602	5.70%	
2003	205,196	9,036	4.60%	
2004	213,147	7,951	3.90%	
2005	219,970	6,823	3.20%	
2006	228,666	8,696	4.00%	
2007	236,377	7,711	3.40%	
2008 Projected	243,780	7,403	3.13%	
2009 Projected	251,638	7,857	3.22%	

# **Table 2: Net Customer Additions**

# **DISTRIBUTION REVENUE**

# 367 OVERVIEW

368 The year over year comparison of PowerStream's distribution revenue is summarized in 369 Table 1. The 2008 and 2009 revenue amounts were calculated by applying current 370 rates (Nov. 1, 2007 and May 1, 2008 for 2008 and May 1, 2008 for 2009) to the forecast 371 sales and customer numbers. The variance in the 2006 actual over Board Approved is 372 related to growth in 2006 relative to the 2006 Board-approved levels which were based 373 on 2004 actual customer and load data. Based on weather normalized sales, the year-374 over-year variances in distribution revenue in the period 2006 to 2009 are related mainly 375 to growth of PowerStream's customer base. Distribution revenue in 2008 and 2009 is 376 lower than historical levels as a result of decreased variable distribution revenue related 377 to CDM initiatives.

378

 Table 1: Distribution Revenue at Current Rates

	Board Approved 2006	Historic Actual 2006 Normalized	2007 Normalized	Bridge Year 2008	Test Year 2009
Fixed and Variable Charge	102,837,941	107,164,024	109,715,340	113,122,680	115,307,774
Transformer Credit	(2,079,674)	(1,938,668)	(1,903,317)	(2,223,791)	(2,538,896)
Total Distribution Revenue	100,758,267	105,225,356	107,812,023	110,898,889	112,768,879
% growth Year over Year		4.4%	2.5%	2.9%	1.7%

PowerStream recovers revenue based on a fixed and variable rate methodology. The
fixed component is derived based on a customer forecast and the variable component is
based on a sales forecast. PowerStream has applied current approved rates to the Test
Year customer and sales forecast in order to derive the Test Year distribution revenue.
At current approved rates, PowerStream's revenue requirement is \$112,768,879 which

is a 1.7% increase over 2008 mainly attributable to customer and consumption growth

as outlined in Table 2.

386

# Table 2: Energy Sales, Demand and Customers

	2006 OEB Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
Consumption, KWH	6,425,946,366	6,710,324,626	6,832,453,515	7,031,323,910	7,060,331,849
Demand, KW	9,415,073	10,111,363	10,403,720	10,498,818	10,598,793
Customer Count		228,666	236,377	243,780	251,638

387 Forecast distribution revenue is supported by the following continuity schedules:

- 388 Table 3: Distribution Revenue by Rate Class
- 389 Table 4: Demand and Consumption
- 390 Table 5: Unit Revenues
- 391 Table 6: Customer Count by Rate Class
- Table 7: Residential and General Service Classes Average Normalized
   Consumption per Customer

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# 395 **Table 3: Continuity Schedule – Distribution Revenue by Class**

								Variance	Analysis	
		Distrit	oution Revenue, \$				Distribution Revenue, \$			
	Board Approved	Actual Normalized	Actual Normalized	Bridge Year Normalized	Test Year		2006 Actual vs Board Approved	Actual 2007 vs. Actual 2006	Bridge Year vs. Actual 2007	Test Year vs. Bridge Year
	2006	2006	2007	2008	2009					
	\$	s	\$	\$	\$		\$	\$	\$	\$
Residential	51,150,354	53,088,794	54,902,976	57,210,114	58,362,421	Residential	1,938,440	1,814,182	2,307,138	1,152,306
GS Less Than 50 kW	17,065,184	16,685,619	16,769,268	17,191,557	17,461,613	GS Less Than 50 kW	-379,565	83,649	422,289	270,056
GS 50 to 4,999 kW	31,939,361	34,952,592	36,201,819	36,795,539	37,719,603	GS 50 to 4,999 kW	3,013,231	1,249,228	593,720	924,064
GS 50 to 4,999 kW Legacy	138,225	165,573	213,601	226,811	26,506	GS 50 to 4,999 kW Legacy	27,348	48,028	13,209	-200,305
Large Use	1,274,699	995,131	205,627	216,759	217,427	Large Use	-279,568	-789,503	11,132	667
Unmetered Scattered Load	553,921	499,833	445,187	450,199	459,194	Unmetered Scattered Load	-54,088	-54,646	5,012	8,995
Sentinel Lighting	6,212	4,186	9,118	13,792	13,850	Sentinel Lighting	-2,026	4,932	4,674	59
Street Lighting	709,985	772,297	967,744	1,017,910	1,047,161	Street Lighting	62,312	195,447	50,165	29,252
TOTAL	102,837,941	107,164,024	109,715,340	113,122,680	115,307,774	TOTAL	4,326,083	2,551,316	3,407,340	2,185,095

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397

400

#### 398 Table 4: Continuity Schedule – Demand and Consumption

#### 399 Demand

		Load (kW)								
	Board Approved	Board Approved Actual Normalized Actual Normalized		Bridge Year Normalized	Test Year					
	2006	2006	2007	2008	2009					
	kW	kW	kW	kW	kW					
Residential	0	0	0	0	0					
GS Less Than 50 kW	0	0	0	0	0					
GS 50 to 4,999 kW	8,542,593	9,379,753	10,077,299	10,192,858	10,386,671					
GS 50 to 4,999 kW Legacy	56,479	77,885	94,990	94,710	0					
Large Use	711,980	539,544	86,953	91,116	91,492					
Unmetered Scattered Load	0	0	0	0	0					
Sentinel Lighting	1,646	1,196	1,335	1,726	1,733					
Street Lighting	102,375	112,985	129,997	118,408	118,896					
TOTAL	9,415,073	10,111,363	10,390,574	10,498,818	10,598,793					

		Variance Analysis Load (kW)							
	2006 Actual vs Board Approved	ve Actual		Test Year vs. Bridge Year					
	#	#	#	#					
Residential	-	-	-	-					
GS Less Than 50 kW	-	-	-	-					
GS 50 to 4,999 kW	837,160	697,546	115,559	193,813					
GS 50 to 4,999 kW Legacy	21,406	17,105	(280)	(94,710)					
Large Use	(172,436)	(452,591)	4,163	376					
Unmetered Scattered Load	-	-	-	-					
Sentinel Lighting	(450)	139	391	7					
Street Lighting	10,610	17,012	(11,589)	488					
TOTAL	696,290	279,211	108,244	99,975					
% Change	7.40%	2.76%	1.04%	0.95%					

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#### 401 Consumption

		Consumption (kwh)							
	Board Approved	Actual Normalized	Actual Normalized	Bridge Year Normalized	Test Year				
	2006	2006	2007	2008	2009				
	kWh	kWh	kWh	kWh	kWh				
Residential	1,964,510,951	1,997,634,862	2,005,684,502	2,076,349,951	2,084,915,995				
GS Less Than 50 kW	839,732,805	780,547,603	791,831,288	826,883,692	830,295,025				
GS 50 to 4,999 kW	3,146,022,987	3,577,505,749	3,839,198,657	3,983,244,995	4,058,984,780				
GS 50 to 4,999 kW Legacy	33,065,000	49,362,517	58,785,932	59,063,121	0				
Large Use	393,855,765	284,558,813	31,921,465	33,750,355	33,889,593				
Unmetered Scattered Load	11,437,054	10,317,258	8,270,556	8,437,589	8,472,398				
Sentinel Lighting	590,077	445,736	463,429	703,132	706,033				
Street Lighting	36,731,727	40,822,715	43,020,722	42,891,076	43,068,024				
OTAL	6,425,946,366	6,741,195,254	6,779,176,550	7,031,323,910	7,060,331,849				

	Variance Analysis								
	Consumption (kwh)								
	2006 Actual vs Board Approved	ve Actual		Test Year vs. Bridge Year					
	#	#	#	#					
Residential	33,123,911	8,049,639	70,665,449	8,566,044					
GS Less Than 50 kW	(59,185,202)	11,283,684	35,052,404	3,411,334					
GS 50 to 4,999 kW	431,482,762	261,692,907	144,046,338	75,739,785					
GS 50 to 4,999 kW Legacy	16,297,517	9,423,416	277,188	(59,063,121)					
Large Use	(109,296,952)	(252,637,348)	1,828,889	139,238					
Unmetered Scattered Load	(1,119,796)	(2,046,703)	167,033	34,810					
Sentinel Lighting	(144,341)	17,693	239,703	2,901					
Street Lighting	4,090,988	2,198,007	(129,646)	176,948					
				~~~~~~					
TOTAL	315,248,888	37,981,296	252,147,360	29,007,939					
% Change	4.91%	0.56%	3.72%	0.41%					

402

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# 403

#### 404 Table 5: Continuity Schedule Unit Revenues

		Revenue per Customer, \$								
	Board Approved	Board Approved Actual Normalized		Bridge Year Normalized	Test Year					
	2006	2006	2007	2008	2009					
	\$/Customer	\$/Customer	\$/Customer	\$/Customer	\$/Customer					
Residential	\$273.47	\$269.36	\$268.70	\$270.92	\$267.52					
GS Less Than 50 kW	\$825.28	\$774.01	\$746.23	\$745.81	\$736.77					
GS 50 to 4,999 kW	\$9,582.77	\$9,634.34	\$9,926.24	\$9,738.13	\$9,666.63					
GS 50 to 4,999 kW Legacy	\$69,112.50	\$82,786.74	\$106,800.61	\$113,405.33	\$39,759.00					
Large Use	\$254,939.80	\$243,705.44	\$205,627.07	\$216,759.38	\$217,426.56					
Unmetered Scattered Load	\$255.62	\$232.09	\$219.26	\$217.23	\$216.55					
Sentinel Lighting	\$23.98	\$27.28	\$62.77	\$97.12	\$97.54					
Street Lighting	\$13.69	\$13.89	\$16.56	\$16.66	\$16.4					
TOTAL	\$387.58	\$382.49	\$376.93	\$375.42	\$369.7					

	Variance Analysis								
	Revenue per Customer, \$								
	2006 Actual vs Board Approved	Actual 2007 vs. Actual 2006	Bridge Year vs. Actual 2007	Test Year vs. Bridge Year					
	#	#	#	#					
Residential	-\$4.10	-\$0.66	\$2.23	-\$3.40					
GS Less Than 50 kW	-\$51.27	-\$27.79	-\$0.41	-\$9.04					
GS 50 to 4,999 kW	\$51.58	\$291.90	-\$188.10	-\$71.50					
GS 50 to 4,999 kW Legacy	\$13,674.24	\$24,013.87	\$6,604.72	-\$73,646.33					
Large Use	-\$11,234.36	-\$38,078.37	\$11,132.30	\$667.19					
Unmetered Scattered Load	-\$23.52	-\$12.83	-\$2.03	-\$0.68					
Sentinel Lighting	\$3.30	\$35.49	\$34.35	\$0.41					
Street Lighting	\$0.20	\$2.66	\$0.10	-\$0.25					
TOTAL	-\$5.09	-\$5.55	-\$1.51	-\$5.64					
% Change	-1.31%	-1.45%	-0.40%	-1.50%					

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# 406

#### 407 Table 6: Continuity Schedule – Customer Count by Class

		Number of Customers (Connections)							
	Board Approved	Normalized		Bridge Year Normalized 2008	Test Year 2009				
	#	#	#	#	#				
Residential	187,044	197,091	204,330	211,166	218,15				
GS Less Than 50 kW	20,678	21,557	22,472	23,051	23,70				
GS 50 to 4,999 kW	3,333	3,628	3,647	3,779	3,90				
GS 50 to 4,999 kW Legacy	2	2	2	2					
Large Use	5	4	1	1					
Unmetered Scattered Load	2,167	2,154	2,030	2,072	2,1				
Sentinel Lighting	259	153	145	142	14				
Street Lighting	51,845	55,588	58,447	61,107	63,80				
TOTAL	265,333	280,177	291,074	301,320	311,82				

	Variance Analysis							
	Number of Customers (Connections)							
	2006 Actual vs Board Approved	Actual 2007 vs. Actual 2006	Bridge Year vs. Actual 2007	Test Year vs. Bridge Year				
	#	#	#	#				
Residential	10,047	7,239	6,837	6,991				
GS Less Than 50 kW	879	915	579	649				
GS 50 to 4,999 kW	295	19	131	124				
GS 50 to 4,999 kW Legacy	0	0	0	-1				
Large Use	-1	-3	0	0				
Unmetered Scattered Load	-13	-123	42	48				
Sentinel Lighting	-106	-8	-3	0				
Street Lighting	3,743	2,859	2,660	2,697				
TOTAL	14,844	10,898	10,246	10,508				
% Change	5.59%	3.89%	3.52%	3.49%				

408

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# 410 Table 7: Continuity Schedule – Residential and General Service Classes – Average Normalized Consumption per Customer

Residential

Average

% Change

GS Less Than 50 kW

Average Normalized Consumption per Customer

(Residential and General Service Classes)

Average consumption (kwh/customer)								
Board Approved	Actual Normalized	Actual Normalized	Bridge Year Normalized	Test Year				
2006	2006	2007	2008	2009				
kWh/customer	kWh/customer	kWh/customer	kWh/customer	kWh/customer				
10,503	10,136	9,816	9,833	9,557				
40,610	36,208	35,236	35,872	35,033				
13,500	12,706	12,335	12,395	12,053				

Variance Analysis									
Ave	Average consumption (kwh/customer)								
2006 Actual vs Board Approved	Actual 2007 vs. Actual 2006	Bridge Year vs. Actual 2007	Test Year vs. Bridge Year						
#	#	#	#						
(367)	(320)	17	(276)						
(4,402)	(972)	636	(839)						
-2,385	2,371	14,256	1,568						
-17.67%	18.66%	115.58%	12.65%						

...

Residential

Average

GS Less Than 50 kW

411

### 413 TRANSFORMER OWNERSHIP ALLOWANCE

Page 9 of 9 414 There are circumstances under which PowerStream does not supply customers with 415 transformation equipment, but rather the customer provides its own equipment. This 416 typically occurs when the customer has unique consumption characteristics that require 417 the use of special equipment or the level of consumption is above a certain threshold 418 (i.e. greater than 3.000 KVA at 600/347V or greater than 5.000 KVA at 4160V). The 419 distribution rates are derived assuming that PowerStream provides transformation to 420 customers. Customers that provide their own transformation are entitled to receive a 421 credit equivalent to the costs of transformation included in base distribution rates. 422

423 PowerStream is proposing to maintain the current Transformer Ownership Allowance
424 Credit of \$0.60 per kW of demand per month. Table 1 below summarizes the
425 Transformer Ownership Allowance for 2007 to 2009.

426

 Table 1: Transformer Ownership Allowance

		Actual		Br	idge Ye	ear	Т	est Yea	ar
		2007			2008			2009	
Rate Class	kw	\$ /kw	\$	kw	\$ /kw	\$	kw	\$ /kw	\$
Residential									
GS Less Than 50 kW									
GS 50 to 4,999 kW	2,982,390	(0.60)	-1,794,165	3,520,493	(0.60)	-2,112,296	4,140,001	(0.60)	-2,484,001
GS 50 to 4,999 kW Legacy	95,040	(0.60)	-57,024	94,710	(0.60)	-56,826	0	(0.60)	(
Large Use	86,879	(0.60)	-52,127	91,116	(0.60)	-54,670	91,492	(0.60)	-54,895
Unmetered Scattered Load		. ,			. ,			. ,	
Sentinel Lighting									
Street Lighting									
TOTALS	3,164,309		-1,903,317	3,706,319		-2,223,791	4,231,493		-2,538,896

427 428

This amount is then allocated to the General Service > 50kW and Large Use classesbased on the total demand of these classes in order to derive the distribution revenue

431 related to this allowance.

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#### 1 OTHER REVENUE 2 PowerStream followed the format of its 2006 EDR Application by dividing Other 3 Revenue - or "Revenue Offsets" - into the following categories: 4 Specific Service Charges • 5 Late Payment Charges • 6 Other Distribution Revenue • 7 Other Income and Deductions •

- 8 Table 1 provides PowerStream's Revenue Offsets by category for the requisite periods.
- 9

# Table 1: PowerStream Revenue Offsets (\$)

	2006 Board Approved	2006 Actual	2007 Actual	2008 Estimate	2009 Forecast
Specific Service Charges	2,428,383	2,612,980	2,593,600	2,619,334	2,621,919
Late Payment Charges	1,030,530	1,665,845	1,700,463	1,756,000	1,834,000
Other Distribution Revenue	1,012,033	981,696	915,435	935,250	954,255
Other Income and Deductions	1,625,403	1,761,431	2,186,779	2,087,119	1,157,873
Total Revenue Offsets	6,096,348	7,021,952	7,396,277	7,397,703	6,568,047

10 Revenue Offsets are deducted from the Service Revenue Requirement to derive the

11 Base Revenue Requirement. The latter is used to set distribution rates.

In its 2006 EDR Application, PowerStream sought and received approval to use the
default Specific Service Charges in the Board's *2006 Electricity Distribution Rate Handbook.* PowerStream does not propose any change to these Specific Service
Charges.

Powerstream proposes to continue charging 1.5 percent per month (19.56% per annum)interest on overdue accounts.

PowerStream proposes to exclude interest income on Customer Deposits from the
Revenue Offsets. In OEB Report on 2006 Electricity Distribution Rates Handbook
Development, the Board decided that this interest should not be a revenue offset (RP2004-0188, Chapter 6)

PowerStream earns interest on these deposits and this interest is returned to those
customers through payment of the interest on their deposit. In the test year, interest
income on Customer Deposits is forecast to be \$385,000.

#### VARIANCE ANALYSIS

### 2 SPECIFIC SERVICE CHARGES

1

There are no significant variances in Specific Service Charges over the period 2006 to 2009. The charges forecast for 2009 represent an increase of 8 percent over the Boardapproved amount for 2006. The increase is the result of an increase in the number of customers.

### 7 LATE PAYMENT CHARGES

8 The 2006 actual Late Payment Charges are \$635,000 higher than the 2006 Board-9 approved amount. Since the latter was based on historical 2004 data, the low late 10 payment charges in that year reflect, that during the PowerStream amalgamation, more 11 attention was spent on harmonizing billing systems and getting bills issued, as opposed 12 to assessing late payment charges. The 2006 actual charges are more reflective of the 13 normal course of business.

The 2009 forecast represents an increase of 10 percent over the 2006 actual value and
78 percent over the 2006 Board-approved value, which was unusually low as noted in
the previous paragraph.

### 17 OTHER DISTRIBUTION REVENUE

This category was relatively stable in the 2006-2007 period. It is projected to stayapproximately at the same level in the 2008-2009 period.

The 2009 forecast represents a decrease of \$58,000 or 5.7 percent over the 2006 Board-approved value. The 2006 Board-approved value was based on a 2004 historical test year which contained revenues for services provided between the pre-merger utilities. This decrease is the result of the discontinuation of revenues from charges between the pre-merger utilities, offset in part by a net increase in the other items contributing to Other Distribution Revenue.

## 27 OTHER INCOME AND DEDUCTIONS

This category comprises "Interest Income", "Gain on Disposition of Property", and "Other
Non-Operating Income". The details are shown in Exhibit C2, Tab 1, Schedule 2, Table
1.

The 2009 forecast represents a decrease of \$467,000 or 28.8 percent over the 2006 Board-approved value. This decrease is mainly the result of the absence of \$500,000 in revenue, in the 2006 Board-approved value, from developers that no longer applies as discussed below.

## • Other Income and Deductions - 2006 Actual vs. 2006 Board-Approved

The actual interest income in 2006 is \$583,000 higher than the 2006 Board-approved value of \$689,000. The main reason is that 2006 Actual cash balance was significantly higher than the cash balance that underpins the 2006 Board-approved value.

39 Miscellaneous non-operating income in the 2006 Actual is lower by \$504,000 compared 40 to the 2006 Board-approved value. The latter was based on a 2004 historical test year 41 which included a one-time payment of \$500,000 from developers in connection with lost 42 or damaged fibreglass stakes. This revenue became non-recurring revenue because, 43 after 2004, PowerStream decided to return to using traditional wooden stakes for which 44 there is no charge.

## 45 • Other Income and Deductions - 2007 Actual vs. 2006 Actual

46 The 2007 Actual is \$490,000 higher than the 2006 Actual as a result of higher interest47 due to increased cash balances.

# 48 • Other Income and Deductions - 2008 Estimate vs. 2007 Actual

49 The 2008 Estimate stays at approximately the same level as in the 2007 Actual.

51	Other Income and Deductions - 2009 Forecast vs. 2008 Estimate
52 53	The decrease of \$929,000 in the 2009 forecast compared to the 2008 estimate is mainly due to lower forecasted interest rate and lower cash balances.
54	Tables 1 to 3 that follow provide additional information, as follows:
55	Table 1 – year-over-year variances for Other Revenue
56	Table 2 - year-over-year variances for Other Distribution Revenue (part of Other
57	Revenue)
58	Table 3 – Details of Specific Service Charges
59	

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# 59 Table 1: Other Revenue

60

Other Revenue	Board Approved	Historic	Actual	Bridge Year	Test Year
	2006 Approved	2006 Actual	2007 Actual	2008	2009
Specific Service Charges	2,428,383	2,612,980	2.593.600	2.619.334	2,621,919
Late Payment Charges	1,030,530	1,665,845	1,700,463	1,756,000	1,834,000
Other Distribution Revenue	1,012,033	981,696	915,435	935,250	954,255
Other Income & Deductions :					
Interest and Dividend Income	688,706	1,271,611	1,761,568	1,773,650	835,000
Gain/Loss on Disposition of Utility and Other Property	20,039	77,061	60,198	-	-
Miscellaneous Non-Operating Income	916,658	412,759	365,012	313,469	322,873
	1,625,403	1,761,431	2,186,779	2,087,119	1,157,873
Total Revenue offsets	6,096,348	7,021,952	7,396,277	7,397,703	6,568,047

2006 Actual vs Board Approved	2007 Actual vs 2006 Actual	Bridge Year vs. Actual 2007	Test Year vs.
Approved	Actual	Actual 2007	Bridge Year
184,597	(19,379)	25,733	2,585
635,315	34,618	55,537	78,000
(30,337)	(66,261)	19,815	19,005
-	-	-	-
582,905	489,958	12,082	(938,650)
57,022	(16,863)	(60,198)	-
(503,899)	(47,747)	(51,543)	9,404
136,028	425,348	(99,660)	(929,246)
-	-	-	-
925,604	374,326	1,425	(829,656)
15.2%	5.3%	0.0%	-11.2%
649,000	670,000	726,000	727,000

Materiality Threshold (1% of Total Distribution Expenses)

### 63 Table 2: Other Distribution Revenue

64 65



**POWERSTREAM - Future Test Year Rate model** 

#### **Other Distribution Revenue**

Description	Board Approved	Historie	c Actual	Bridge Year	Test Year	2006 Actual vs Board Approved	2007 Actual vs 2006 Actual	Analysis Bridge Year vs. Actual 2007	Test Year vs. Bridge Year
	2006 Approved	2006 Actual	2007 Actual	2008	2009		2000 / 10100		Bridge Fear
Retail Services Revenue (acct 4082)	170,844	312,053	313,071	319,300	325,700	141,210	1,017	6,229	6,400
Service Transactions Request Revenues (acct 4084)	860	4,899	15	100	100	4,039	(4,884)	85	-
SSS administration Charge Revenue (4078)	621,936	625,073	593,765	605,600	617,700	3,137	(31,308)	11,835	12,100
						-	-	-	-
Other components of "Other Distribution Revenue"	218,394	39,671	8,585	10,250	10,755	(178,722	) (31,087)	1,665	505
(accts 4090,4205-4215,4220,4240-5)						-	-	-	-
Other Distribution Revenue	1,012,033	981,696	915,435	935,250	954,255	(30,337	) (66,261)	19,815	19,005
						-3.0%	6.7%	2.2%	2.0

66	Materiality Threshold (1% of Total Distribution Expensess)	649,000	670,000	726,000	726,000	806,000
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-								Transactions V	olume		1			Test Year 2009		
Code	Description	Note	Standard Rate	Applicable Y/N	Updated Amt. (if applic.) \$	2006 EDR Approved #	Actual 2006 #	Actual 2007 #	Bridge Year 2008 #	Test Year 2009 #	2006 EDR Approved	Actual 2006	Actual 2007	Bridge Year 2008	Amount for Rate Calculations \$	
1	Arrears certificate		<b>\$</b> 15.00	Y	\$	# 2,206	# 1,981	# 2,619	# 2,300	# 2,350	33,095	29,718	39,288	34,500	ء 35,250	
2	Statement of account	1	15.00	Y		16,260	2	3	3	3	243,895	30	45	38	39	
4	Duplicate invoices for previous billing		15.00	Y		219	12	22	17	20	3,280	173	330	255	300	
5	Request for other billing information		15.00	Y		258	0	0	0	0	3,870	0	0	0	(	
6	Easement letter		15.00	Y		164	943	459	460	470	2,465	14,144	6,890	6,900	7,050	
7	Income tax letter		15.00	Y		6	9	3	6	6	90	135	45	92	94	
9	Account history		15.00	Y		21	6	9	10	10	315	90	135	150	150	
10	Credit reference/credit check (plus credit agency costs)		15.00	N		-					0	0	0	0	C	
11	Returned cheque charge (plus bank charges)		15.00	Y		3,695	2,997	2,782	2,900	3,100	55,425	44,948	41,723	43,500	46,500	
13	Legal letter charge		15.00	Y		375	805	695	700	700	5,625	12,075	10,427	10,500	10,500	
14	Account set up charge/change of occupancy charge (plus credit agency costs if applicable)		30.00	Y		32,926	40,718	37,488	39,700	40,500	987,780	1,221,534	1,124,640	1,191,000	1,215,000	
15	Special meter reads		30.00	Y		8	15	14	15	15	240	450	420	444	453	
16	Collection of account charge - no disconnection		30.00	Y		18,766	25,662	30,532	28,500	26,900	562,990	769,866	915,954	855,000	807,000	
18	Disconnect/Reconnect at meter - during regular hours		65.00	Y		1,865	1,308	2,037	1,700	1,750	121,225	85,007	132,392	110,500	113,750	
20	Disconnect/Reconnect at meter - after regular hours		185.00	Y		205	236	311	279	300	37,925	43,697	57,609	51,615	55,500	
24	Meter dispute charge plus Measurement Canada fees (if meter found correct)		30.00	Y		5	3	3	3	3	160	90	90	90	90	
27	Temporary service install & remove - overhead - no transformer		500.00	Y		21					10,667	0	0	0	C	
30	Specific Charge for Access to the Power Poles \$/pole/year	2	22.35	Y		16,078	17,495	11,795	14,083	14,776	359,336	391,024	263,614	314,750	330,244	
	Total					93,079	92,192	88,772	90,675	90,903	2,428,383	2,612,980	2,593,600	2,619,334	2,621,919	

#### 67 Table 3 Specific Service Charges

Notes 1 After amalgamation, PowerStream did not issue statements of account at the extent the predecessor utilities have done it before. This charge stopped to be the source of significant revenue. 2 The number of pole rentals is reverse-calculated from the annual pole rental charges. The actual pole rental revenue recognized in 2006 is by \$407K higher than in 2006 Board Approved EDR, since in 2006 this amount includes the pole rental charges under-collected by Hydro Vaughan in the previous years. In 2007, pole rental revenue declines by \$158K, as compared to 2006, mainly due to the reduced rental charge as a result of the settlement with Rogers Cable.

## 1 OPERATING & MAINTENANCE AND ADMINISTRATION EXPENSE: OVERVIEW

- 2 Table 1 shows PowerStream's Operation, Maintenance and Administration (OM&A)
- 3 costs, by year, for the period 2006 to 2009.

## Table 1: PowerStream OM&A Expense (\$000)

	Board			Bridge	Test			
	Approved	Historic	(Actual)	Year	Year			
	2006	2006	2007	2008	2009			
Operation	5,587	7,057	8,861	8,237	9,418			
Maintenance	6,739	6,319	6,819	5,508	6,471			
Operation & Maintenance (O&M)	12,326	13,376	15,680	13,745	15,889			
Administration Expenses	25,957	25,419	26,986	25,904	29,210			
OM&A Expenses	38,283	38,795	42,666	39,649	45,098			
\$ change		512	3,871	-3,017	5,449			
% change		1.3%	10.0%	-7.1%	13.7%			
% change 2009 to 2006 EDR Approved								

- 5 OM&A costs for 2009 of \$45.1M are an increase of \$6.8M or 17.8% from the 2006 Board
- 6 Approved amount of \$38.3M.
- 7 Table 2 below shows PowerStream's OM&A per customer for 2006 to 2009.
- 8

## Table 2: OM&A per Customer

	Board Approved	Historic (	Actual)	Bridge Year	Test Year
	2006	2006	2007	2008	2009
OM&A, \$000's	38,283	38,795	42,666	39,649	45,098
Customers	213,535	228,666	236,377	243,780	251,638
OM&A / Customer, \$	\$ 179.3	\$ 169.7	\$ 180.5	\$ 162.6	\$ 179.2
OM&A / Customer , % change		-5.5%	6.4%	-9.9%	10.2%
OM&A / Customer , % change - 2009 vs. 2006 Board Approved					0.0%

2009 EDR Application

9 PowerStream's OM&A cost per customer for 2009 has decreased slightly from the cost
10 per customer based on the 2006 Board Approved amounts. Despite many factors driving
11 costs upwards (see Key Drivers for OM&A Changes below), PowerStream has been
12 able to hold down the OM&A cost per customer.

PowerStream owns many of the Transformer Stations that supply its service area and these are deemed to be distribution assets. PowerStream estimates that OM&A costs are about 10% higher that they would otherwise be, as a result the ownership of Transformer Stations. PowerStream does not pay wholesale transmission transformation and line connection charges on power supplied from company owned transformer stations. As a result PowerStream's Retail Transmission Connection rates to customers are lower than if it did not own transformer stations.

# 20 KEY DRIVERS FOR OM&A CHANGES

Table 3 provides the estimated impact of significant cost drivers from 2006 Board Approved to 2009.

Table 3:	Estimated Impact of Major Cost Drivers for OM&A
	2006 Board Approved to 2009 Test Year (\$000)

Description	Increase (Decrease)			
Wage increases	\$	4,925		
Additional Staff	\$	4,241		
Locate expense	\$	471		
Bad Debt expense	\$	465		
IFRS	\$	750		
Meter Re-verification and Maintenance	\$	(427)		
Salary capitalized	\$	(3,473)		
Other net increase (decrease)	\$	(137)		
Net Change	\$	6,815		

The 2006 Board Approved Amount is based on a 2004 Historical Test Year with minor adjustments. As a result the 2006 Board Approved to 2009 Test Year effectively spans the period from 2004 to 2009. A number of factors, both external and internal, have affected or are expected to affect the level of PowerStream's OM&A costs in this period.

#### 29 Wage Increases

Labour costs form 80% of PowerStream's OM&A costs, representing \$30.6M of the
2006 Board Approved OM&A costs of \$38.3M. Wage increases on this labour add
\$4.9M to 2009 costs over the amounts in the 2006 Board Approved OM&A costs.

33 PowerStream's first Collective Agreement for Bargaining Unit Staff was signed in 2005 34 and replaced the collective agreements with the predecessor utilities. This agreement 35 resulted in a harmonization of union wage rates, from the previous contracts with the 36 predecessor utilities, resulting in a one time wage adjustment of \$0.4M prior to the 37 annual increase of 3% in 2005. PowerStream's Collective Agreements for Bargaining 38 Unit Staff have included annual rate increases of 3% for 2006 through 2009. 39 PowerStream uses the annual wage increase from the collective agreement to adjust the 40 salary ranges for its Management/Non-union staff. Wages and salaries have increased 41 3% per annum before any "step increases", i.e., salary increases based on experience 42 or merit. Benefit costs have also increased. See Exhibit D1, Tab 1, Schedule 9 for 43 further information regarding compensation.

#### 44 Growth

By the end of 2009, PowerStream expects its total customer base to have grown to 251,638, an increase of 17.8% from the levels in the 2006 EDR filing. Increased staff levels are required to serve the larger number of customers. Meter reading, bill printing and mailing costs increase in direct proportion to the increase in customer numbers. Expansion of PowerStream's distribution system is needed to support this growth. A larger distribution system results in more operation and maintenance work and an increase in staff to carry out these activities.

#### 52 Staff Levels

By 2009, PowerStream's staff is forecast to reach 434 employees. This represents an
increase of 64 or 17% from the 2006 EDR level of 370. The increased staff will add
\$4.2M to OM&A costs in 2009.

The addition of 31 apprentices accounts for almost half of the increase in staff. The remaining addition of 33 employees is driven in part by growth (19) and in part by new and increased requirements (14). PowerStream's staff increase of 19 employees or 5.1% that is growth related compares to customer growth of 17.8%. There was an increase of 14 staff or 3.8% for new requirements in the health and safety, environmental, communications, financial reporting/budgeting, rates and regulatory areas.

63 See Exhibit D1, Tab 1, Schedule 9 for more information on PowerStream's staffing and64 workforce planning.

#### 65 Locates Expense

66 There has been a dramatic increase in the number of locate requests from the level 67 underpinning locates expense of \$1.5M contained within the 2006 Board Approved 68 OM&A expense. This increase is significantly in excess of any growth related increase. 69 This can be attributed to stricter regulations and more rigorous enforcement resulting in 70 more locates being requested and performed. PowerStream has needed to hire 3 71 additional cable locators. These compensation costs are included in this amount and 72 excluded from the Increased Staff amount shown in Table 3. PowerStream has taken 73 steps that have lowered the cost per locate but the volume has driven up the total cost to 74 \$2.0M.

#### 75 Bad Debt

PowerStream's 2006 Board Approved Bad Debt expense is \$681,000. PowerStream's
has analyzed its bad debt history, reviewed its customer base and has budgeted bad
debt expense of \$1,146,000 for 2009. This represents an increase of \$465,000.

A downturn in certain industries, particularly the automotive industry, has resulted in
increased bad debt expense over the past few years and this is expected to continue
over the next several years.

PowerStream's benchmarks itself against other Ontario electrical distribution utilities as
a performance check. PowerStream compared its bad debt expense as a % of Total
Electricity Service Revenue for 2005 and 2006 against a group of similar utilities.
PowerStream's average of 0.187% ranked second. The 2009 bad debt expense is
0.169% of Total Electricity Service Revenue. See Exhibit D1, Tab 1, Schedule 3 for
detailed discussion of Bad Debt expense.

### 88 IFRS

The Canadian Accounting Standards Board of the CICA has defined the timeline for all publicly accountable enterprises to move to International Financial Reporting Standards (IFRS). PowerStream will be required to prepare its financial statements, based on IFRS, beginning January 1, 2011. To meet this goal, PowerStream will need to spend an estimated \$3.0M over four years (2009-2012). The average annual amount of \$750,000 is used for the 2009 Test Year Rate application.

95 Compliance with IFRS consists of consulting costs relating to identifying and addressing
96 the gaps between current accounting methods and IFRS, updating processes and
97 accounting systems.

#### 98 Meter Re-verification and Maintenance

In 2006 PowerStream spent \$427,000 on meter re-verification, seal extensions and
maintenance. As a result of the Smart Meter program, PowerStream does not plan to
spend anything on these items in 2009.

## 102 Salary Capitalized

103 In 2006, PowerStream started to capitalize the portion of management staff time spent104 on capital projects. In 2009 this is estimated to be \$3.5M. See Exhibit B1, Tab 3,

Schedule 1 for details of PowerStream's capitalization policy and burden allocationprocess.

## 107 Other Net Decrease

- 108 PowerStream's estimated OM&A spending is \$0.1M less than the OM&A costs
- 109 calculated from the estimated impact of the previous items.

## 110 OM&A YEAR TO YEAR VARIANCES

111 This section presents an overview; the detailed variance analysis is presented in Exhibit

112 D1, Tab 1, Schedule 3.

## 113 2006 Actual

As shown in Table 1 above, there is a small increase of \$0.5M or 1.3% in 2006 Actual OM&A compared to 2006 Board Approved (based on a historical 2004 test year). This was a result of costs increases, from wages and inflation, and the demands of growth, being offset in large part by savings from combining operations of the predecessor utilities.

## 119 2007 Actual

120 There is an increase of \$3.9M or 10.0% for OM&A costs in 2007 over 2006. The main 121 reasons for the increase are summarized in Table 4.

122

## Table 4: Summary of Increases from 2006 to 2007 (\$Millions)

Item	Impact on OM&A
2006 OM&A expense	38.8
Increased volume - Cable Locates	0.6
Increased transformer/distribution station planned maintenance	0.6
Increased lines inspection and maintenance	0.8
Bad Debt	0.8
Billing & Collection	0.8
Other net increase	0.3
Total	3.9
2007 OM&A expenses	42.7

- The major factors, contributing to the higher level of 2007 OM&A spending, are:
  Cable locates the volume of cable locates in 2007 significantly increased, as compared to 2006, mainly due to changes in the regulatory environment leading to more locate requests;
- 127 Increased planned maintenance programs on transformer and distribution
  128 stations;
- Increased line inspection and maintenance work due to unusually severe
   weather conditions, including two major snowstorms and higher than average
   number of failures on primary and secondary lines, requiring a higher volume of
   unplanned maintenance;
- The high level of Bad Debt in 2007, mainly due to the bankruptcy of Quebecor
  World and several other large commercial customers;
- The increase in Billing and Collection expenses mainly due to prior period adjustments in 2006 which understated the 2006 amount.
- Other changes with a net increase of \$0.3M

# 138 2008 Bridge Year

There is a decrease of \$3.0M or 7.1% in OMA for the 2008 Bridge Year over 2007 Actual. OM&A for 2008 was budgeted at a lower level relative to 2007 Actual due to a matter of timing. The 2008 budget was prepared in the summer of 2007 and was based mainly on 2006 Actual and 2007 Budget data. The 2007 actual year to date and forecast data at that time did not reflect the significantly increased 2007 Actual OM&A over 2006 that would occur by year end.

The 2008 budget was prepared using 2007 burden rates. These rates had not been updated for several years and by the end of 2007 these rates left a large balance that had not been applied and needed to be allocated. The portion of the 2007 under applied burden amount allocated to OM&A was \$2M. PowerStream undertook a burden study in the fall of 2007 - see Exhibit B1, Tab 3, Schedule 1 for a discussion of burdens and thenew 2008 burden rates.

Updating the 2008 OM&A budget with the 2008 burden rates would increase theseexpenses by \$2.0M to a total of \$41.7 M.

- 153 Based on August 2008 projections, the forecasted 2008 OM&A will reach \$41.3M, which
- 154 is higher than the original budget, but lower than the revised budget amount, reflecting
- 155 PowerStream's effort to efficiently manage operating costs.

## 156 **2009 Test Year**

- 157 There is an increase of \$5.4M or 13.7% in OM&A for the 2009 Test Year over the 2008
- 158 Bridge Year. Table 5 below itemizes these impacts.
- 159

## Table 5: Summary of OM&A Increases from 2008 to 2009 (\$M)

Item	Impact on OM&A
2008 OM&A expenses	\$39.7
Impact of updating burden rates	2.0
Salary and wage Increases	1.3
Increase in headcount	0.9
International Financial Reporting Standards compliance	0.8
Volume increases in cable locates	0.3
Other	0.1
2009 OM&A expenses	\$45.1

160 These items are discussed below.

161	•	The 2008 budget was prepared using the old burden rates. A burden study was
162		completed in December 2007 which established new burden rates for 2008.
163		Application of these rates increases the 2008 budgeted OM&A amount by \$2.0M.
164		At the time this was written, PowerStream was projecting that OM&A would
165		exceed budget in 2008 by \$1M mainly due to the impact of updated burden rates.
166	•	Salary and wage increases - 3% increase for all staff, plus experience or merit
167		increases
168	•	Increased headcount - 14 new positions, including 6 line apprentices, as
169		discussed in Exhibit D1, Tab 1, Schedule 9.
170	•	Compliance with International Financial Reporting Standards (IFRS) consists of
171		consulting costs relating to identifying and addressing the gaps between current
172		accounting methods and IFRS, updating processes and accounting systems. The
173		amount shown is the average annual cost for 2009 to 2012.
174	•	Increased Cable Locates – to reflect the higher volume of cable locates in 2009.

### 1 OPERATING COST DESCRIPTIONS AND BUDGET DEVELOPMENT PROCESS

#### 2 OPERATION AND MAINTENANCE EXPENSES

PowerStream's categorization of Operation and Maintenance (O&M) activities is based on the OEB Interpretation Bulletin "Clarification of Operation and Maintenance Activities" (Article 530). "Operation" activity is defined as work that encompasses actions of a detective, preventative, and/or monitoring nature, and as result is normally planned or scheduled. "Maintenance" is defined as the activity generally performed in a reactionary manner based on the results of an Operation activity and is normally a result of unplanned events.

The mix between operation and maintenance expenditures may vary from year to year. In some years PowerStream may have more maintenance functions than operation activities or vice versa. With PowerStream's corporate structure, a number of departments within the company can carry out both operations and maintenance. Therefore for the purpose of the following discussion, O&M costs should be considered together.

16 Operation and Maintenance Expenses include those associated with PowerStream's 17 annual distribution plant inspection and maintenance program as well as expenses 18 related to unplanned maintenance activities. PowerStream's annual inspection and 19 maintenance program is designed in accordance with utility best practices, historical 20 experience and regulatory requirements, as defined in Section 4 of Distribution System 21 Code (DSC). Under the program, major equipment items (i.e., transformers, switches, 22 switchgears) are selected for cyclic maintenance based on their performance history and 23 operating history. Adjustments are made to the maintenance cycle as required and 24 based on the equipment's exposure to contamination (i.e., main roads and intersections) 25 or specific performance issues.

A description of PowerStream's typical Operation activities and Maintenance programsfollows.

### 29 Control Room

PowerStream's control room operates 24 hours per day, seven days per week. Staff
 monitors and directs system operations and manages and directs PowerStream's
 emergency response system.

### 33 Metering

Costs associated with operating customer meter and related equipment are included in the "Operation Expense - Metering" category. Costs associated with the province-wide program to retrofit mechanical meters with Smart Meters are not included in this category, with the exception of 2009 operating costs for 2007 Smart Meters added to fixed assets. The costs associated with the Smart Meter program are discussed at Exhibit I, Tab 3.

### 40 **Customer Premises (Cable Locates)**

PowerStream provides certain services for customers at no additional charge. In the main, these services comprise cable locates. Given the growth of PowerStream's customer base and the economic development within PowerStream's service area, PowerStream is experiencing an increase in the number of requests for cable locates relative to prior years, as detailed in Exhibit D1, Tab1, Schedule 3.

## 46 General Switching

47 PowerStream has remotely operable switches and also switches that require manual
48 operation. Switching is done for different purposes - load management, construction and
49 general maintenance, as well as power restoration.

#### 50 Insulator Washing Programs

Insulator washing is required to prevent failure in the distribution system. Insulators may
become contaminated by road salt, vehicle exhaust or other airborne contaminants
which can result in flashovers and interruption of power. PowerStream's insulator

54 washing program also includes visual inspection and identification of any damaged 55 equipment in the main feeder infrastructure.

## 56 Dry-Ice Cleaning

57 The dry-ice cleaning program for pad-mounted switch gear is a cleaning method that 58 allows an efficient and cost effective maintenance of switchgear. Instead of water, this 59 method uses dry ice. This allows more flexible maintenance schedule during the year 60 and helps to avoid switching, to remove switchgear from service.

### 61 Transformer Station Maintenance

Maintenance at our Transformer Stations is performed on a regular basis. Not only does this ensure the continued safe, reliable and economic operation of our facilities, but also many components within the facilities require routine maintenance as per schedules dictated by the North American Electric Reliability Corporation. Maintenance schedules for the major components adhere to manufacturer recommended guidelines. Site maintenance is also important for safety, access, and functional purposes.

## 68 SCADA (Supervisory Control and Data Acquisition) Maintenance

The SCADA system is comprised of a master control system as well as remote components installed throughout the PowerStream's distribution system. All components require periodic maintenance. For example, communication devices are in need of periodic repair and batteries on remote devices need to be periodically replaced.

### 73 Thermographic Scan

The Station Maintenance department uses infrared scanning technology (i.e., heat detection technology) in transformers and distribution stations as an early detection tool to find and prevent possible plant failure. In 2007, PowerStream's Lines Department also began to use infrared scanning tools for preventative maintenance on its overhead and underground distribution system.

## 80 Tree Trimming

PowerStream's tree trimming program is based on a five-year cycle, with adjustments for more densely treed, overhead areas. For example, PowerStream has established a three-year cycle for the Aurora downtown area, which is heavily treed. Tree trimming in Richmond Hill and Markham was previously based on a three-year cycle, but is currently done on a five-year cycle. PowerStream's target is to establish five-year cycles for its entire service area. This will reduce the number of trips to each location.

### 87 ADMINISTRATION EXPENSES

Administration expenses comprise expenses related to all other activities including billing and collection, community relations, advertising, administration and general ("A&G") activities. A&G expenses include expenses related to the corporate, accounting and finance, senior management including the engineering and operations areas, insurance, bad debt and eligible charitable donations.

93 The following activities are categorized as "Administration":

### 94 Billing and Collection

95 The "Billing and Collection" function includes customer relations (call centre), meter96 reading, billing, payment and collection.

97 PowerStream's call centre operates from 8:00 am to 4:30 pm on business days. The 98 call centre is the customer services hub of PowerStream. Most customer enquiries are 99 managed within the Customer Relations department. PowerStream continues to meet 100 and exceed the "telephone accessibility" service quality indicator as set by the OEB, with 101 over 150,000 calls answered in 2007 at a service level of over 80 percent of calls 102 answered within 30 seconds.

PowerStream outsources its meter reading services. In 2007, it issued a request for proposal ("RFP") for this activity. The amounts included in PowerStream's 2009 revenue requirement in respect of meter reading reflect the prices negotiated pursuant to the RFP process.

107 PowerStream bills its customers using a customized Customer Information System
108 ("CIS") which is managed, in-house, by PowerStream employees. Billing staff is
109 available to address and resolve customer billing issues.

PowerStream manages its payment and collection activities internally through the Collections Department. Overdue accounts are monitored and steps are taken to ensure that overdue amounts are brought up to date. When necessary and as permitted, field 113 staff will disconnect service to limit bad debt exposure and induce settlement of overdue 114 accounts, as defined in Section 4.2 of Distribution System Code (DSC). Once the 115 Collections Department has exhausted all internal means to collect outstanding amounts 116 or otherwise resolve the issue, the account is closed and transferred to an external 117 collection agency.

# 118 Community Relations and Advertising

119 This category includes all communications activities with all external groups, like media, 120 shareholders and customers, performed by the Corporate Communications Department. 121 These include the production of customer brochures, newsletters and bill inserts, 122 organization and facilitation of community information sessions, and 24/7 media 123 relations. The Corporate Communications Department also provides support for the 124 EEPP (Electrical Emergency Preparedness Plan), such as creating external messaging 125 and responding to media inquiries. PowerStream has not included any advertising 126 expenses related to the promotion of its corporate brand in the revenue requirement it 127 seeks to recover in 2009 rates.

## 128 Administrative and General Expense

A&G expenses include those related to the corporate, finance and senior operations andengineering management team functions.

## 131 • Corporate

132 The "corporate" function in PowerStream comprises Human Resources, Information133 Services, Regulatory Affairs, Process Improvements and Key Accounts.

- 134 The Human Resources Department is responsible for addressing staffing requirements,
- 135 staff training, labour relations, compensation matters, and human resource policies.
- 136 The Information Services Department is responsible for the maintenance and operation
- 137 of PowerStream's information technology infrastructure, software applications, telephone
- 138 services and Customer Information System (CIS).

The Regulatory Affairs group is responsible for OEB-related matters, including
advocacy, participation in consultations and compliance with licence, reporting and
record keeping requirements.

The Process Improvement group reviews and identifies processes and procedures that are in need of improvement in accordance with PowerStream's goal to achieve operational efficiencies. Selected processes are then analyzed, redesigned and modeled to ensure optimal work flow. Staff involvement is an integral part of this process.

147 The Key Accounts function deals directly with larger customers in the PowerStream148 service area as well as working with potential new customers with significant loads.

## 149 • Finance

150 The finance function relates to the management of all the financial information of the 151 organization, including internal and external reporting, general accounting, corporate 152 finance and rates.

The General Accounting group is responsible for the daily and monthly general
accounting functions, which include payroll, accounts payable, accounts receivable,
preparation of financial results and budget tracking.

The Corporate Finance group is responsible for monthly, quarterly and annual financial
reporting. This group interacts with the entire organization in order to develop the
annual budgets and develop PowerStream's overall business plans and strategies.

The Rates group is responsible for developing PowerStream's rates, including the management of its distribution rate applications. This group also develops PowerStream company's revenue targets for business planning purposes, based on load and customer growth assumptions and ensures that all regulatory accounting records are kept in accordance with OEB requirements.

#### **164** • Senior Operations and Engineering Management team

This function relates to the management of PowerStream's operational and engineering activities. The Uniform System of Accounts (USoA) requires that all executive salaries be recorded to Account 5605; accordingly, PowerStream has allocated these costs to the administrative category. All costs (i.e., salaries and office expenses) related to the Senior Operations and Engineering Management team have been included in this classification.

## 171 INSURANCE, BAD DEBT & CHARITABLE DONATIONS

172 Insurance expense, bad debt expense and charitable donations are included in the A&G173 category of O&M expenses.

174 Insurance expense includes property and liability insurance. Vehicle insurance is
175 allocated to vehicle overhead accounts and applied to capital and operations activities
176 through the overhead application process.

In any year, PowerStream could be exposed to two types of bad debt: (i) non-payment of distribution and commodity charges; and (ii) non-payment of bills for the repair of damaged distribution plant, pole attachments and service isolation (temporary disconnection of service). A forecast of PowerStream's bad debt expenses related to non-payment of distribution and commodity charges is included in the revenue requirement that PowerStream seeks to recover in this application. The forecast is based on historic experience and analysis of uncollectible amounts.

184 PowerStream's charitable donations fall into one of two categories: (i) donations that are 185 eligible for recovery in rates as per s. 6.2.4 of the 2006 Handbook; and (ii) donations that 186 are not eligible for recovery. PowerStream's eligible donations relate to its sponsorship 187 of the Winter Warmth Program (which assists eligible customers in paying their 188 electricity bill) and its participation in the local United Way campaign. These donations 189 meet the criteria of eligibility for recovery in rates set out in the 2006 Handbook and 190 have, accordingly, been included in the OM&A component of the revenue requirement 191 for which PowerStream seeks recovery in this application.

- 192 PowerStream supports various other local initiatives in respect of which it does not seek
- 193 recovery in this application.

### 194 **POWERSTREAM OM&A BUDGET DEVELOPMENT PROCESS**

The process for the development of the OM&A budget is similar that described in the Capital Investment Process in Exhibit B1, Tab 2, Schedule 1. In fact, the capital and OM&A budgets are developed in a parallel, and information is ultimately combined for presentation to the Executive Management Team (EMT), Audit & Finance Committee and the Board of Directors.

- The Corporate Finance Department coordinated the development of the OM&A budget.For the creation of the 2008 and 2009 budgets, the following steps were taken in 2007:
- April/May update to the five-year financial forecast model in order to determine
   the OM&A budget "envelope" or target ranges for 2008 and 2009
- June budget guidelines developed by Corporate Finance and approved by the
   EMT, budget "kick-off" meeting held with Directors and Managers and budget
   directive issued to staff. A copy of the 2007 budget directive is in Appendix 1,
   Schedule 16.
- July/August departments developed OM&A budgets with support from
   Corporate Finance
- September 7 OM&A and Preliminary Capital Budget due.
- September 12 budget update provided to Audit & Finance Committee.
- October 12 final OM&A and Capital Budget due.
- November Corporate Finance worked with EMT to finalize 2008 and 2009
   budgets and the five-year financial forecast
- December 5 Approval by the Audit and Finance Committee.
- December 12 Approval by the Board of Directors.
- 217
- 218

1 2

## OPERATING, MAINTENANCE AND ADMINISTRATION EXPENSE: VARIANCE ANALYSIS

# 3 INTRODUCTION

4 Table 1 summarizes PowerStream's OM&A expense and the related year-over-year

5 variances for the period 2006 to 2009.

6

## Table 1: OM&A Expense 2006 - 2009 (\$000's)

	2006 Board Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
Operation (a)	5,587	7,058	8,861	8,237	9,418
\$ Increase		1,471	1,803	(624)	1,181
% Increase		26%	26%	-7%	14%
Maintenance (a)	6,739	6,319	6,819	5,508	6,471
\$ Increase		(420)	501	(1,311)	962
% Increase		-6%	8%	-19%	17%
<b>Operation and Maintenance</b>	12,326	13,377	15,680	13,745	15,889
\$ Increase		1,051	2,303	(1,935)	2,143
% Increase		9%	17%	-12%	16%
Administration (b)	25,957	25,418	26,986	25,904	29,210
\$ Increase		(539)	1,568	(1,082)	3,306
% Increase		-2%	6%	-4%	13%
TOTAL	38,283	38,795	42,666	39,649	45,098
\$ Increase		512	3,871	(3,017)	5,449
% Increase		1%	10%	-7%	14%

7

Note: a. See 2007 Rate Harmonization application (EB-2007-0074), EDR 2006 model Sheet 2-4

- 8 9
- b. See Table 4

Adjusted Accounting Data

10 The 2006 and 2007 actual amounts, the 2008 estimated amounts and the 2009 forecast

11 amounts above all exclude non-distribution and other amounts not allowed in the

12 determination of rates.

Administration is a total of all distribution expenses excluding Operation, Maintenance, Amortization, Interest and PILs. See Table 4 under Administration below for details. A detailed analysis of the year-over-year variance in OM&A expense follows in the sections below. Explanations are provided for variances that are greater than or equal to 1 percent of total Distribution Expenses before PILs, for each category of expense, the materiality threshold specified on page 18 of the Minimum Filing Requirements for Transmission and Distribution Applications (EB-2006-0170).

The 2008 estimate in Table 1 represents PowerStream's OM&A costs, based on the information available at the time of budget preparation in 2007. The 2008 Estimate is the 2008 Budget adjusted to eliminate non-distribution amounts and other amounts not allowed for rate making purposes.

The 2008 budget was prepared in the summer of 2007 using the burden rates existing at that time. Later in 2007, PowerStream did a study on its burden process and burden rates (see Exhibit B1, Tab 3, Schedule 1), which resulted in new burden rates for 2008. The 2008 budget as approved and the updated estimate as of April 30, 2008 were used in this rate application. The estimate did not reflect the change in burden rates.

PowerStream estimates that updating the 2008 OM&A budget to reflect the 2008 burden
rates would increase OM&A expense in the 2008 Bridge Year by \$2.0M, to a total of
\$41.7M.

Based on August 2008 projections, the 2008 Bridge Year OM&A will reach \$41.3M. This
is higher than the original budget, but lower than a budget amount that reflects the 2008
burden rates. This result reflects PowerStream's effort to manage its operating costs.

The 2009 budget reflects the new 2008 burden rates. The forecast 2009 Test Year OM&A expense amount is \$5.4M greater than the 2008 Bridge Year amount. New burden rates account for \$2M of the increase. The other main factors contributing to this increase are:

- 39
- annual salary and wage increases;
- the addition of 14 employees;

- 41 increase in bad debt expenses; and
- incremental expenses related to International Financial Reporting Standards
- 43 (IFRS) compliance.
- 44 These factors are discussed, in detail, in the following sections.

#### 45 **OPERATION EXPENSES**

- 46 Table 2 summarizes PowerStream's operation expense and the related year-over-year
- 47 cost variances for the period 2006 to 2009.

48

#### Table 2: Operation Expenses 2006-2009 (\$000)

	2006 Board Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
Transformer Stations <sup>a</sup>	1,071	568	980	983	914
\$ Increase		(503)	412	3	(69)
Distributor Stations <sup>b</sup>	93	138	304	384	349
\$ Increase		45	166	80	(35)
Lines <sup>c</sup>	550	877	1,186	1,395	2,006
\$ Increase		328	309	209	612
Control Room/Load Dispatching <sup>d</sup>	1,220	1,979	2,224	2,243	2,496
\$ Increase		760	245	19	253
Metering <sup>e</sup>	828	1,454	1,521	1,235	1,305
\$ Increase		627	67	(286)	70
Customer Premises & Other <sup>†</sup>	1,827	2,042	2,646	1,997	2,347
\$ Increase		215	604	(649)	350
TOTAL	5,587	7,058	8,861	8,237	9,418
\$ Increase		1,471	1,803	(624)	1,181
% Increase		26%	26%	-7%	14%

4901233456789

Notes: a. OEB account numbers 5012, 5014, 5015

b. OEB account numbers 5016, 5017

c OEB account numbers 5020,5025,5030,5035,5095,5040,5045,5050,5055,5090

d. OEB account numbers 5010

e. OEB account numbers 5065

f. OEB account numbers 5070, 5075

g. The cost categories in Table 2 are functional groupings of the OEB accounts that were included in the Board Approved Operation total expense of \$5,587,000 from the approved EDR 2006 model (EB-2007-0074) Sheet 2-4, Adjusted Accounting Data.

60 Overall there is an increase of \$3,831,000 or 69% in Operation expense from the 2006

61 Board Approved (based on 2004 historic test year amount of \$5,587,000) to the 2009

62 Test Year amount of \$9,418,000. Discussion of the year-over-year variances follows.

The increase in Operation expense in the period 2006 to 2009 is offset in part by a
\$267,000 decrease in Maintenance expense in the same period (see Table 3) as
PowerStream has increased its preventative programs. The combined net increase in
O&M expense is \$3,563,000 or 29%.

#### 67 **2006** Actual vs. **2006** Board Approved

Actual 2006 Operation expense increased \$1,471,000 or 26% over the 2006 Board
approved amount. The materiality threshold is \$648,000 for 2006 (i.e.,1 percent of 2006
Board Approved Distribution expenses before PILs).

The 2006 Board Approved amount is based on 2004 historic test year amounts. Increased costs reflect general labour rates increases of 3% per year from 2004 to 2006 and similar inflationary increases in other costs. In addition, at the creation of PowerStream (June 1, 2004) and later at the amalgamation of Aurora Hydro with PowerStream (November 1, 2005), union wage rates were standardized through negotiations at the higher rates among the predecessor utilities.

Most of the 2006 vs. 2006 Actual increase is explained by the Transformer
Station/Control Room/Load Dispatching, Lines, Metering and Customer Premise areas.
These are discussed below.

#### • Transformer Stations and Control Room/Load Dispatching

81 Transformer Stations 2006 Actual expenses decreased by \$503,000 or 47% relative
82 to the 2006 Board approved (Historic 2004 Test Year) amount.

83 Control Room actual 2006 expenses increased \$760,000 or 62% over 2006 Board
84 approved (Historic 2004 Test Year) amount.

85 These individual variances are largely attributable to how PowerStream's 86 predecessor utilities recorded Control Room expenses in the 2006 Board Approved 87 EDR (historic 2004 test year). Hydro Vaughan recorded Control Room expenses in 88 Account 5015, "Transformer Station Operation", while Markham Hydro and 89 Richmond Hill Hydro recorded these expenses in Account 5010, "Load Dispatching". 90 As a result, the 2006 Board-approved Control Room amount contained only 91 Markham and Richmond Hill costs while Vaughan's Control Room expenses were 92 reflected in the "Operation Expenses - Transformer Stations" category. 93 PowerStream's "2006 Actual" reflects Control Room expenses more consistently 94 under the "Load Dispatching" accounts.

After combining these two categories, the change is a net increase of \$257,000 or
11%, due to wage and general inflation cost increases and the increase in operating
expenses related to the Greenwood TS expansion in 2006.

98 • Lines

Actual 2006 expenses in this category increased \$328,000 or 60% over the 2006
Board approved (Historic 2004 Test Year) amount. The increase is due to a higher
level of plant inspections.

# 102 • Metering Expense

103 Actual 2006 expenses in this category increased by \$627,000 or 76% over the 2006 104 Board approved (Historic 2004 Test Year) amount. The main reason for this is the 105 application of more consistent accounting policies in 2006. In 2004, metering 106 expenses were recorded in both maintenance and operation accounts, so the total 107 2004 metering expenses amounted to \$1,348,000. Beginning in 2006, PowerStream 108 classified metering expenses as Operation. Therefore, for more meaningful analysis 109 of this time period, the operation and maintenance lines should be combined. The 110 combined meter operation and maintenance expense is \$1.348,000 for 2006 Board 111 Approved and \$1,465,000 for 2006 Actual, an increase of \$117,000 or 8.7%.

#### 112 • Customer Premises & Other

Actual 2006 expenses in this category increased \$215,000 or 12% over the Board
approved historic 2004 test year amount. The main item in this category is Cable
Locates. In 2006 there were 45,183 cable locates, a large increase over the number

116 in the historic 2004 test year.

# 117 2007 Actual vs. 2006 Actual

Actual 2007 Operation expense increased \$1,803,000 or 26% over 2006 Actual
expenses. The materiality threshold for 2007 is \$670,000 (i.e.,1 percent of 2006 Actual
Distribution Expenses before PILs).

Most of this increase was in the Transformer Station, Lines, and Customer Premise &Other areas. These are discussed below.

#### 123 • Transformer Stations

Actual 2007 expenses in this category represent an increase of \$412,000 or 73%
over 2006 actual expenses. This is a result of increases in planned maintenance
programs on a number of Transformer Stations.

#### 127 • Lines

Actual 2007 expenses in this category represent an increase of \$309,000 or 35%
over 2006 actual expenses. The increase was mainly in increased lines inspections
and overhead system optimization (planned maintenance).

# 131 • Customer Premises & Other

Actual 2007 expenses in this category represent an increase of \$604,000 or 30%over 2006 actual expenses.

This increase was mainly due to 40% more locates in 2007 compared to 2006.
Changes in cable locate regulations and increased enforcement resulted in this
increased number of locate requests.

In addition there was \$330,000 recorded in customer premise expenses that related to isolation work done in prior years. This represents the difference between the fixed amounts charged to customers and the actual costs to perform the work. Specific service charges were updated in the 2006 EDR process to replace the previously approved charges which were out of date and not reflective of the actual cost.

#### 142 2008 Bridge Year vs. 2007 Actual

Estimated 2008 Bridge Year operation expense decreased \$624,000 or 7% from 2007
Actual expenses. The materiality threshold is \$726,000 for 2008 (1 percent of 2007
Actual Distribution Expenses before PILs). This is attributable mainly to Customer
Premises & Other as discussed below.

# 147 • Customer Premises & Other

- Estimated 2008 expenses in this category represent a decrease of \$649,000 or 25%
  over 2007 actual expenses.
- The main component of this category is locates. PowerStream uses a combination of internal staff and outside contractors to perform locates. Powerstream is participating in a pilot project with the Locate Alliance Consortium ("LAC"). Membership in the consortium provides a cost benefit as LAC is able to negotiate lower costs per locate on behalf of the larger group and often is able to do a single trip to locate on behalf of several members.

# 156 **2009 Test Year vs. 2008 Bridge Year**

157 Operation Expense for 2009 is expected to increase by \$1,181,000 or 14% over 2008

expenses. The materiality threshold is \$727,000 for 2009 (1 percent of 2008 Bridge YearDistribution expenses before PILs).

#### 160 • Lines / Control Room

161 Forecast 2009 expenses in this category represent an increase of \$865,000 or 24% 162 over estimated 2008 expenses. This is mainly due to the implementation of the 163 apprenticeship program. The newly hired apprentices will be working both in the 164 control room and the lines area. In 2009, PowerStream is planning to continue the 165 operation programs started earlier, such as three-year pole testing and inspection 166 programs, thermographic scan for preventative maintenance in both overhead and 167 underground lines, insulator washing program and switchgear cleaning dry-ice 168 process.

#### 169 • Metering Expenses

Forecast 2009 expenses in this category represent a slight increase of \$70,000 or 6% over estimated 2008 expenses. The normal wage increase in this area is partially offset by the reduction in meter maintenance and re-verification costs, as a result of the accelerated replacement of existing mechanical meters with Smart Meters.

#### 174 • Transformer and Distribution Stations

Forecast 2009 expenses in this category represent a decrease of \$104,000 or 7% over estimated 2008 expenses. Based on a normal planned maintenance cycle, the planned maintenance each year is performed on different transformer and distribution stations. Depending on the volume of work required for the specific station, the annual operation and maintenance expenses may fluctuate from year to year.

181

#### 182 MAINTENANCE EXPENSES

183 Table 3 summarizes PowerStream's Maintenance Expense and related year-over-year

184 variances for the period 2006 to 2009.

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#### Table 3: Maintenance Expense: 2006-2009 (\$000's)

	2006 Board	2006	2007	2008 Bridge	2009 Test
	Approved	Actual	Actual	Year	Year
Stations <sup>a</sup>	916	509	158	419	1,103
\$ Increase		(407)	(350)	260	685
Lines <sup>♭</sup>	5,112	5,799	6,661	5,089	5,367
\$ Increase		687	862	(1,571)	278
Metering <sup>c</sup>	520	11	-	-	-
\$ Increase		(509)	(11)	-	-
Other <sup>d</sup>	190	-	-	-	-
\$ Increase		(190)	-	-	-
TOTAL	6,738	6,319	6,819	5,508	6,471
\$ Increase		(421)	500	(1,311)	962
% Increase		-6%	8%	-19%	17%

186 Notes: a. OEB account numbers 5110, 5114, 5112 187

b. OEB account numbers 5120, 5125, 5130, 5135, 5160, 5145, 5150, 5155

188 189 190

c OEB account numbers 5175 d. OEB account numbers 5105

e. These cost categories are functional groupings of the OEB accounts included in the Board Approved Maintenance total expense of \$6,738,000 from the approved EDR 2006 model (EB-2007-0074) Sheet 2-4, Adjusted Accounting Data.

192 193

191

194 The 2009 Test Year total for Maintenance of \$6,471,000 represents a decrease of 195 \$267,000 or 4% from the 2006 Board Approved amount of \$6,738,000.

- 196 Since the 2006 Board Approved (2004 Historic Test Year), PowerStream has increased
- 197 its level of planned preventative programs thereby increasing the Operation Expense,
- 198 and reducing the Maintenance Expense.

#### 199 2006 Board Approved vs. 2006 Actual

Actual 2006 Maintenance Expense decreased by \$421,000 or 6% from the 2006 Board-Approved amount. The materiality threshold is \$648,000 for 2006 (i.e., 1 percent of 2006 Board Approved Distribution expenses before PILs).

This variance is below the materially threshold and is primarily due to a change in the actual level of maintenance activity, mainly due to increased preventative work captured in Operation Expense.

#### 206 2007 Actual vs. 2006 Actual

Actual 2007 Maintenance Expense increased \$500,000 or 8% from 2006 actual
Maintenance Expenses. The materiality threshold is \$670,000 for 2007 (1 percent of
209 2006 Actual Distribution expenses before PILs).

- The increase was mainly due to an increase of \$862,000 in line maintenance expenses which was partially offset by the reduction in the cost of station maintenance.
- 212 Increased line maintenance expenses in 2007 were the result of the higher than average
- 213 number of failures in both primary and secondary lines. The high number of failures in
- 214 2007 was a result of aging asset base. PowerStream has addressed this by increasing
- 215 line replacement in its capital budget plans.
- 216 The decrease in the cost of station maintenance is mainly due to a shift between 217 planned and unplanned maintenance.

#### 218 2008 Bridge Year vs. 2007 Actual

Estimated 2008 Maintenance Expense decreases by \$1,311,000 or 19% from 2007
actual expenses. The materiality threshold is \$726,000 for 2008 (1 percent of 2007
Actual Distribution expenses before PILs).

Powerstream estimates that line maintenance expenses in 2008 will decrease due to a forecasted normal level of failures, whereas 2007 Actual was unusually high. There is a certain amount of year-over-year variation to failures and PowerStream budgets arebased on an average number of failures.

226 Another factor contributing to the decrease is the capitalization of replacement assets,

such as poles, which were previously expensed in many cases. PowerStream now

228 capitalizes all these items in accordance with Generally Accepted Accounting Principles.

- This is not a change in accounting policy, but rather a correction in the application of the existing policy.
- 231 2009 Test Year vs. 2008 Bridge Year
- Forecast 2009 Maintenance expense represents an increase of \$962,000 to estimated
  2008 expenses. The materiality threshold is \$727,000 for 2009 (1 percent of 2008 Bridge
  Year Distribution expenses before PILs).
- 235 There are several major factors contributing to this variance:
- increased station maintenance;
- forecasted increase in the number of failures on primary and secondary lines,
   resulting in higher maintenance expenses; and
- 2009 Test Year budgeted amounts based on new 2008 burden rates while 2008
   Bridge Year budgeted amounts prepared using old burden rates.

## • ADMINISTRATION EXPENSE

- 242 Table 4 summarizes PowerStream's Administration Expense and related year-over-year
- 243 variances for the period 2006-2009.

#### 244 Table 4: Administration Expenses 2006–2009 (\$000's)

	2006 Board	2006	2007	2008	2009
	Approved	Actual	Actual	Bridge Year	Test Year
Billing and Collection <sup>a</sup>	5,641	5,145	5,984	5,250	5,551
\$ Increase		(496)	839	(734)	301
% Increase		-9%	16%	-12%	6%
Community Relations / Advertising <sup>a</sup>	415	706	516	625	634
\$ Increase		291	(190)	109	9
% Increase		70%	-27%	21%	1%
Community Relations - CDM	0	1,834	2,103	650	64
\$ Increase		1,834	268	(1,453)	(586)
% Increase		100%	15%	69%	-90%
Administrative and General Expenses	17,685	15,128	14,859	16,651	19,582
\$ Increase		(2,556)	(269)	1,792	2,931
% Increase		-14%	-2%	12%	18%
Insurance Expense	671	642	773	834	982
\$ Increase		(29)	131	61	148
% Increase		-4%	20%	8%	18%
Bad Debt Expense	668	1,295	2,040	863	1,236
\$ Increase		627	745	(1,177)	373
% Increase		94%	57%	-58%	33%
Charitable Contributions	(80)	15	30	15	41
\$ Increase		95	15	(15)	26
% Increase		-119%	100%	-50%	173%
Other Distribution Expenses	956	653	681	1,016	1,119
\$ Increase		(304)	28	336	102
% Increase		-32%	4%	49%	10%
TOTAL	25,957	25,418	26,986	25,904	29,210
\$ Increase		(539)	1,567	(1,082)	3,306
% Increase		-2%	6%	-4%	13%

<sup>245</sup> 246

16 Note: a. These expense categories (grouping of OEB accounts) are taken from the 2007 Rate Application (EB-2007-

247 0074), EDR 2006 model Sheet 2-4 Adjusted Accounting Data . In the 2006 EDR model, Community Relations and

Advertising are shown separately as \$526,000 and \$ (111,000) respectively.

PowerStream has totalled the expense groups above and labelled these "Administration
Expense". This total consists of all distribution expenses excluding Operation,
Maintenance, Amortization, Interest and PILs.

252 The 2009 Test Year Administration Expense has increased by \$3,253,000 or 13% over

the 2006 Board Approved amount. The Board Approved amount is based on a 2004

254 historic test year with minor adjustments.

255 The largest part of this increase is attributable to wage increases and other inflationary

256 pressures. Wages make up the largest part of these costs. During this period wage rates

in the union contracts increased 3% per year. There have been similar increases in non-

258 union salaries and other costs.

# 259 2006 Actual vs. 2006 Board Approved

Actual 2006 Administration Expense decreased \$539,000 or 2% from 2006 Boardapproved amounts. The materiality threshold is \$648,000 for 2006 (1% of 2006 Board Approved Distribution expenses before PILs).

The decrease is mainly due to a reduction in Administrative and General ("A&G")
expenses, partially offset by increased Conservation and Demand Management ("CDM")
and Bad Debt Expenses.

# **• Administrative and General Expenses**

Actual A&G expenses in 2006 were \$2,556,000 lower than the 2006 Board Approved amount. This variance was largely the result of savings realized through the merger of three predecessor utilities and the acquisition of Aurora Hydro mainly in the area of facility costs (closure of Richmond Hill and Aurora offices) and staff reduction.

# • Community Relations (CDM)

272 Conservation and Demand Management ("CDM") expenses were \$1,834,000 in
273 2006 compared to a 2006 Board Approved amount of \$0. These expenses are the

274 result of carrying out PowerStream's OEB approved CDM plan and were funded by275 the third tranche funding in 2005 rates.

#### **Bad Debt Expense**

Bad Debt Expense in 2006 was \$1,295,000 compared to a 2006 Board Approved
amount of \$668,000. The increase of \$627,000 is mainly due to the fact that the
2006 Board Approved amount was based on a 2004 historical amount, which was
understated compared to subsequent actual bad debt experience on the 2004
receivables.

#### 282 **2007 Actual vs. 2006 Actual**

Actual 2007 Administration Expense increased by \$1,568,000 or 6.2% over 2006 actual
expenses. The materiality threshold is \$670,000 for 2007 (1% of 2006 Actual Distribution
expenses before PILs).

Increases in the Billing and Collection and Bad Debt categories drove this variance asexplained below.

#### **Billing and Collection Expenses**

Billing and Collection expenses in 2007 increased by \$839,000 or 16% over 2006.

In 2007, the Billing and Collection Department employed 12 co-op students, at a cost
of \$75,000. In 2006, the same number of co-op students was employed at a similar
cost but the costs were recorded in the A&G expense category. The result is an
increase of approximately \$75,000 in 2007 in the "Billing and Collection" category
and a corresponding decrease in the 2007 A&G expenses.

Retailer services costs were lower in 2006 mainly due to a \$400,000 adjustment to
recognize several years of costs that belonged in the 1518 RCVA variance account,
thereby understating the real cost in 2006.

- In 2007, an under-applied burden of \$300,000 increased the level of expense in the
  Billing and Collection category by \$300,000. See Exhibit B1, Tab 3, Schedule 1 for
  more information regarding changes in burden rates.
- The remaining increase of \$64,000 reflects wages increases, step wage increases,inflation and higher spending on training programs.

#### **Bad Debt Expenses**

Bad Debt expense in 2007 was \$2,040,000. This is significantly higher bad debt than a "typical" year, based on PowerStream's historical experience. There are two main reasons for this. In 2007 there was a large bad debt of \$400,000 and additional bad debts of \$300,000 in total in respect of several other large commercial customers. The amount provided in 2006 for bad debt was understated by \$265,000 compared to the actual write offs of 2006 bad debts in 2007. The result was that expense of \$265,000 was recognized in 2007 rather than in 2006.

#### 311 2008 Bridge Year vs. 2007 Actual

Administration Expense in 2008 is estimated to decrease by \$1,082,000 or 4% from
2007. The materiality threshold is \$726,000 for 2008 (1% of 2007 Actual Distribution
expenses before PILs). The principal reasons for this decrease are described below.

#### **Billing and Collection**

316 Billing and Collection Expenses in 2008 are estimated to decrease \$734,000 or 12% 317 from 2007. The main reason for this decrease is that the cost of providing water 318 billing and collection services to the City of Vaughan and the Town of Markham is 319 offset by the revenue generated by providing these services. The level of this 320 revenue increased in 2008 because higher prices for these services that reflect 321 current costs and a profit were negotiated in 2007. These new prices were reflected 322 in the 2008/09 budget. See Exhibit D1, Tab 1, Schedule 6 for a discussion of Shared 323 Services.

#### **324** • Community Relations (CDM)

In 2008 "Third tranche"CDM spending is estimated to be \$650,000, a decrease of \$1,453,000 or 69% from 2007. The Third Tranche CDM plan was substantially completed by the end of 2007 with only a small part remaining for 2008. All other CDM spending in 2008 is being carried out under OPA programs and is recorded as non-distribution as per the OEB's direction.

#### **330** • Administrative and General Expenses

Administrative and general expenses in 2008 are estimated to increase by
\$1,792,000 or 12% over 2007. The principal drivers of this increase are:

- a \$600,000 increase in regulatory expenses (i.e., legal costs, consulting and
   OEB interveners costs) associated with various regulatory initiatives, including
   Third Generation IRM and the Comparison of Distributor Costs project;
- a \$300,000 increase in the labour cost of external contractors and temporary
   help for initiatives such as the transition to International Financial Report
   Standards;
- a \$300,000 increase in compensation, due to projected inflation and step
  increases; and
- a \$592,000 increase in "Miscellaneous Expenses", mainly due to increased
   building maintenance cost. Actual 2007 expense was understated due to the
   reversal of an accrual in 2006 with no offsetting expenses from 2006.

#### **Bad Debt Expense**

- As explained above, the Bad Debt Expenses recorded in 2007 were unusually high.
- 346 The 2008 Budget was prepared assuming a more typical year.

347

#### 348 2009 Test Year vs. 2008 Bridge Year

Administration Expense in 2009 is forecast to increase \$3,306,000 or 13% over 2008.
The main drivers of this increase are discussed below.

# **Billing and Collection Expenses**

In 2009 Billing and Collection expenses are forecast to increase \$301,000 over 2008.
This increase is mainly due to wage increases and increased head count.

#### • Administrative and General (A&G) Expenses

- The projected increase in A&G expenses of \$2,931,000 in 2009, relative to 2008, comprises:
- 357 \$750,000 in connection with the costs of the transition to International 358 Financial Reporting Standards ("IFRS"). The Canadian Accounting 359 Standards Board (AcSB) of the CICA has defined the timeline for all publicly 360 accountable enterprises to move to IFRS. PowerStream will be required to 361 prepare its financial statements, based on IFRS, beginning January 1, 2011. 362 To meet this goal, PowerStream will need to spend an estimated \$3.0M over 363 four years (2009-2012). The average annual amount is used for the 2009 364 Test Year Rate application;
- \$640,000 from the application of the updated overhead burdens rates;
- \$200,000 in increased audit fees, due to the increased volume of required
   audit work, related to the anticipated accounting policy changes as per IFRS
   requirements (i.e., inventory evaluations, financial instruments etc.);
- \$200,000 in increased consulting fees, related to various IT projects, such as
   JDE support, and business processes re-engineering;
- \$460,000 in salary increase related to the hiring of new employees, as a
   result of growth as well as new and increased requirements;

- \$ 370,000 related to annual compensation increases;
- \$180,000 related to the inflationary increase in miscellaneous costs across
   all administrative departments; and
- a remaining increase of \$80,000 in other items.

#### **Bad Debt expense**

The projected 2009 Bad Debt expense is an increase of \$374,000 over the 2008forecasted expense.

380 The forecasted 2009 Bad Debt expense amounts to \$1,146,000. This amount is 381 budgeted, based on last three years of bad debt history and includes provision for 382 bad debt write-offs and bankruptcies write-offs, net of estimated recoveries. The 383 2009 Bad Debt expense also includes the cost of bad debt insurance, provided by 384 MEARIE. This insurance is necessary to reduce exposure to large bad debts due to 385 commercial bankruptcies experienced in recent years. The insurance product 386 includes several "named insured" companies within PowerStream's service area, as 387 well as a general provision for all general service companies greater than a certain 388 minimum size. The Bad Debt insurance provides an additional means to mitigate 389 risks and limit bad debt losses. In the absence of this insurance, PowerStream 390 estimates its Bad Debt losses would be significantly higher.

The forecasted 2009 Bad Debt expense also includes a provision for other bad debt
write-offs related to Miscellaneous Accounts receivable (receivables other than
electricity bills) in the amount of \$90,000.

1

# PURCHASED SERVICES AND PRODUCTS

2 PowerStream's procurement policy seeks to ensure that required goods and services3 are purchased at fair and reasonable prices.

Purchases between \$10,000 and \$100,000 must be underpinned by written quotations from at least three approved vendors. This requirement may be waived if the purchase is made from a qualified supplier which has previously proven to consistently offer competitive pricing and reliable service or if there are timing, technical or proprietary issues which require limiting the number of bidders or directing the order to a specific supplier. Purchases over \$100,000 require a competitive bidding process.

Table 1, below, lists the vendors, related transaction and procurement method in respect of all procurement transactions (other than corporate services) with an aggregate annual value of greater than \$100,000 in the period 2006-2007 or in 2008. For corporate services, the materiality threshold is \$30,000. PowerStream used these thresholds to capture the most meaningful transactions. The actual annual dollar value of each contract have been excluded for the following reasons:

- most of the services / products that were purchased in 2006 and 2007 used a
   tendering process; the actual dollar values have, accordingly, been excluded to
   protect the competitive procurement process; and
- PowerStream does not forecast the value of service or product purchases at the vendor level; it is, accordingly, not possible to estimate the 2008 dollar values, at the vendor level, or forecast the value of individual contracts in 2009.

Table 1: Services and Products Purchased by PowerStream from Third Parties							
Company	Service	Timeline	Procurement method				
	Operations and Maintenance						
Trans Power U. C. Inc.	underground line maintenance	ongoing	RFP				
Mc G. Poleline Ltd. (K-line LTD)	overhead line maintenance	ongoing	RFP				
MULTIVIEW LOCATES INC.	contract cable locates	Ongoing	Sole /directed source				
Canadian Locators Inc. (CLI) contract cable locates – LAC certified contractor		Starting 2008	Pilot				
Utility Line Clearing & Maint.	tree trimming and insulator washing	ongoing	RFP				
Davey Tree Expert Co. of Canada	tree trimming	Until 2006	RFP				
Cressman tree Services	tree trimming	From 2007	RFP				
Wickens Industrial Ltd.	dry Ice cleaning	ongoing	sole / directed source				
Soil Vac Inc.	secondary burn offs	From 2007	trial run / pilot RFP in future				
Mackin Gibson Consulting	outage report program	ongoing	sole / directed Source				
Brinks Inc.	freight, courier	ongoing	RFP				
Olameter Inc	meter reading, bill printing, CDM, call centre	ongoing	RFP				
York Region Utility Services L	meter installs and meter repairs	ongoing	RFQ				
Rodan Energy and	cross phase analysis for large GS	ongoing	sole / directed				

Company	Service	Timeline	Procurement method
Metering Solution	customers		source
	Corporate Services		
Gowlings Lafleur Henderson	litigation, corporate advice	ongoing	sole / directed source
Borden Ladner Gervais LLP	OPA-CDM 2007 Agreements, corporate advice	ongoing	sole / shared with CLD
Fraser Milner Casgrain LLP	regulatory advice and applications	ongoing	sole source, based on RFP for 2006 EDR
Deloitte and Touche LLP	audit / tax advice	ongoing	sole source
KPMG LLP	M&A, strategic plan	ongoing	RFP
Lannick Associates	recruitment fees	2007 only	sole / directed source
BDR Consulting	financing plan advice	2007 only	sole / directed source
EnerSpectrum group	CDM implementation support	2006-2007	RFQ
HOK Canada Inc.	New building interior design	2007 only	RFP
LNR Corporation, Broker	feasibility studies /LEEDS	2007 only	RFP
	IT Services		
Mid-Range Computer group Inc.	• • • • •		Service specific, RFQ for Disaster recovery
Rondinone Management Service Inc.	PeopleSoft support	ongoing	sole source
T&W Info-Systems Ltd	IT support for CIS	ongoing	sole source

Company	Service	Timeline	Procurement method
Ideaca	IT consulting – Biztalk, Sharepoint	ongoing	RFP
Focused Management Resources	process efficiency – customer connection	2007 -2008	RFP
ESRI Canada LTD	GIS implementation	2007	RFP
Telus Mobility	wireless communication	ongoing	RFP
Savage Data Systems	EBT (Electronic Billing Transactions)	ongoing	Sole Source
ENERconnect	IESO wholesale settlement services	Starting 2008	RFQ / Business case

23

#### 1

#### AMORTIZATION

PowerStream amortizes its capital assets in accordance with the Canadian Institute of Chartered Accountants ("CICA") Handbook and the Board's Accounting Procedures Handbook for Electric Distribution Utilities. The assets are amortized on a straight-line basis and the half-year rule is applied. The "half-year rule" results in taking one half of the annual amortization amount in the first year and in the final year.

Capital assets are either recorded as single identifiable items or grouped where, by their
nature, it would be impractical to identify individual assets. These grouped assets are
managed as a pool for the purposes of amortization. See Exhibit 1, Tab 3, Schedule 1,
for PowerStream's capitalization policy.

PowerStream has made no change to the amortization rates it uses, which are the same amortization rates that were used in its approved Harmonized Rate Application (EB-2007-0074). Table 1 on the next page provides amortization expenses by asset group for: 2006 Board-Approved, 2006 Actual, 2007 Actual, 2008 Bridge year and 2009 Test Year.

Asset Group	2006 Board Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
Land and	54 000	50.404	70.070	70.004	70.004
Buildings	51,966	56,424	76,070	76,091	76,091
TS Primary Above 50	1,874,721	2,035,563	2,245,417	2,339,263	2,542,875
DS	213,901	227,537	233,593	269,896	285,193
Poles, Wires	17,067,140	18,545,945	18,937,902	19,886,514	21,538,184
Line Transformers	6,429,554	6,995,668		7,495,080	
Services and	0,429,554	0,995,000	7,287,788	7,495,080	7,787,745
Meters	2,778,822	3,016,775	3,507,607	4,045,022	4,204,561
General Plant	148,089	160,795	175,315	403,389	634,576
Equipment	1,267,386	1,119,281	1,454,983	1,800,801	2,090,881
IT Assets	1,637,900	1,783,897	2,742,938	4,273,621	5,743,534
CDM Assets	0	0	0	0	0
Other Distribution Assets	679,205	746,094	729,075	783,023	829,056
Intangible Assets	331,049	476,221	87,115	1,200	1,200
Capital Contributions	(4,675,014)	(5,912,209)	(6,392,692)	(6,977,336)	(7,766,100)
Amortization before Burden Allocation	27,804,720	29,251,993	31,085,111	34,396,564	37,967,795
Less: burden allocated amortization <sup>2</sup>		(1.085,470)	(1,200,033)		· ·
TOTAL Net	(1,242,042)	(1.065,470)	(1,200,033)	(1,350,857)	(1,428,238)
AMORTIZATION	26,562,678	28,166,523	29,885,078	33,045,707	36,539,557

#### Table 1: PowerStream Amortization Expenses

NOTES:

1

1. Non-distribution assets are excluded from the asset groupings

2. Amortization of several asset classes are reallocated to burden clearing accounts

2 The year-over-year increases in amortization expenses are the result of increases in the

3 balances recorded in all asset categories. The asset additions are described more fully

4 in Exhibit B1, Tab 4, Schedules 1 and 2 and asset variance analysis is in Exhibit B1, Tab

5 7, Schedule 1.

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D1 Tab 1 Schedule 6 Page 1 of 6

#### 1

#### SHARED SERVICES

2 PowerStream has two affiliates: the City of Vaughan and its wholly-owned subsidiary, 3 Vaughan Holdings Inc. The latter is one of PowerStream's two shareholders. 4 Nevertheless, for the purpose of the Affiliate Relationships Code for Electricity Distributors and Transmitters (the "ARC"), PowerStream treats its minority shareholder, 5 6 Markham Enterprises Corporation, and its parent, the Town of Markham, as affiliates as 7 well. PowerStream has accordingly proposed that Shared Service Agreements govern 8 the terms and conditions of the provision of services to and the purchase of services 9 from the City of Vaughan and the Town of Markham. These agreements have been 10 drafted by PowerStream and await signatures from PowerStream's shareholders. 11 Copies of the Shared Services Agreements between PowerStream and the City of 12 Vaughan, and PowerStream and the Town of Markham, covering the period 2008 to 13 2010 are included at Exhibit D1, Tab 1, Schedule 7 and Exhibit D1, Tab 1, Schedule 8, 14 respectively. It was hoped to have these Shared Services Agreements executed by the 15 time of the filing of this Application, but this was not possible. Note that these 16 agreements replace those that covered the period 2005 to 2007.

17 The purpose of this written evidence is to describe the goods and services that 18 PowerStream purchases from and provides to the Town of Markham and the City of 19 Vaughan and explain how the prices that PowerStream pays and receives for these 20 have been determined<sup>1</sup>.

#### 21 PRODUCTS AND SERVICES PURCHASED FROM THE TOWN OF MARKHAM

#### 22 Leased premises

PowerStream (and, previously, Markham Hydro Distribution Inc.) leased land and a building located at 8100 Warden Avenue to accommodate administrative staff, operations staff, warehousing and fleet services under a lease with the Town of Markham.

<sup>&</sup>lt;sup>1</sup> As the revenue that PowerStream receives for services provided to "affiliates" is offset against the costs of providing such services, it is appropriate to include evidence regarding the provision of such revenue-generating services in the OM&A section of PowerStream's Application.
2009 EDR Application

PowerStream's rationale for relocating administrative staff to a new corporate head
office is outlined in Exhibit B1, Tab 5, Schedule 3.

29 In 2007, senior staff at the Town of Markham asked that PowerStream vacate the 8100 30 Warden Avenue location so that they could lease the property to a company in the 31 information technology industry. As a result, PowerStream vacated the Warden Avenue 32 facility in February, 2008, and relocated to temporary leased space. The Town of 33 Markham charged 1/12 of the annual rent (or \$70,410.84) for 2008. Also, since 34 PowerStream would continue to need outdoor storage space at 8100 Warden Avenue, 35 a fee of \$10,000 per month was negotiated starting September 1, 2008. The lease 36 payments for 2008 therefore total \$110,411 (\$70,410 plus four months at \$10,000). 37 Lease payments for 2009 are \$120,000 (twelve months at \$10,000). There are no 38 payments in 2010 since PowerStream anticipates relocating to a new operations centre 39 early in 2010.

#### 40 Cashier services

The Town of Markham provides cashier services to PowerStream at Markham Town Hall. Customers may pay their electricity and water bills and get responses to basic questions about their bills and account history at this location. PowerStream pays a market price for these services based on the cost to have a customer service agent in place and have the cost to have a connection to PowerStream's Customer Information System. For 2009 and 2010, a 2 percent inflation factor is applied to the 2008 rate.

The annual cost of the facilities leased from and the cashier services purchased fromthe Town of Markham are summarized in Table 1 below.

## 49 Table 1: Facilities Leased and Services Purchased from the Town of Markham (\$)

Service	2006	2007	2008	2009	2010
facilities	602,000	602,000	110,411	120,000	Nil
cashier	Nil	Nil	56,227	57,296	59,015

#### 50 **PRODUCTS AND SERVICES PROVIDED TO THE TOWN OF MARKHAM**

#### 51 Water and sewer

PowerStream provides certain services to water and sewer customers in the Town of Markham. These include billing, collection, revenue management, customer account management, responses to telephone and written enquiries and the reporting of certain statistics. The price that is charged by PowerStream for these services is based on fully-allocated costs and includes an amount that is equal to PowerStream's weighted average cost of capital (7.3%). Revenues are netted against these fully-allocated costs, to PowerStream, of providing these services.

#### 59 Street lighting maintenance

PowerStream also provides street lighting maintenance services to the Town of 60 61 Markham. These comprise managing a third-party contract for streetlight maintenance, 62 re-lamping program, accident and vandalism repair, streetlight fault repairs and pole 63 replacement. The third party was selected through a tendering process, therefore the 64 street lighting costs are market-based. PowerStream charges a 20% contract 65 management fee for overseeing the contract. All revenues including the 20% service 66 fee, from the provision of these services, are netted against PowerStream OM&A 67 expenses. The annual amount is not fixed, but rather depends on the volume of 68 activity, as evident in the amounts for 2006 and 2007.

Table 2 summarizes the water and sewer and street lighting maintenance services thatPowerStream provides to the Town of Markham.

Service	2006	2007	2008	2009	2010		
water and sewer	1,038,000	1,160,165	1,363,337	1,401,200	1,426,190		
street lighting	785.800	863,700	800.000	800.000	800.000		

#### Table 2: Services Provided to the Town of Markham (\$)

# SERVICES AND PRODUCTS PURCHASED BY POWERSTREAM FROM THE CITY OF VAUGHAN

#### 74 Leased facilities

71

75 PowerStream leases facilities from the City of Vaughan at 2800 Rutherford Road. In 76 February, 2008 administrative staff were relocated from this facility to the new corporate 77 head office. Operations staff, warehousing and fleet services remained at Rutherford 78 Road. Also some operations staff from the vacated 8100 Warden Avenue site were 79 moved to Rutherford Road. Annual lease charges are based on a review comparable 80 rates conducted by the City of Vaughan and reviewed with PowerStream. Lease 81 payments will end in 2010 when PowerStream occupies a new operations centre. 82 Although there is a lease amount for 2010 in the draft agreement, PowerStream has 83 provided the City of Vaughan with official notice that the Rutherford Road facility will be 84 vacated.

#### 85 **Software maintenance**

The City of Vaughan and PowerStream share licensing fees for JDE Enterprise Software that each uses independently to manage their financial systems. The combined, higher volume of licenses results in lower costs per license. The City managed this process and charges PowerStream an annual software fee which is less than what it would pay was PowerStream to obtain the licenses on its own.

#### 91 Fuel service charges

The City of Vaughan purchases gasoline and diesel fuel for its fleet at bulk, discounted
rates. The City includes PowerStream's requirements in its purchases and charges
PowerStream an annual fee for managing the procurement, maintenance and billing

95 services related to PowerStream fueling its vehicles at 2800 Rutherford Road.
96 PowerStream pays for the fuel at the City's cost.

#### 97 Mail and records

- 98 Prior to PowerStream relocating to the new corporate head office in February, 2008, the
- 99 City of Vaughan provided mail delivery and records management services to 100 PowerStream.
- 101 Table 3 summarizes the services purchased by PowerStream from the City of Vaughan.

102

Table 3: Services Purchased by PowerStream from the City of Vaughan

Service	2006	2007	2008	2009	2010
facilities	789,921	881,889	717,532	731,882	746,520
information technology	107,400	89,400	37,000	37,740	38,495
fuel services	In facilities	In facilities	10,919	11,158	11,404
Mail/records	20,000	20,600	Nil	Nil	Nil

#### 103 SERVICES PROVIDED BY POWERSTREAM TO THE CITY OF VAUGHAN

#### 104 Water and sewer

PowerStream provides billing and collection of services to the City of Vaughan. These services include billing of all water and sewer services, revenue management and collections, customer account management, telephone and written inquiry handling and certain reporting statistics.

#### 109 **Payroll services**

PowerStream provides payroll services to the City of Vaughan including payroll administration (including taxes, benefits and deductions), Statistics Canada reporting, OMERS remittance and reporting and WSIB payments, as well as coordinating payroll audits and testing.

#### 114 **Cashier services**

PowerStream provides cashier services to the City of Vaughan. These include services to process payments for electricity and water bills, municipal taxes, parking permits, licensing fees, opening and sorting night box payments and responding to simple customer enquires. The increased cost starting in 2008 reflects the addition of a second staff member to the work volume.

120 Table 4 summarizes the services provided by PowerStream to the City of Vaughan.

121

 Table 4: Services Provided by PowerStream to City of Vaughan (\$)

Service	2006	2007	2008	2009	2010
payroll	250,000	275,500	260,075	266,091	272,253
cashier	103,000	124,630	231,671	235,965	240,972
water and sewer	1,044,000	1,136,380	1,376,148	1,414,367	1,439,592

122 The prices charged to the City of Vaughan for the provision of the services enumerated 123 in Table 4 reflect fully allocated costs and include a 7.3% mark up to reflect 124 PowerStream's weighted average cost of capital. The revenues that PowerStream 125 receives in this regard are netted against PowerStream's operating expenditures.

#### SHARED SERVICES AGREEMENT made in duplicate this 1st day of January, 2008

BETWEEN:

POWERSTREAM INC., (hereinafter called "PowerStream")

- and -

#### THE CITY OF VAUGHAN, (hereinafter called the "City")

WHEREAS on June 1, 2004, Hydro Vaughan Distribution Inc. ("Vaughan Hydro"), Markham Hydro Distribution Inc. and Richmond Hill Hydro Inc. amalgamated to become PowerStream (the "Amalgamation") in accordance with a merger agreement dated March 11, 2004, between The Corporation of the Town of Markham, the City, Hydro Vaughan Distribution Inc., Markham Energy Corporation, Markham Hydro Distribution Inc. and Richmond Hill Hydro Inc. (the "Merger Agreement");

AND WHEREAS prior to the Amalgamation, the City and Vaughan Hydro entered into an agreement providing for Vaughan Hydro to implement and co-ordinate the billing and collection of water rates on behalf of the City (the "Services Agreement");

AND WHEREAS pursuant to subsection 5.2(6)(b) of the Merger Agreement, all contracts listed on Schedule 4.2(34) of the Merger Agreement, which includes the Services Agreement, are to satisfy the requirements of the Affiliate Relationships Code for Electricity Distributors and Transmitters issued by the OEB and revised November 24, 2003 (the "Affiliate Relationships Code");

AND WHEREAS PowerStream and the City wish to enter into an agreement to replace the Services Agreement in order for PowerStream to continue to provide certain services to the City and the City to provide certain facilities to PowerStream consistent with the Affiliate Relationships Code and for the consideration and on the terms and conditions hereinafter set forth;

NOW THEREFORE in consideration of the premises and the mutual covenants and agreements herein contained (the receipt and sufficiency of which is hereby acknowledged by each of the Parties hereto), the Parties hereto hereby covenant and agree as follows:

#### 1. INTERPRETATION

- 1.1 <u>Definitions</u>. In this Agreement, including the recitals and Schedules hereto, the following words shall have the following meanings:
  - 1.1.1 "Affiliate" means a body corporate which is deemed to be affiliated with another body corporate, by virtue of one of them being the subsidiary of

1

the other or both being subsidiaries of the same body or each of them being controlled by the same person

- 1.1.2 "Affiliate Relationships Code" means that as described in the third recital of this Agreement;
- 1.1.3 "Agreement" means this agreement and all recitals and all Schedules attached hereto as the same may be amended, modified, supplemented, restated, or replaced from time to time;
- 1.1.4 "Applicable Law" means collectively, all applicable federal, provincial, territorial, municipal and foreign laws, statutes, ordinances, decrees, rules, regulations, by-laws, legally enforceable policies, codes, or guidelines, judicial, arbitral, administrative, ministerial, departmental or regulatory judgments, orders, decisions, directives, rulings or awards, and conditions of any grant of approval, permission, certification, consent, registration, authority or licence by any court, statutory body, self-regulatory authority, stock exchange or other Governmental Authority;
- 1.1.5 "Binding Arbitration" has the meaning ascribed thereto in Section 8.12;
- 1.1.6 "Business Day" means any day other than a day which is a Saturday, a Sunday or a statutory holiday or a civic holiday in Ontario;
- 1.1.7 "Claims" has the meaning ascribed thereto in Section 7.2;
- 1.1.8 "Confidential Information" means the confidential, secret or proprietary information of one Party (the "Disclosing Party"), including any of such information or data which (a) the Disclosing Party is obligated, under contract or law, to keep confidential and (b) is technical, financial or business in nature, and which has been or may hereafter be disclosed, directly or indirectly, to the other Party (the "Recipient"), either orally, in writing or in any other material form, or delivered to the Recipient;
- 1.1.9 "Disclosing Party" has the meaning ascribed thereto in Section 3.2;
- 1.1.10 "Effective Date" means the date of this Agreement January 1, 2008;
- 1.1.11 "Extension Notice" has the meaning ascribed thereto in Section 4.2;
- 1.1.12 "Facilities" means the facilities provided by the City to PowerStream as set out on Schedule A attached hereto;
- 1.1.13 "Fees for the Facilities" means collectively, the charges set out in the Lease, for the provision of the facilities by the City to PowerStream as set out on Schedule A attached hereto, plus all applicable taxes if any in respect thereof;

- 1.1.14 "Fee Review Date" has the meaning ascribed thereto in subsection 2.5.3;
- 1.1.15 "Fees" means collectively the Fees for the Facilities and the PowerStream Fees;
- 1.1.16 "Governmental Authority" means any court, arbitrator, administrative agency, commission, or governmental or regulatory official, department, agency, body, authority or instrumentality, whether foreign, federal, state, provincial, municipal, or local, having jurisdiction over the Parties;
- 1.1.17 "In Writing" or "Written" means a posted letter, a facsimile transmittal or an e-mail message;
- 1.1.18 "Internal Dispute Resolution" has the meaning ascribed thereto in subsection 8.12.1;
- 1.1.19 "Lease" means the commercial terms related to the facilities leased by PowerStream from the City, which are set out in Schedule A.
- 1.1.20 "MFIPPA" means the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M. 56.
- 1.1.21 "Notice" has the meaning ascribed thereto in Section 8.4;
- 1.1.22 "Parties" means the parties to this Agreement and "Party" shall mean any one of them.
- 1.1.23 "PowerStream Fees" means collectively, the charges for the provision of the Services as set out in Schedules D, E and F attached hereto, plus all applicable sales or service taxes in respect thereof,
- 1.1.24 "Receiving Party" has the meaning ascribed thereto in Section 3.2;
- 1.1.25 "Requested Party" has the meaning ascribed thereto in Section 8.1;
- 1.1.26 "Services" means the services purchased by the City from PowerStream as set out on Schedules B and C attached hereto, or those services agreed to in writing between the Parties from time to time;
- 1.1.27 "Term" means the term of this Agreement commencing on the Effective Date to and including the Termination Date;
- 1.1.28 "Termination Date" has the meaning ascribed thereto in Section 4.1; and
- 1.1.29 "Unsatisfied Party" has the meaning ascribed thereto in Section 8.1.
- 1.2 <u>Headings</u>. The division of this Agreement into Sections and subsections and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement. The terms "this Agreement",

"hereof', "hereunder" and similar expressions refer to this Agreement and not to any particular Section or other portion hereof and include any agreement supplemental hereto. Unless something in the subject matter or context is inconsistent therewith, references herein to "Sections" are to sections and "subsections" are to subsections of this Agreement.

- 1.3 <u>Extended Meanings</u>. In this Agreement words importing the singular number only shall include the plural and vice versa, words importing any gender shall include all genders and words importing persons shall include individuals, partnerships, associations, trusts, unincorporated organisations, companies and corporations.
- 1.4 <u>Currency</u>. All references to currency herein are to lawful money of Canada unless otherwise specified.
- 1.5 <u>Schedules</u>. The following Schedules which are attached to this Agreement are incorporated by reference into this Agreement and are deemed to be a part of it:

Facilities provided by the City to PowerStream:

Schedule A	-	Facilities
Schedule B	-	Information Technology
Schedule C	-	Fuel Service Charge

Services Purchased from PowerStream by the City:

Schedule D	-	Payroll Services
Schedule E	-	Cashier Services
Schedule F	-	Water Meter Reading and Water Billing and Remittance
Schedule G	-	Pricing Summary

#### 2. SERVICES

- 2.1 Provision of Services.
- 2.2 In accordance with the terms hereof, from and after the Effective Date to the Termination Date:
  - 2.2.1 PowerStream agrees to provide and perform, at the request of the City, the Services for the benefit of the City or the City's Affiliates, as the case may be; and

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- 2.2.2 the City agrees to provide the Facilities for the benefit of PowerStream or PowerStream's Affiliates, as the case may be, as the successor in title to Markham Hydro Distribution Inc., the named Tenant in the Lease, in accordance with the provisions of the Lease, as amended in writing from time to time. PowerStream covenants and agrees to comply with the provisions of the Lease, as amended from time to time.
- 2.3 <u>Standard of Services</u>. Notwithstanding the provisions of section 7.1 herein, PowerStream shall provide the Services in a prudent business manner in accordance with the policies and service levels applicable to such Services and the practices, policies and service levels as set out in Schedules B and C inclusively or such practices, policies and service levels as may be amended from time to time pursuant to Section 2.4 hereof. PowerStream shall provide the Services in accordance with all Applicable Laws. Notwithstanding the foregoing, "Applicable Laws" shall not include any by-laws, guidelines, directions, rules or standards of the City introduced, proclaimed or implemented after the date hereof that affects the provision of the Services by PowerStream hereunder or the terms hereof.
- 2.4 <u>Amendments</u>. At any time during the term of this Agreement the City may request changes in the Services that the City receives or the practices, policies or performance levels applicable to the Services received by the City by submitting such requests in writing to PowerStream. Within a reasonable time, but in any event not more than thirty (30) Business Days after receiving written notice of a request, PowerStream shall advise the City whether the change requested will have an impact on the delivery of the Services, acting reasonably, and whether or not the request will have an impact on the associated Fees and whether PowerStream authorizes the implementation of the change under the revised terms specified by the City or rejects the change proposed. Minor adjustments to existing reports shall not trigger fee increases or the imposition of one-time fees. Pending PowerStream's response, the City shall continue to receive the applicable Services in accordance with the latest approved terms for the provision of such Services.
- 2.5 <u>Fees</u>.
  - 2.5.1 PowerStream Fees rendered by PowerStream shall be those as set out on Schedules D, E and F, or as mutually agreed upon by the Parties in writing from time to time. For clarity purposes, the PowerStream Fees set out on Schedules D, E and F, for years 2009 and 2010 have been agreed upon by the Parties and such fees have been paid by the City in full and no outstanding amounts are payable in respect of those years as of the date of this Agreement.
  - 2.5.2 Fees for the Facilities provided by the City shall be those as set out on Schedule A, or as mutually agreed upon by the Parties in writing from time to time. For clarity purposes, the Fees for the Facilities set out on

Schedule A for years 2009 and 2010 have been agreed upon by the Parties and such fees have been paid by PowerStream in full and no outstanding amounts are payable in respect of those years as of the date of this Agreement.

- 2.5.3 The Parties shall review the PowerStream Fees on an annual basis, prior to or on November 1<sup>st</sup> (the "Fee Review Date"). PowerStream shall base the PowerStream Fees for the following year on reasonable estimates. If the Parties are unable to agree on the adjustments to the PowerStream Fees within thirty (30) days of the Fee Review Date then the dispute shall be settled by the dispute resolution procedure in accordance with Section 8.12 herein.
- 2.5.4 Unless otherwise specified herein, PowerStream Fees shall be invoiced to the City on a quarterly basis.
- 2.5.5 Fees for the Facilities shall be invoiced to PowerStream in accordance with the Lease.
- 2.5.6 The Parties agree that payment of PowerStream Fees and other charges provided for hereunder will be due and payable in arrears not later than thirty (30) days after the date of invoice.
- 2.5.7 All PowerStream Fees and the Facilities shall comply with the requirements of the Affiliate Relationships Code.
- 2.6 <u>Co-operation by City</u>. The City shall co-operate with PowerStream to assist it in the provision of the Services. Without limiting the generality of the foregoing, the City will:
  - 2.6.1 assign a minimum of two (2) representatives of the City to co-ordinate with PowerStream the provision of the Services to the City to deal with financial and operational issues respectively;
  - 2.6.2 prepare and provide to PowerStream, in a mutually acceptable format, all information reasonably required by PowerStream to permit proper delivery of the Services;
  - 2.6.3 establish, incorporate and maintain as part of the practices, policies and service levels applicable to such Services, in consultation with PowerStream, operating procedures to satisfy the City's requirements for accuracy and auditing;
  - 2.6.4 train, if necessary, personnel to assist in the provision of the required information to PowerStream to permit PowerStream to provide the Services; and

2.6.5 provide PowerStream assistance in collecting amounts owed to the City. The City may place any of such unpaid amounts on the collector's roll and enforce any other rights or remedies of the City pursuant to section 398(2) of the *Municipal Act*, S. O. 2001, c. 25.

#### 2.7 Customer Information.

- 2.7.1 PowerStream acknowledges that the ownership of all data in respect of water and sewer customers of the City as such data relates to: water and sewer information, water and sewer consumption history and charges, fire protection information, customer information including name, billing address, legal description, service address, the final twelve (12) months of meter readings for each customer, outstanding water and sewer invoices, customer credit and collection information, and information with regard to work orders and asset management systems is and shall remain the property of the City. PowerStream shall ensure that all of the data contemplated by this Section 2.7.1 is backed up in accordance with current PowerStream procedures and can be restored in1-2 Business Days. The City acknowledges that PowerStream can only back up data collected over a maximum period of 7 years.
- 2.7.2 The City acknowledges that the ownership of data in respect of electricity customers of PowerStream or any of its Affiliates is and shall remain the property of PowerStream
- 2.7.3 Requests for data by the City under Section 2.7.1 shall be made in writing, which may include electronic mail, by an individual designated by the City to the attention of Bill Schmidt, Director of Information and Technology at PowerStream or such other individual designated by PowerStream. PowerStream shall within 1 Business Day advise the City of the effort required to provide such data and such data shall be provided by PowerStream to the City no later than 2 Business Days from the date the request is made by the City or within such other, longer period of time as set out in the response from PowerStream.
- 2.7.4 Each Party, its employees and agents shall abide by all Applicable Laws, including the requirements of the Affiliate Relationships Code to the extent that it applies, related to the collection, use, retention, destruction and disclosure of any personal data which has been collected, used, retained, destroyed and disclosed in connection with the Services and the Facilities provided by such Party hereunder.

#### 3. CONFIDENTIAL INFORMATION

3.1 <u>Confidentiality Obligation</u>. Commencing upon the Effective Date and continuing thereafter, each Party:

- 3.1.1 shall treat as confidential, keep in safe custody and not disclose to any third party any Confidential Information provided to it by the other Party; and
- 3.1.2 use such Confidential Information only to the extent necessary to comply with this Agreement.
- Each of the Parties shall establish and enforce procedures to protect Confidential 3.2 Information disclosed to it by the other Party and shall restrict disclosure of such Confidential Information to only those employees, officers, agents and professional advisors of it and its Affiliates who need to know such information in connection with such Party's performance of this Agreement and in accordance with MFIPPA or any other applicable legislation. If a Party or its Affiliate is required by order of any Governmental Authority or Applicable Law or the rules of a stock exchange to disclose Confidential Information disclosed to it by the other Party, it shall promptly notify the other Party of the request for disclosure and shall cooperate with the other Party if that other Party opposes the request for disclosure and wishes to seek confidential treatment for such Confidential Information that is required to be disclosed. Each of the Parties acknowledges that no adequate remedy at law exists for a material breach or threatened material breach of this Section 3.2 the continuation of which unremedied will cause the other Party to suffer irreparable harm, and agrees that the other Party is entitled, in addition to other remedies which may be available at law or in equity, to immediate injunctive relief from any breach of this Section 3.2 and to specific performance of its rights. Promptly following the Termination Date, each Party agrees to use commercially reasonable efforts to deliver to the other Party (the "Disclosing Party") the Confidential Information (including all electronic and other copies thereof) disclosed to it (the "Receiving Party") by the Disclosing Party that the Receiving Party possesses or, upon request by a Disclosing Party, the Receiving Party shall confirm to the Disclosing Party that such Confidential Information has been destroyed in accordance with the Disclosing Party's instructions but, in no event if such Confidential Information is not returned to the Disclosing Party or destroyed in accordance with its instructions, such Confidential Information shall not be disclosed by the Receiving Party to any other person. Notwithstanding the forgoing, (i) PowerStream acknowledges that the City and its Affiliates are subject to MFIPPA and PowerStream agrees to act in accordance with applicable provincial laws relating to privacy as they apply to the provision of the Services by PowerStream; and (ii) the City acknowledges that PowerStream and its Affiliates are subject to the Personal Information Protection and Electronic Documents Act (Canada) and the City agrees to act in accordance with applicable federal laws relating to privacy as they apply to the provision of the Facilities by the City.

## TERM.

4.1 <u>Term</u>. This Agreement will be effective as at the Effective Date and shall terminate three (3) years after the Effective Date, unless terminated earlier

pursuant to Section 5.1 or extended by renewal of the term pursuant to Section 4.2 (the "Termination Date").

4.2 <u>Extension of Term</u>. If either Party gives notice in writing to the other Party by not later than sixty (60) days prior to the Termination Date, requesting the continuation of Services or the provision of the Facilities, as the case may be (an "Extension Notice") for an additional one year period, the Parties agree to negotiate, in good faith, in order to determine the terms and conditions on which such Services or the provision of the Facilities will be provided for a renewal term of one year or such longer period as is mutually agreed to. Notwithstanding anything in this Section 4.2 to the contrary, there shall be no obligation upon any Party having been provided with an Extension Notice to extend the term of this Agreement.

## 5. TERMINATION.

- 5.1 <u>Termination</u>. This Agreement, except for subsections 2.5.1, 2.5.2, 2.5.4 to 2.5.7 inclusive, and Sections 3.1,3.2 and 7.1 to 7.5 inclusive, which shall survive the termination of this Agreement, shall terminate on the Termination Date and may be terminated prior thereto as follows:
  - 5.1.1 by the mutual written consent of the Parties hereto;
  - 5.1.2 by either Party effective upon not less than twelve (12) months written notice to the other Party in respect of the Facilities or the Services, save and except for water services provided by PowerStream to the City as set out on Schedule B hereto, which shall require PowerStream to provide the City with eighteen (18) months written notice for termination of such service;
  - 5.1.3 by either Party effective upon not less than thirty (30) days written notice of any material breach or default of any provision or obligation of this Agreement by a Party, provided that such notice will not be effective to terminate this Agreement in the event the other Party cures the default during such notice period; and
  - 5.1.4 immediately, by either Party if the other Party becomes insolvent or is a party to any bankruptcy or receivership proceeding or any similar action affecting the affairs, property or solvency of such Party.
  - 5.1.5 <u>Termination Without Prejudice.</u> Any such termination of this Agreement shall be without prejudice to any other remedies which any Party may have against the other arising out of such breach of default and shall not affect any rights or obligations of any Party arising under this Agreement prior to such termination.

## FORCE MAJEURE.

6.1 <u>Force Majeure</u>. Performance of any obligation under this Agreement, other than the payment of Fees pursuant to Section 2.5.6, may be suspended by either Party without liability to the extent that an act of God, war, fire, earthquake, explosion, governmental expropriation, governmental law or regulation or any other occurrence beyond the reasonable control of such Party or labour disruption, strike or injunction (if such labour event is not caused by the bad faith or unreasonable conduct of such Party) delays, prevents, restricts, limits or renders commercially unfeasible the performance of any such obligation. The affected Party may invoke this provision by promptly notifying the other Party of the nature and estimated duration of the suspension. No Party hereto invoking this provision shall be liable for any failure to perform or any delay in the performance of its obligations in this Section 6.1.

## 7. DISCLAIMER, LIMIT OF LIABILITY AND INDEMNITY

- 7.1 <u>Disclaimer</u>. The Services provided by PowerStream are provided without any warranty whatsoever, other than as is set forth in Section 2.3 hereof. In particular, PowerStream makes no warranty as to the suitability of any of the Services for the specific purposes or needs of the City. The warranty contained in this Agreement is the only warranty made by PowerStream with respect to the Services. PowerStream specifically excludes any other warranties or conditions express or implied, including, but not limited to, implied warranties or conditions of merchantability, merchantable or satisfactory quality or fitness for a particular purpose, and those arising from a course of dealing or usage of trade.
- 7.2 <u>Indemnity by the City</u>. The City agrees to indemnify, defend and hold harmless PowerStream from any and all claims, litigation, damages, losses, causes of action or expenses (including legal fees and disbursements) ("Claims") suffered or incurred by PowerStream from third parties or otherwise in connection with:
  - 7.2.1.1 a breach of the City's obligations under this Agreement insofar as PowerStream has complied with its obligations under this Agreement; and
  - 7.2.1.2 any negligence on the part of the City, its employees, contractors or agents in its provision of the Facilities.
- 7.3 Notwithstanding the provisions of Section 7.2, the City shall be under no obligation to indemnify and save harmless PowerStream from any Claims resulting from the negligence or wilful misconduct of PowerStream in its provision of the Services hereunder.
- 7.4 <u>Indemnity by PowerStream</u>. PowerStream agrees to indemnify, defend and hold harmless the City from any and all Claims suffered or incurred by the City from third parties or otherwise in connection with:

- 7.4.1 a breach of PowerStream's obligations under this Agreement insofar as the City has complied with its obligations under this Agreement; and
- 7.4.2 any negligence on the part of PowerStream, its employees, contractors or agents in its provision of the Services hereunder.
- 7.5 Notwithstanding the provisions of Section 7.4, PowerStream shall be under no obligation to indemnify and save harmless the City from any Claims resulting from the negligence or wilful misconduct of the City in its provision of the Facilities hereunder.
- 7.6 <u>Insurance</u>. PowerStream shall provide and keep in force a comprehensive liability insurance policy with coverage equal to or greater than Five Million Dollars (\$5,000,000) (Canadian) of sufficient coverage in respect of the Services performed by it under the terms of this Agreement. The City shall provide and keep in force insurance in respect of the Facilities as required under the terms of this Agreement.

### 8. MISCELLANEOUS

- 81 Audit. PowerStream shall maintain accurate and complete books and records with respect to (i) the Services provided hereunder, (ii) the PowerStream Fees, and (iii) any information provided by the City to PowerStream for the provision of the Services. The City shall maintain accurate and complete books and records in respect to (i) the Facilities provided hereunder, (ii) the Fees for the Facilities, and (iii) any information provided by PowerStream for the provision of the Facilities. Each Party shall keep its accounts and records in accordance with Canadian generally accepted accounting principles from time to time approved by the Canadian Institute of Chartered Accountants (or a successor institute) with respect to the computation of Fees and other charges payable pursuant to this Agreement. Each Party shall be entitled to audit such books and records in order to confirm compliance with the terms of this Agreement. Each Party shall make such books and records available to individuals designated by the other Party and provide any assistance it may reasonably require in order to conduct audits and inspections, provided that:
  - 8.1.1 audits and inspections shall be made at reasonable times and on at least ten (10) Business Days prior notice; and
  - 8.1.2 audits of Fees shall be made not later than twenty four (24) months after such Fees have been paid by a Party to the other Party.

Each Party agrees to provide the other Party with reasonable facilities for such audits and inspections and copies of documents, where necessary, appropriate and permitted by law. If a Party is not satisfied with the information provided (the "Unsatisfied Party"), the Unsatisfied Party may retain, at its own expense, an independent auditor, to review the books and records referred to above. The Party requested to provide additional information (the "Requested Party") may refuse

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to disclose to the Unsatisfied Party or its agents any information that the Requested Party is prevented from disclosing as a result of a confidentiality obligation to another person provided that the Requested Party shall use commercially reasonable efforts to obtain consents to permit disclosure of such information if such information is reasonably required in order to conduct an audit and inspection by the Requesting Party under this Section 8.1 and the Requesting Party or its agents has requested access to such information. Each of the Parties agree that any third party conducting an audit or inspection shall be subject to the confidentiality provisions of Sections 3.1 and 3.2 and may be required by the Requested Party to enter into a confidentiality and non-disclosure agreement in form and substance reasonably acceptable to the Requested Party and each of the Parties agree that should an independent auditor be deemed by the Requested Party to be a competitor of the Requested Party, the Parties shall mutually agree to the review and audit procedures prior to such review and audit.

- 8.2 <u>Governing Law</u>. This Agreement shall be governed by and construed in accordance with the law of the Province of Ontario and the laws of Canada applicable therein.
- 8.3 <u>Successors</u>. This Agreement will enure to the benefit of and be binding on the respective successors and assigns of each of the Parties.
- 8.4 <u>Time of Essence</u>. Time shall be of the essence of this Agreement
- 8.5 Notices. Unless otherwise expressly provided herein, any notice, consent or other communication (a "Notice") given pursuant to or in connection with this Agreement shall be in writing and shall be sufficiently given to the person to whom it is addressed if transmitted by facsimile, delivered in person to or for such person at the address of such person indicated below or at such other address as such person shall have provided in writing to the other Party in accordance with this provision. Any Notice provided in accordance with this provision shall be deemed to have been sufficiently given or made on the date on which it was so transmitted by facsimile or delivered provided that if such day is not a Business Day or delivery occurs after normal business hours of the recipient, the Notice shall be deemed given or made on the Business Day following transmission or delivery, as the case may be.

To PowerStream:

PowerStream Inc. 161 Cityview Boulevard Vaughan, Ontario L4H 0A9

Attention:	Dennis Nolan Executive Vice President, Corporate Services and Secretary
Fax:	(905) 532-4616
E-Mail:	dennis.nolan@powerstream.ca

To the City:

City of Vaughan 2141 Major Mackenzie Drive Vaughan, Ontario L6A 1T1

For Financial matters or matters relating to the Facilities:

Attention:	Barry Jackson Director of Cit Treasurer	y Financial	Services/Deputy
Fax:	(905) 303-2036		

E-Mail: barry.jackson@vaughan.ca

For Operational issues:

Attention:	Marlon Kallideen Commissioner of Community Services
Fax:	(905) 303-2033
E-Mail:	marlon.kallideen@vaughan.ca

or to such other address as such Party shall have notified to the other Party hereto. Any communication so addressed and delivered shall be deemed to have been sufficiently given or made on the date on which it was received.

- 8.6 <u>Entire Agreement</u>. This Agreement, together with the recitals and the Schedules attached hereto, constitutes the entire agreement between the Parties hereto with regard to the subject matter hereof and supersedes and cancels all previous negotiations, agreements, commitments and writings in respect of the subject matter hereof. This Agreement may not be modified or amended in any respect except by written instrument signed by the Parties hereto.
- 8.7 <u>Waiver</u>. The failure of any Party to this Agreement at any time to require performance by the other Party of any provision hereof shall in no way affect the full right to require such performance at any time thereafter of any other provision hereof and no waiver by any Party hereof of any breach of condition, covenant or

agreement shall constitute a waiver except in respect of the particular breach giving rise to such waiver. Any such waiver shall be effective only if made in writing by the Party entitled to waive the provision.

- 8.8 <u>Independent Contractor</u>. By virtue of this Agreement, no Party hereto constitutes any other Party hereto as its agent, partner, joint venturer, franchisee or legal representative and no Party has express or implied authority to bind any other Party hereto in any manner whatsoever. Unless otherwise contemplated in the Services or the Facilities or approved in writing by the other Party, no Party hereto will assume or create any obligation or responsibility whatsoever, express or implied, on behalf of or in the name of that other Party.
- 8.9 <u>Assignment</u>. This Agreement and the privileges herein granted shall not be assigned by either Party except with the prior written consent of the other, such consent not to be unreasonably withheld. Notwithstanding the foregoing, either party or its permitted assignee may, as security only, assign, transfer, pledge, grant a security interest in or otherwise dispose of its rights and interests under this Agreement to a trustee or lending institution, including such an assignment, transfer or other disposition upon or pursuant to the exercise of remedies by such trustee or lending institution.
- 8.10 <u>Further Assurances</u>. Each of the Parties hereto from time to time at the request and expense of the other Party hereto and without further consideration, will execute and deliver such other instruments of transfer, conveyance and assignment and take such further action as such other Party may require to more effectively complete any matter provided for herein.
- 8.11 <u>Severability</u>. Any covenant or provision hereof determined to be void or unenforceable in whole or in part will be deemed not to affect or impair the validity or enforceability of any other covenant or provision hereof and the covenants and provisions hereof are declared to be separate and distinct.

## 8.12 Arbitration.

8.12.1 In the event of any dispute or claim between the Parties, arising out of, or relating to, in any way connected with this Agreement or its interpretation or the fulfilment of the obligations of the Parties hereunder (a "Dispute"), such Dispute shall be referred internally by either Party by written notification to Dennis Nolan, Executive Vice President, Corporate Services and Secretary at PowerStream and Clayton Harris, Deputy City Manager and Commissioner of Finance and Corporate Services at the City for resolution (the "Internal Dispute Resolution"). If the Dispute is not resolved within 60 Business Days of a Dispute being referred to the Internal Dispute Resolution then such Dispute shall be settled by binding arbitration ("Binding Arbitration"). Binding Arbitration shall be conducted in accordance with the Arbitration Act, 1991 (Ontario), as amended from time to time.

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- 8.12.2 It shall be a condition precedent to the right of a Party to this Agreement to submit a Dispute to Binding Arbitration that such Party shall have given written notice of its intention to do so to the other Party to this Agreement and such written notice shall state the particulars of such Dispute. Within ten (10) Business Days of such notice being provided, the Parties to this Agreement shall mutually appoint a single arbitrator to determine the Dispute. The arbitrator shall fix a time, which shall not be later than ten (10) Business Days following his or her appointment, and a place in Vaughan, Ontario, for the purpose of hearing the evidence and representations of the Parties. Each of the Parties shall co-operate with the arbitrator and shall provide him or her with all information in their possession or under their control necessary or relevant to the matter being determined. Within ten (10) Business Days after the conclusion of the arbitration hearing, or such longer period as may be required by the arbitrator appointed under this subsection 8.12.2, the arbitrator shall make an award and reduce the same to writing and deliver one copy of his or her decision to each Party.
- 8.12.3 If the Parties fail to agree on an arbitrator within the time period specified in subsection 8.12.2 above, then, unless the parties otherwise agree, the Dispute shall be submitted to ADR Chambers for final resolution, which submission shall be by written notice which may be provided by either Party to ADR Chambers and to the other Party to this Agreement. Within five (5) Business Days following the date of any notice given by either Party pursuant to this subsection 8.12.3, an arbitrator shall be selected by random draw made by ADR Chambers. The arbitrator so selected shall perform both the settlement conference and the trial in the matter. The Parties further agree to be bound by the rules of the ADR Chambers in force from time to time.
- 8.12.4 There shall be no right of appeal from the arbitrator's award except in accordance with the Arbitration Act, 1991 (Ontario). The Parties agree that a judgment upon the arbitration award may be entered in any court in Canada or any court having jurisdiction, or that an application may be made to such court for judicial recognition of the award and/or an order of enforcement thereof. The Parties agree that the arbitrator selected pursuant to subsections 8.12.2 and 8.12.3 shall determine costs (legal fees and disbursements) as part of the arbitrator's award.
- 8.13 <u>Counterparts</u>. This Agreement may be executed by the Parties hereto in several counterparts, each of which when so executed and delivered shall be an original and all such counterparts shall together constitute one and the same instrument.

IN WITNESS WHEREOF, this Agreement has been executed by the Parties hereto on the date first above written.

## POWERSTREAM INC.

Per: \_\_\_\_\_\_ Name: Dennis Nolan Title: EVP Corporate Services & Secretary

## CITY OF VAUGHAN

Per:

Name: Linda Jackson Title: Mayor

Per:

Name: Sybil Fernandez (Jeffrey Abrams) Title: City Clerk

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## SCHEDULE A FACILITIES TERMS

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## Joint Service Agreement Between Power Stream & the City of Vaughan DRAFT Rent TMI Service Schedules

Table of Schedules

Schedule	Reference
Summary (2008 -2010)	А
Civic Centre Rent & TMI Detail Schedule	в
JOC Indoor Rent & TMI Detail Schedule	С
JOC Indoor Map	D
2008 JOC Outdoor Rent & TMI Detail Schedule	E
2007 TMI Schedule	F
Service Level Provision	G

(A) - 1 of 1 Joint Service Agreement Between Power Stream & the City of Vaughan 335,150.34 \$ 731,882.34 265,623,18 \$ 746,519.98 2) Area provided by Power Stream and confirmed by B&F department. The above schedule to based on information provided to date. Rental space requirement adjustments should adhere to any processes indicated within the agreement. To ensure involcing is current the City Finance Dept, should be notified. 328,578.77 \$ 717,531.70 265,623. 265,823. Power Stream is assessing the possibility of relocating outdoor requirements, Rent may not be required in 2009/2010
 Allocation of shared space is promited based on % of nertial space type and therefore nortal space adjustments may change the relion of space type impacting the area allocated to each type. Total Total Total Note - As agreed and additional \$34,053/month for every month the 2007 footprint is occupied. \$ 4,273,166.89 341,853.35 **Draft Rental Schedule** 240,807.58 8% Incl 240,807.58 8% \$4,189,379.30 \$ 4,107,234.61 240,807.58 JOC - Industrial JOC Outdoor JOC - Industrial JOC Outdoor JOC Outdoor 3 year rental schedule 8% Incl loci 24,455.00 7.28 8.54 24,455.00 7.43 8.71 JOC - Industrial 7.14 8.37 379,403,55 394.731.45 24,455.00 386.991.62 69 69 67 67 2% 49 60 9.18 9.36 9.55 18.00 9.549.38 Civic. 360.60 9,740.37 9.935.18 360.60 380.60 Civic Civic 49 49 69 69 69.69 1) Annual Inflation Increase Factor for 2008-10) Market Rental Rata/Ft2 (Note 1) Area Rented (Note 2) Market Rental Rate/Ft2 (Note 1) Market Rental Rate/Ft2 (Note 1) 2008 Annual Rent & TMI 2010 Annual Rent & TMI 2009 Annual Rant &TM Estimated Investment Estimated Investment Estimated Investment Area Rented (Note 2) Area Rented (Note 2) Schedule Notes Estimated TMI/Ft2 Estimated TMI/Ft2 Estimated TMI/Ft2 General Notes: Rent & TMI Rent & TMI Rent & TM 4/7/2008

2009 EDR Application

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## Joint Services Between the City & Power Stream Civic Centre Building Space & Rent

Power Stream Occupied Office Space	M2	Ft2 (Note 4)
Cashier	12.60	135.63
Total Designated Office Space	12.60	135.63
% of Total Civic Centre Area		0.2%
Shared Office Area		
Info/Security Area (Note 1)	5.40	58.13
1st Floor Entrance Area (Note 2)	15.5	166.85
Total Hydro Shared Area	20.90	224.97
Total Power Stream Area	33.50	360.60
Power Stream % of Civic Centre		0.4%
Total Civic Center		81,926.00

Rent Valuation	Rate	Area	Amount	
Office Rent (Note 3)	\$ 9.18	360.60	\$	3,310.31
TMI - Base (Note 3)	\$ 17.30	360.60	\$	6,239.07
Total Rent 2008			\$	9,549.38
Est. Total Rent 2009			\$	9,740.37
Est. Total Rent 2010			\$	9,935.18

### Note 1

The Inquiry Counter, Security Info and Copy areas are shared 50/50 between Hydro & City, based on actual space utilized.

## Note 2

Civic Centre common areas (cafeteria, entrance, etc.) are allocated based on Hydro space occupied in Civic Center space occupied

#### Note 3 (Rent & TMI)

Rates were provided by the City's Real Estate Department and are based on general estimates and surrounding market rates. Actual rates will vary depending on the location, logistics, building quality, etc. These figures are not to be construed as appraised rental values.

4/7/2008

2007 Civic Center Schedule

(B) Page: 1 of 2

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## Joint Services Between the City & Power Stream Civic Centre Building Space & Rent

 Rental Type
 \$/Ft2

 Corp Office - I.e. Civic Center/J.O.C.
 \$ 9.00
 Based on 2007 market rates

 Industrial (High Office Component 40-60%)
 \$ 7.00
 Based on 2007 market rates

 per Agreement - assume a 2% inflation factor each year after - for a 3 yr term.
 For the purpose of this model TMI per rented location will be based on the existing B&F costs prorated by area.

 See Occupancy Cost Schedule
 Schedule

Note 4 - Conversion Factors	M2	Ft2	Acre	Hectare
	,		2.4711	1
		43560	1	
	4,046.86		1	
	10.7642	1		

4/7/2008

2007 Civic Center Schedule

(B) Page: 2 of 2

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## Joint Service Between the City Power Stream J.O.C. Building Space & Rent

Detailed Breakdown	M2	Ft2		
Hydro Occupied Area (See Map)	2,271.90	24,455.00		
Total J.O.C. Area J.O.C. %	9,299.34 24%	100,100.00 24%		
Rent Valuation				
Industrial 4080 and	Rate	Ft2 24,455.00	e	Amount 174,608.70
Industrial 40/60 split Total Rent	\$ 7.14	24,455.00	<u>s</u>	174,608.70
TMI - (See Schedule for Rate Calc)	\$ 8.37	24,455.00	s	204,794.85
Total 2008 Rent & TMI			\$	379,403.55
Est. Total Rent 2009 (note 1) Est. Total Rent 2010 (note 1)				386,991.62 394,731.45

#### Note 1 (Rent)

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Estimated rates for valuation purposes provided by Bosley Farr Associates LTD These figures are not to be construed as appraised rental values.

Rental Type		\$/Ft2	_
Corp Office - I.e. Civic Center/J.O.C.	\$	9.00	2007 rates
Industrial (High Office Component 40-60%)	\$	7.00	2007 rates
2009 & 2010 estimated by adding 2% for inflat	tion.		

For the purpose of this model TMI per rented location will be based on the existing B&F costs prorated by area. See Occupancy Cost Schedule

Note 2 - Outdoor Area Included in Rent Typically rental rates applied to office/industrial space include a proportion of the outside area i.e. outside walkways, parking etc. Per Bosely Farr Associates the industry typically applies a double density factor. For example, 1000 Ft2 rented facility would include and additional 1000 ft2 outside for parking, sidewalks, and grass areas.

Power Stream Occupied Building Space Allocated Outdoor Area, Included in Rent Allocated Outdoor Area Converted to Acres		24,455.00 24,455.00 0.56			
Note 3 - Conversion Factor	M2 10.7642 4,046.86	Ft2 1 43560	Acre 2.4711	Hectare	1
Note 4 Area rented is relatively self contained - Li	mited shared comm	non area.			

4/7/2008

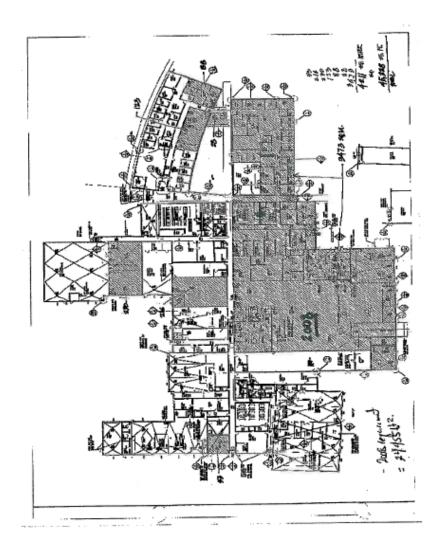
2007 JOC Indoor Schedule

(C) - Page: 1 of 1

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## Joint Service Agreement between the City Power Stream Facility Services Provided

Provided by Power Stream - reviewed by Jeff Peyton/Ange Cloffi (Reviewed again on April 7th, 2008. (ONLY - YELLOW HIGHLIGHTED AREA



4/7/2008

Map of JOC occupied by Power Stream

(D) - 1 of 1

## Joint Services Between the Clty & Power Stream J.O.C. Outdoor Area & Rent

Outdoor Area	M2	Ft2	% of Area	
Staff Parking - Paved/lighted	1,894.25	20,390.09	2.03%	Adjust 50%
Control Room Parking - Paved/lighted	50.00	538.21	0.05%	Adjust 50%
Total Staff Parking Area	1,944.25	20,928.30	2.09%	
Driveway/Utility Parking Paved	4,944.80	53,226.82	5.31%	
Hydro Gravel Lot (Poles)	7,682.30	82,693.81	8.25%	
Hydro Gravel Lot (Wire/Transformer)	4,681.80	50,395.83	5.03%	_
Total Gravel Lot Area	12,364.10	133,089.65	13.28%	-
Truck Port 16 Vehicles - 6M High	730.00	7,857.87	0.78%	
Shared Area				Footprint
East & West Entrance (Note 4)	2,299.50	24,752.31	2.47%	24.4%
Frontal Area (Note 4)	2,360.38	25,407.64	2.54%	_
Total Shared	4,659.89	50,159.95	5.01%	_
Total Occupied	24,643.04	265,262.58	26.47%	
Acres		6.09	26.47%	
Total JOC Site Area (Excluding Police)				
Site Area - 10.239 HA or 25.3 Acres	102,385.47	1,102,097.64		
Less: J.O.C. Building	9,299.34	100,100.00	9.08%	
Total J.O.C. Outdoor Area	93,086.12	1,001,997.64	90.92%	
Total JOC Acres		23.00		

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4/7/2008

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2007 JOC Outdoor Schedule

(E) - Page 1 of 3

## Joint Services Between the City & Power Stream J.O.C. Outdoor Area & Rent

Rent Valuation		\$/Unit	Area Rented		Area Value	% of Area
General Land						
Staff Parking - Paved/Lighted			20,928.30			
Driveway/Utility Parking Paved			53,226.82			
**Shared Entrances **			24,752.31			
Total General Ft2		_	98,907.42			
Less - Portion Included in Rent (Note2)		-	(24,455.00)			
Excess land			74,452.42			28%
Converted to Acrea			1.71			
Land Value per Acre (Note 1)		\$550,000	74,452.42	\$	940,055.82	
Cost of Improvements per ft2 (Note 1)	\$	3.50	1.71		260,583.47	
Fotal Investment				\$	1,200,639.30	
Gravel Lots						
Total Lot Area Converted to Acres			133,089.65 3.06			50%
			3.00			
Land Value per Acre (Note 1)		\$550,000	133,089.65	\$	1,680,424.81	
Cost of Improvements per ft2 (Note 1)	\$	2.50	3.06		332,724.11	
otal Investment					2,013,148.93	
ruck Port						
ruck Port 16 Vehicles - 6M high Converted to Acres			7,857.87			3%
onverted to Adres			· 0.18			
and Value per Acre (Note 1)		\$550,000	7.857.87	s	99,215.48	
Cost of Improvements per ft2 (Note 1)	s	50.00	0.18	•	392,893.30	
otal Investment					492,108.78	
ront Grass Area						
ower Stream Allocated Portion			25,407.64			10%
Converted to Acres			0.58			
and Value per Acre (Note 1)		\$550,000	0.58	\$	320,803.59	
Annual Rental Value		Rate *	Area (Ft2)		Value	Annual Rent
ront Grass Area		8%	25,407.64	\$	320,803.59	\$ 25,664.29
Seneral		8%	74,452.42	\$	1,200,639.30	
Gravel		8%	133,089.65		2,013,148.93	
ruck		8%	7,857.87		492,108.78	
otal Investment		8%	240,807.58	\$	4,026,700.60	\$ 322,136.05
008 rent estiamte (included 2% inflati					0	\$ 328,578.77
009 rent estiamte (Included 2% Inflati						\$ 335,150.34
010 rent estlamte (included 2% Inflati	on)				- r	\$ 341,853.35

\* Real-Estate Rate of return on similar investments

4/7/2008

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2007 JOC Outdoor Schedule

(E) - Page 2 of 3

#### Joint Services Between the City & Power Stream J.O.C. Outdoor Area & Rent

## Note 1 (Excess Land Rent)

Annual rental rates are typically defined by an expected return on property investment Estimated rates for valuation purposes provided by Bosley Fair Associates LTD These figures are not to be construed as appraised rental values.

Appropriate rate of return	8%
Estimated excess land value/Acre \$	\$550,000

Cost of land improvements

Туре	\$/Ft2		
General - Paved/Lighted	\$	3.50	
Gravel Lots - Fencing etc.	\$	2.50	
Truck Port - Construction	\$	50.00	

J.O.C. - Outdoor TMI

#### Note 2 - Outdoor Area Included In Rent

Typically rental rates applied to office/industrial space include a proportion of the outside area i.e. outside walkways, parking etc. Per Bosely Farr Associates the industry typically applies a double density factor. For example, 1000 Ft2 rented facility would include and additional 1000 ft2 outside for parking, sidewalks, and grass areas. Therefore, this portion is deducted from the total outdoor Power Stream area.

- As Negotiated

Allocated Outdoor Area, Included in Rent Allocated Outdoor Area Converted to Acres		24,455.00 0.56			
Note 3 - Conversion Factor	M2	Ft2	Acre 2.4711	Hectare	1
		43560	1		
	4,046.86 1	10.7642	1		

#### Note 4 - Shared Area Allocation

Outdoor shared areas (entrances etc) are allocated based on Power Stream space occupied within the JOC building. This driver was selected for its simplicity.

4/7/2008

2007 JOC Outdoor Schedule

(E) - Page 3 of 3

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D1 Tab 1 Schedule 7 Page 27 of 45

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2007 TMY

od by Mari

16,500,730 1,901,275 13,72%

Costs

Notes -1) - The Building & Fucitity TMI rate includes operali

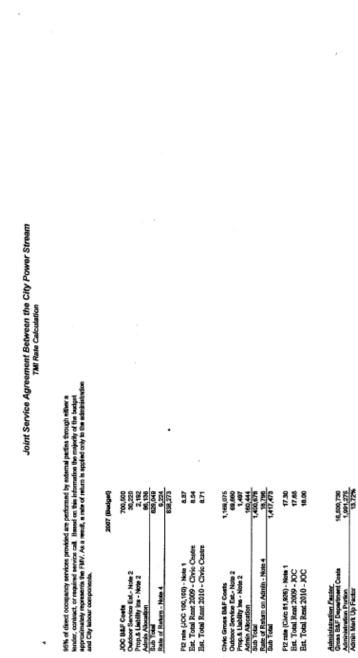
oct based

only applies to Admin & Oubtoor Sen callon as the are primarily contract bar

7.3% rate of return, using Power Stream's rate, Other costs are assempt from a rate of return applic

3) The City is not obligated to pay property taxes and therefore this frem is excluded

 Outdoor maintenance & property insurance is Preser & Joe Chiarele adjusted for general infatil (Dapties (projecto requested by Nycho outside gemain a priordification above and beyond the above set minu)



2009 EDR Application

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4/7/2008

#### Joint Service Agreement between the City Power Stream Facility Services Provided

Occupancy Services Provided	10.0.	Civic Centre	Tender	Rent	Contractor
Staff Staff Consellated Other Staff Resources Uplicat	1.5 At Random	1/5 Al Fandom		TAI Fille	
Security 247. Security Grant - (Paint & Open Fectilies)	34 ha 7 daya a wask	Business Hours Upstains	Near Putane	114	Group Faik Foss/AFI (Hydra)
Designated Sectority Connects Security Common Monitoring (Duard @ J.O.C.) Security Common Nationation	6 of 18 designated	3 of 15 designated		TM	
Security Cemera Monitoring (Guard @ J.O.C.) Security Cemera Matrienance	Yes Yes	Yes		141	City Staff Lyver City Staff City Staff
Galageries and investory Security Tapes Supp Card Access (invisibility, Manilating, Card Crestion)	Dely 2004 Budgel	Cally		THE	City Staff
Durglar Allerh	No No	840		NA.	Citybe
Safety File Agent Manifering File Agent System Matchemetre (Panel Lights/Delectors)	Yee	Yes		TM	Chubb & Fits Depl.
Fire Alarm System Natiolenasce (Pasel Lights/Detectors) Fire Cade (capecilos/Testing	Monthly Annually	Monthly Accounty		TM	Custors Galety Custors Balety/ Technical Standards
The Delivershard Subsidier Residences Residences	Ma every 6 yrs	Ma every 6 yrs		146	Bafety Aseos Fiame-Terrer
Pin Edisgulater & Selety Equipment Haylacement Energyany Power Trailing & McDifestorie Terrotative Config (24 Collin), Usiding, Terropanisten) Terrotative Config - Bills Billing / Art (Tiller Markiments & Dollangue Billing / Art (Tiller Markiments & Dollangue	Guariety	Quarterly As requested		1MI TMI + Rate	Gal Power Systems
Environment Texting (All Coolity, Lighting, Temperature) Termanature Coolicit - FMS	As required Dwily Counterly	Cally		THE+ Pale	As required City Staff City Staff
Major Alt Fiber Malylanaene & Changas	Calariedy Semi-entual	Seni-ennul Geni-ennul		TMI	City Staff
Peri Contral	Monthly	Nontry		THE	100
desard Malrianance Clearing Benvices General Anses (Durling, Mopping, Berbege Pick-Up, etc.)	Duly	Delly	Near Fulute	TM	J & A Building Services J & A Building
Cleaning Services Hydro Specific Areas (Dusling, Mapping, Garbage PickUp, etc.)	Duly	Delty		Rate	Genvicee
Office Gastage Disposal & Bin Raital Jackbold Supplies (Dasp. Taros, Paper Towels, Gastage Bags, etc.) Exergency Clearchy (Fiscality, Spin, Frayed Rugs, etc.)	Uselly Daily	Weekly	Near Polym	That Ratio	York Buteb
Emergency Clean-Up (Flooting, Bplia, Prayed Rugs, etc)	As requested	As requested		TME + Rain	J & A Building Benfore Bio-Chem
Bis-Chern, Mapkin Removal	Monthly	Monthly		Rate Rate	Blo-Chem
Carpel Replacement (Entrances, Otics and Washouse) Carpel Staam Charley	Weekly Quarterly	Sent-Awast~		Rais + TH	G &K Work Weer J & A Building Bervices
Window Cleaning ( 2x per year - industry standard in 1x)	Deni-Avuali	Seni-Annal		THE	ATM
Retempting Lighting General Picestonei Lave Cleaning	Weekly Accure	Viety		THE	City Staff City Staff
Plans/Vegetation Maintenance (Main, Feed, Clean, Trin)	Weekby	Vilantity		Rate	Interfor Landscepting
Mani Replacement	As required	Quartedy		Rate TMI	Interfor Landscaping
Auto & Handisap Deer Maldenande Look & Versteinfelangen & Registerneti	As required As required	As required As required		TMI + Rate	Annex Doors Coalg Lock/Oity Sief
Auto de Partologie (Loen Malazinatore Lock & Sky Malabienswa & Regeliacenant Repair Viout Annau (Vid)nal Winkstallans, Computer Trays, etc.) General Malabananos, Repair & Instalation (ElectricultActivePaletLabour etc.)	As required Weakly	As required Weekly		Fisio The + Pisio	
	As requested	As requested		Refe .	Hill Rollin.
Signage (Purchase, Installation, Replacement, Maintenence) Plumbing Program	As requested Monthly	As requested Monthly		THE . PORCE	City Staf2Richmond Hill Reélic All Signa City StaffVibilier Long Plantère City Staff
Material & Supplee (Johts, Ballasta, Teps, Geskets, Baskets, etc.) Machine Tires, Smail Tools, Restal Equipment.	Daily	Dely		TMI + Plate TMI + Plate	City Staff
	Call Call	Monitor	Report.		All Diness Figure.
Bevetor Maintenance Revolve Maktanesee - RoofCminage Inspection & Debris Removal	Cuarlety	Custory	Poppers.	111	Dover As Required
Warehousa Maintananda Creatuad Door Maintananda Program (5 of 20) Power Loadig Zook Maintananda Program Power Creatig Zook Maintananda Program Power Creatig Cook Maintan	Manihiy	NA		Refe	Burell
Power Loading Dock Mainteence Program	Cuartery Accual	NA NA		Rate Rate	
Pump-Out Shep Calub Basins	Quertery	Questady		Rate	Fortillin
Culdoc Malatetanaa. Perting Let Sweeping	Seni-Annal	Semi-spinal		TM	Public Works
<u>Codinas Milatanasa</u> Parton Li Bonepha Valanay su Charao benepha Parton Luo - Rapaha, Luo Familag, etc. Parg-Cu Catoli Basten	As required As required As required	As required As required		TM	Public Works Parts City Galf Public Works Public Works City Staff City Staff City Staff City Staff City Staff City Staff City Staff
Purp-Out Calch Basine	As required	As required As required		3ME 1MI	Public Works
File Hydrani Malclenance Even Toxich and Gutler Clearing	Annual	An required Annual		TMI	City Staff
Plan Flydrain Hallestandol Ewes Trough and Gather Clearing These & Skinds Practing These & Skinds Practing These & Skinds Practing	Berni-Accel	Semi-Annual Every 3 years		TM	City Staff
Tree & Skyle Precing Tree & Skyle Registerant	As required	As required		TMI	City Built
Flower Planting Cultivation	Salle	As required Spring Weekly		TM	City Skall
Walarias & Earthblas	Spring Weekby Northly Weekby	Menthey		TM	City Staff
Turf (Gease) Cutting & Talsming Partitioning and Apartice	Yearly	Yesty		TM	City Blat
Debrie Pick-Up Engly Cutate Garbege Cane	Weekly			114	City Skall
Engly Cutatio Garbage Cane Snow Removal Packing - Flow, Matadal Application, & Removal Snow Removal Malayse - Stowel, Rower, & Material Application	Delly 20 Valla-Wexer	Delly 25 Visits/Weiler		TMB	City Sual City Sual City Sual City Sual City Sual City Sual City Sual
	As required	As required		THE	CRYBUR
Additional Services, Traisphone Une Charges Lang Distance Wash Bay Service Inducting Malandain and Egylphonet Destroyed in 10 Cable Coding	Max. \$17,000 Max. \$5,000	Monitry		Rate Rate	Ball Carolia Ball Carolia
Wash Bay Service including Maladala and Equipment		None		Rate	City Staff
Deligrand 1A celle octav	Monthly	Monitory		Rate Rate	Rogens Vaugteen Hydro Vaugteen Hydro
hydro Weler	Monthly Monthly Marthly Marthly Marthly	Monitaly Monitaly		Rate	Vacghan Hydro Consumers Gas
	Dely	Monthly Duilty		TIME	City Suff City Suff
General Administration (Management, Countination, Invoice Proceeding & Payment) Noning Fumitien, Hanging Motures, & Delivering Boose	Delly WeektyXx requests	d WeekbylAs requested		Rela	
Direct Charte Backs. Yransformer Stafon (Asimianance, Losie, Signege, etc.)	As blief	As billed		Rate Rate	As Required As Required Yes: Disposel
Clesci, Claimas Bacta. Yna Honne Stallon (Maintananna, Loiks, Ngnaga, Mo.) Cartaula (Finol à Post-Meeting Claim-Up) Garsage Diaposal (Waodifietal Recycling)	As blied As blied As blied	As billed As billed As billed	Recent	7 ate	Yerk Disposel
comments configures for examinent stand en effe					

Note 1 – TMI Bervices Intervisedual in the TMI risk that are elemandary provided services to ensure a minimum element of earlies. It is in the CB/s best interest to control these services In ensure a constraint is interpretent in the CB/s investment, and while potential Pigaton. Bervice registrated a above the interdation the topological and the powerful effect of a service service and the topological and the CB/s interdation of earlies and the topological and the powerful effect of a service service and the topological and the topological and the powerful effect of a service service of the topological and the topological and the topological and the powerful effect of a service service of the topological and the topological and the powerful effect of the topological and the topological and the topological and the powerful effect of the topological and to

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## SCHEDULE B INFORMATION TECHNOLOGY

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12 \$ 75,000 \$ 32,500 \$ 33,150 \$ 33,813 \$ 4,682 \$ 38,495 2010 1 of 1 4 \$ 4,590 \$ 37,740 2009 Annual Price 37,000 4,500 2008 47 -89,400 14,400 2007 Note: 1) Any additional services outside the above requirement will need to be negotiated independently and charged outside the current service agreement. \*\* ŝ We have a mutual need to establish a network link between the Civic Centre and their new building. The City needs to provide Power Stream with access to our JDEPayroli system for administration. Power Stream needs a link to enable their cashiering function to access Power Stream billing. So both organizations will be equally benefiting from the link. The link costs about \$750\text{month} and it would be reasonable to share the cost on a 50/50 basis. The City pays for the annual maintenance of the JDE software (which entities us to software bug fixes, new releases, etc.). Power Stream is fully benefiting from this service and have access to an identical set of applications. Therefore, is reasonable to charge for the software maintenance fee, in addition, for 2007 the City maintained the JDE Software licenses on their behalf. Joint Service Between the City Power Stream Information Technology Services 1 **IDE Enterprise Software License Maintenance** 2) Services adjusted by a 2% historical inflationary factor Network Link (WAN Services) Total Joint Service Amount Description of Service 11/12/2007

Schedule 1B Page: 1 of 1

11/12/2007 10:57 AM

1.0 - Hydro ITS Services (07-10)

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D1 Tab 1 Schedule 7 Page 31 of 45

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# SCHEDULE C FUEL SERVICE CHARGES

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#### Joint Services between Power Stream & the City Fuel Service

The City purchases gas through the region's Coop program. After a brief discussion with Keith McLochi, supervisor of Supplies and Services @ ext 1669 (York Region), it was determined that Power Stream could obtain these rates independently. However, there are costs other than fuel charges associated with providing this service.

These costs are detailed below and will be prorated based on Power Stream fuel consumption.

- Allocation should be based on consumption Daniela can provide historical info
- Per Alvin the following activity times and costs are as follows:

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<ul> <li>Per Alvin the following activit</li> </ul>	ty times and	costs are as fo	llows:			2008	Est. 2009	Est. 2010
Service	Note	Resources	Time	Percentage		Cost	Cost	Cost
Polling	Note I	Fleet Clerk	1hr/week	2.86%	\$	4,000	4,120.43	4,244.05
Monthly report	Note 1	Fleet Clerk	3.5hr/month	2.50%	\$	2,184	2,249.53	2,317.01
Maintenance call	Note 1	Fleet Clerk	1.5 hr/month	1.07%	\$	936	964.08	993.01
Dipping	Note 1	Mechanic	5hr/week	14.29%	\$	9,611	9,899.70	10,196.69
Admin/Supervision	Note 1	Supervisor		5.00%	\$	5,858	6,034.11	6,215.13
Reports/Invoices	Note 1	Coordinator	3 hrs/Month	2.14%	\$	1,567	1,613.53	1,661.93
Maintenance	Note 2	S-A-S Petrol	leum Tech Inc.		s	8,127	8,370.66	8,621.78
Fleet Dep't OH Est.	Note 3				s	8,146	8,389.87	8,641.56
Facility OH Est.	Note 4				\$	5,022	5,172.66	5,327.84
Admin Total					S	45,451	\$ 46,815	\$ 48,219
Capital Cost	Note 5				\$	16,950	\$ 16,950	\$ 16,950
,					\$	62,401	\$ 63,765	\$ 65,169
PowerStream Consumption % of							a data da madra da da da da da	
Total (Administration / rental								
charge)	Note 6				\$	10,176	\$ 10,399	\$ 10,628
Adjusted to include a Rate of Return	n (7.3%)				s	10,919	\$ 11,158	\$ 11,404
Annual Consumption (avg. 2004-2	2006)					200,906	200,906	200,906
Charge rate/Consumption						5.44%	5.55%	5.68%

4 0 - GAS revised (12-11-07)

12/11/2007

Schedule 7A Page: 1 of 2

Power Stream has access to all 3 locations - JOC, Civic, and Woodbridge Yard

#### Joint Services between Power Stream & the City

Note 1 - Budgeted salaries, including benefit costs	Fuel Service
Fleet Mgmt. Supervisor	117,167
Fleet Clerk	73,105
Mechanic	56,301
Finance Assitance (Corrdinator)	73,105

Note 2- Fuel Operating System (All maintenance and repair costs Acct: 6850001.7346)

Year	Actual	Budget
2006	4,230	8,000
2005	4,469	9,790
2004	11,276	6,000
2003	19,588	5,000
2002	5,260	5,000
2001	9,974	5,000
2000	2,091	10,000
Average	8,127	6,970

#### Note 3- Fleet Dep't O/H

.

5% of total departmental costs less labour component Annual Departmental Budget 858,130 Less Labour component <u>695,220</u> 162,910 5% Allocation to fuel service 8,146

#### Note 4 - Facility Overhead

Building and facility costs are allocated to the building not the department. However, a portion of these costs (I.e hydro, gas, maintenance etc) should be allocated. This cost is prorated by ft2 and allocated to the mailroom space occupied.

Facility OH Costs		
Admin Area (20*30)	600	
B&F Rate/Ft2	8.37	(See Occupancy Schedule)
Total cost	5,022	

### Note 5 - Capital Cost

Cost of installing a Gas Pump of Similar Size and Type. Per Fleet Supervisor, the cost to replace a gas dispenser is approximately \$5,000 plus \$1,050 for labour. Per Ted Lam, B&F, - The cost of installing a JOC pump & tank is approximately \$93,000 for equipment, + \$20,000 installation (\$113,000). The charge for City gas pump use is as follows:

Cost to install = \$113,000 with an estimated life of 20 years =

s	5,650	Estimated amortization per Month
	x 3	
\$	16,950	3 Pumps (JOC, Civic, Yard)
	x 13%	
\$	2,764	Hydro's proportion based on historical consumption levels

#### Note 6 - PowerStream Consumption

PowerStram consumption is approximately 16.3% of the purchase volume/price ( see schedule)

4 0 - GAS revised (12-11-07)

12/11/2007

Schedule 7A Page: 2 of 2

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## SCHEDULE D PAYROLL SERVICES

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## Schedule D – Payroll Services Payroll Services Provided by PowerStream to the City of Vaughan

#### Service Summary

PowerStream agrees to provide the following payroll services to the City of Vaughan for the years 2008 to 2010.

- Payroll administration
  - Payroll service for the COV employees.
  - Payroll to City Council for Region of York, Hydro Vaughan Holdings, Inc., Hydro Vaughan Energy Corp and Vaughan Holdings.
  - Retroactive payment processing for collective agreement ratified.
  - Payment of retiring allowances and severance packages including RRSP transfers.
  - o Distribution of labour costs to the City's general ledger.
  - Special payments for cleaning allowances, long service pay, reclass pay, shift premiums, statutory holiday pay, etc.
  - Preparation of Record of Employment forms.
  - Processing of bank deposit changes and tax changes.
- Tax, benefits, and deductions administration
  - Weekly deductions and remittances for income tax, CPP, EI (4 CRA business numbers), support payments and garnishments, employee credit union, group RRSP, recreation memberships, Canada Savings Bonds, union dues (6 unions), group home and auto insurance, optional and spousal life insurance, United Way, employee computer purchase plan, clothing and uniform deductions.
  - Monthly remittances for Employer Health Tax (4 accounts), WSIB, OMERS (2 accounts).
  - Monthly and annual reporting for OMERS (2 accounts).
- Reporting
  - Monthly reporting to Statistics Canada, OMERS, Employer Health Tax, and WSIB.
  - Annual reporting for CRA (T4 and T4A's), OMERS, Employer Health Tax, WSIB, Public Sector Salary Disclosure Information, El Premium Reduction Application.
  - Responding to HRDC requests for information regarding employment insurance claims.
  - Ad hoc reporting to department managers for budget monitoring.
  - Assist with City Financial Information Return.
- Other
  - Coordinate payroll audits by City auditors, CRA, Ministry of Finance, and WSIB.
  - Perform all acceptance testing and implement payroll computer systems changes including integration with other finance and HR systems.
  - Legislative interpretation and ensuring compliance with legislation.
  - Ensure compliance with City by-laws and six collective agreements.
  - OMERS administration (leave of absence buy-backs, termination reporting, etc.).

Liaise with external government organizations, banks, lawyers, etc.

#### **Costing Methodology**

PowerStream will charge the following prices for providing the payroll services listed above to the City of Vaughan:

- 2008: \$260,075
- 2009: \$266,091
- 2010: \$272,253

The prices listed above are cost based and are marked up by PowerStream's weighted average cost of capital of 7.3%. The following process was used to arrive at the costs.

- 1. Determined the direct costs associated with providing the service.
- 2. Determined the indirect costs associated with providing the service.
- Determined what percentage of each budgetary account of the Payroll Department is attributable to providing the services.
- Determined what costs are related only to providing the service and PowerStream wouldn't incur if it didn't provide the service
- 5. Adjusted all costs for 2% inflation for years 2009 and 2010
- 6. Summed all the costs related to providing the cashier services.
- Adjusted the total cost for 7.3% in order to ensure a ROI of 7.3% as required by the ARC.
- 8. The adjusted amount is the price charged to the COV.

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D1 Tab 1 Schedule 7 Page 37 of 45

# SCHEDULE E CASHIER SERVICES

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### Schedule E - Cashier Services

#### Cashier Services Provided by PowerStream to the City of Vaughan

#### Service Summary

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PowerStream agrees to provide the following cashier services to the City of Vaughan for the years 2008 to 2010.

- · Opening and sorting night box for payments
  - Processing payments for:
    - Taxes
    - Parking permits
    - o Permits
    - Licensing
    - Dog Tags
- Delivery of items to the COV Mail Room
- · Encoding all cheques in preparation for daily bank deposits
- Preparing Debit Machine, Visa/MasterCard
- Cash petty cash cheques
- Change/create float for events (Canada Day, Winder Fest, etc.)
- Prepare courier pick-up for Symcor payments
- · Prepare for Brinks pick-up of daily cash deposits
- Prepare daily COV blotter
- Issue COV receipts
- Deliver completed/processed receipts to appropriate departments:
  - Building
  - Taxes
  - Bylaws
  - Licensing
  - o Finance
- Process and accept ticket purchases for COV events/offers
  - Wonderland
  - Ontario Place
  - Golf tournaments
  - o Other special events
- Respond to counter inquiries (location of departments, tax due dates, etc.)

#### Costing Methodology

PowerStream will charge the following prices for providing the cashier services listed above to the City of Vaughan:

- 2008: \$231,672
- 2009: \$235,965
- 2010: \$240,972

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The prices listed above are cost based and are marked up by PowerStream's weighted average cost of capital of 7.3%. The following process was used to arrive at the costs.

- 1. Determined the direct costs associated with providing the service.
- 2. Determined the indirect costs associated with providing the service.
- Determined what percentage of each budgetary account of the Payroll Department is attributable to providing the services.
- Determined what costs are related only to providing the service and PowerStream wouldn't incur if it didn't provide the service
- 5. Adjusted all costs for 2% inflation for years 2009 and 2010
- 6. Summed all the costs related to providing the cashier services.
- Adjusted the total cost for 7.3% in order to ensure a ROI of 7.3% as required by the ARC.
- 8. The adjusted amount is the price charged to the COV.

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## SCHEDULE F WATER METER READING AND BILLING

.

## SCHEDULE F

## SERVICE DESCRIPTION FOR WATER METER READING AND WATER BILLING AND REMITTANCE

#### GENERAL SERVICES PROVIDED

#### · Billing of all water/sewer services.

- As required, PowerStream to explain the methodology used to produce estimated readings and the adjustment/correction once regular reads are collected.
- PowerStream shall be responsible for the work quality of their meter readers.
- PowerStream shall be responsible for submitting any work orders relating to water meters to the City and/or the City's contractor in a timely manner.

#### **Revenue Management & Collections**

- Payment by customers of water accounts are in conjunction with electricity accounts and the amounts owing are treated as one (unless prevented by the Ontario Energy Board from doing so).
- Upon request, PowerStream shall investigate & provide account details to the City for specific customers where consumption varies from historic consumption levels.
- PowerStream shall provide billing & collection for Waterworks customer services as per the Town's approved user fee schedule for the following services:
  - Frozen meter replacement
  - · Water turn on and/or turn off
  - Water meter removal, replacement and/or reinstallation
  - Water meter testing
- PowerStream shall provide written notices to the customer to have the ARB installed or repaired
- Coordination of appointments for repairs to water meter remote readout devices.

#### CUSTOMER ACCOUNT MANAGEMENT

- Resolution of Returned Mail
- Management of outgoing mail.

## SERVICE LEVELS

 PowerStream will include with its regular bill mailings one (1) bill insert per mailing (containing Waterworks information supplied by the municipality) at no cost. Availability is at the discretion of PowerStream. There may be third party costs associated with bill inserts.

#### **Telephone and Written Inquiry Handling**

Response to telephone and written inquiries regarding water/sewer and electric will meet or exceed the mandated requirements as set out by the Ontario Energy Board:

- Telephone Response 65% of calls answered within 30 seconds.
- Written Response to Inquiry Within 10 business days, 80% of the time.

Annual statistics are reported to the Ontario Energy Board.

### REPORTING STATISTICS

- Monthly Billing Summary best efforts by the fifth working day and no later than the 10<sup>th</sup> calendar day.
- Monthly Active Account Count List of Water Accounts best efforts by the fifth working day (broken down between residential and commercial) and no later than the 10<sup>th</sup> calendar day.

#### Water Meter Serial Number Corrections

PowerStream shall update the water meter serial numbers in their database as provided by the City from time to time. These corrections should be merged into PowerStream's database within 20 business days of receipt.

#### Work Orders Statistics

· PowerStream shall provide the City monthly reports of outstanding work orders.

#### Customer Billing Data

PowerStream should provide customer billing data to the City in electronic format at the end of each billing month. The billing data should include the customers billed in the current month, separated into residential, general and industrial customers. Data is used in various Waterworks analyses.

## PRICING

PowerStream will charge the following prices for providing the water meter reading, billing and payment & collection services listed above. An adjustment based on actual accounts will be made at the end of Q1 2009 and at the end of Q1 2010. Remittance is on the 10<sup>th</sup> day after month end.

- 2008: \$1,376,148
- 2009: \$1,414,367
- 2010: \$1,439,592

The prices listed above are cost based and are marked up by PowerStream's weighted average cost of capital of 7.3%. The following process was used to arrive at the costs. The meter reading service is obtained form a competitive bidding process.

- Determined the direct costs associated with providing the service.
- 2. Determined the indirect costs associated with providing the service.
- Determined what percentage of each budgetary account of the various Customer Services Departments are attributable to providing the services.
- Determined what costs are related only to providing the service and PowerStream wouldn't incur if it didn't provide the service
- 5. Adjusted all costs for 2% inflation for years 2009 and 2010
- 6. Summed all the costs related to providing the water services.
- Adjusted the total cost for 7.3% in order to ensure a ROI of 7.3% as required by the ARC.
- 8. The adjusted amount is the price charged to the Town of Markham.

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# SCHEDULE G PRICING SUMMARY

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## PRICING SUMMARY

City of Vaughan/PowerSteam Joint Services Pricing Summary 2008 to 2010

# Services Provided by the City of Vaughan to PowerStream (In Dollars)

Schedule - Service	2008	2009	2010
A - Facilities	717,532	731,882	746,520
B - Information Technology	37,000	37,740	38,495
C - Fuel Service Charge	10,919	11,158	11,404

# Services Provided by PowerStream to the City of Vaughan

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Service	2008	2009	2010
D - Payroll	260,075	266,091	272,253
E - Cashier	231,671	235,965	240,972
F - Water Services	1,376,148	1,414,367	1,439,592

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#### SHARED SERVICES AGREEMENT made in duplicate this 1st day of January, 2008

BETWEEN:

#### POWERSTREAM INC., (hereinafter called "PowerStream")

- and -

# THE CORPORATION OF THE TOWN OF MARKHAM, (hereinafter called the "Town")

WHEREAS on June 1, 2004, Hydro Vaughan Distribution Inc., Markham Hydro Distribution Inc. ("Markham Hydro") and Richmond Hill Hydro Inc. amalgamated to become PowerStream (the "Amalgamation") in accordance with a merger agreement dated March 11, 2004, between The Corporation of the City of Vaughan, the Town, Hydro Vaughan Distribution Inc., Markham Energy Corporation, Markham Hydro Distribution Inc. and Richmond Hill Hydro Inc. (the "Merger Agreement");

AND WHEREAS prior to the Amalgamation, the Town and Markham Hydro entered into an agreement dated April 17, 1996, providing for Markham Hydro to implement and coordinate the billing and collection of water rates on behalf of the Town (the "Services Agreement");

AND WHEREAS pursuant to subsection 5.2(6)(b) of the Merger Agreement, all contracts listed on Schedule 4.2(34) of the Merger Agreement, which includes the Services Agreement, are to satisfy the requirements of the Affiliate Relationships Code for Electricity Distributors and Transmitters issued by the OEB and revised November 24, 2003 (the "Affiliate Relationships Code");

AND WHEREAS PowerStream and the Town wish to enter into an agreement to replace the Services Agreement in order for PowerStream to continue to provide certain services to the Town and the Town to provide certain facilities to PowerStream consistent with the Affiliate Relationships Code and for the consideration and on the terms and conditions hereinafter set forth;

NOW THEREFORE in consideration of the premises and the mutual covenants and agreements herein contained (the receipt and sufficiency of which is hereby acknowledged by each of the Parties hereto), the Parties hereto hereby covenant and agree as follows:

#### 1. INTERPRETATION

1.1 <u>Definitions</u>. In this Agreement, including the recitals and Schedules hereto, the following words shall have the following meanings:

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- 1.1.1 "Affiliate" means a body corporate which is deemed to be affiliated with another body corporate, by virtue of one of them being the subsidiary of the other or both being subsidiaries of the same body or each of them being controlled by the same person
- 1.1.2 "Affiliate Relationships Code" means that as described in the third recital of this Agreement;
- 1.1.3 "Agreement" means this agreement and all recitals and all Schedules attached hereto as the same may be amended, modified, supplemented, restated, or replaced from time to time;
- 1.1.4 "Applicable Law" means collectively, all applicable federal, provincial, territorial, municipal and foreign laws, statutes, ordinances, decrees, rules, regulations, by-laws, legally enforceable policies, codes, or guidelines, judicial, arbitral, administrative, ministerial, departmental or regulatory judgments, orders, decisions, directives, rulings or awards, and conditions of any grant of approval, permission, certification, consent, registration, authority or licence by any court, statutory body, self-regulatory authority, stock exchange or other Governmental Authority;
- 1.1.5 "Binding Arbitration" has the meaning ascribed thereto in Section 8.12;
- 1.1.6 "Business Day" means any day other than a day which is a Saturday, a Sunday or a statutory holiday or a civic holiday in Ontario;
- 1.1.7 "Claims" has the meaning ascribed thereto in Section 7.2;
- 1.1.8 "Confidential Information" means the confidential, secret or proprietary information of one Party (the "Disclosing Party"), including any of such information or data which (a) the Disclosing Party is obligated, under contract or law, to keep confidential and (b) is technical, financial or business in nature, and which has been or may hereafter be disclosed, directly or indirectly, to the other Party (the "Recipient"), either orally, in writing or in any other material form, or delivered to the Recipient;
- 1.1.9 "Disclosing Party" has the meaning ascribed thereto in Section 3.2;
- 1.1.10 "Effective Date" means the date of this Agreement January 1, 2008;
- 1.1.11 "Extension Notice" has the meaning ascribed thereto in Section 4.2;
- 1.1.12 "Facilities" means the facilities provided by the Town to PowerStream as set out on Schedule A attached hereto;
- 1.1.13 "Fees for the Facilities" means collectively, the charges set out in the Lease, for the provision of the facilities by the Town to PowerStream as

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set out on Schedule A attached hereto, plus all applicable taxes if any in respect thereof;

- 1.1.14 "Fee Review Date" has the meaning ascribed thereto in subsection 2.5.3;
- 1.1.15 "Fees" means collectively the Fees for the Facilities and the PowerStream Fees;
- 1.1.16 "Governmental Authority" means any court, arbitrator, administrative agency, commission, or governmental or regulatory official, department, agency, body, authority or instrumentality, whether foreign, federal, state, provincial, municipal, or local, having jurisdiction over the Parties;
- 1.1.17 "In Writing" or "Written" means a posted letter, a facsimile transmittal or an e-mail message;
- 1.1.18 "Internal Dispute Resolution" has the meaning ascribed thereto in subsection 8.12.1;
- 1.1.19 "Lease" means the lease dated the 5<sup>th</sup> day of May, 2003, between The Corporation of the Town of Markham and Markham Hydro Distribution Inc., as amended by the Memorandum of Understanding ("MOU") dated February 6, 2008, between PowerStream and the Town of Markham, copies of which are attached as Schedule "A", as amended in writing from time to time.
- 1.1.20 "MFIPPA" means the Municipal Freedom of Information and Protection of Privacy Act, R.S.O. 1990, c. M. 56.
- 1.1.21 "Notice" has the meaning ascribed thereto in Section 8.4;
- 1.1.22 "Parties" means the parties to this Agreement and "Party" shall mean any one of them.
- 1.1.23 "PowerStream Fees" means collectively, the charges for the provision of the Services as set out in Schedules A and B attached hereto, plus all applicable sales or service taxes in respect thereof,
- 1.1.24 "Receiving Party" has the meaning ascribed thereto in Section 3.2;
- 1.1.25 "Requested Party" has the meaning ascribed thereto in Section 8.1;
- 1.1.26 "Services" means the services purchased by the Town from PowerStream as set out on Schedules C and D attached hereto, or those services agreed to in writing between the Parties from time to time;
- 1.1.27 "Term" means the term of this Agreement commencing on the Effective Date to and including the Termination Date;

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1.1.28 "Termination Date" has the meaning ascribed thereto in Section 4.1; and

1.1.29 "Unsatisfied Party" has the meaning ascribed thereto in Section 8.1.

- 1.2 <u>Headings</u>. The division of this Agreement into Sections and subsections and the insertion of headings are for convenience of reference only and shall not affect the construction or interpretation of this Agreement. The terms "this Agreement", "hereof", "hereunder" and similar expressions refer to this Agreement and not to any particular Section or other portion hereof and include any agreement supplemental hereto. Unless something in the subject matter or context is inconsistent therewith, references herein to "Sections" are to sections and "subsections" are to subsections of this Agreement.
- 1.3 <u>Extended Meanings</u>. In this Agreement words importing the singular number only shall include the plural and vice versa, words importing any gender shall include all genders and words importing persons shall include individuals, partnerships, associations, trusts, unincorporated organisations, companies and corporations.
- <u>Currency</u>. All references to currency herein are to lawful money of Canada unless otherwise specified.
- 1.5 <u>Schedules</u>. The following Schedules which are attached to this Agreement are incorporated by reference into this Agreement and are deemed to be a part of it:

Facilities provided by the Town to PowerStream:

Schedule A	-	Facilities
Schedule B	· .	Cashiering

Services Purchased from PowerStream by the Town:

Schedule C	-	Water Meter Reading and Water Billing and Remittance
Schedule D	-	Streetlight Maintenance Services
Schedule E	-	Pricing Summary

#### 2. SERVICES

#### 2.1 Provision of Services.

2.2 In accordance with the terms hereof, from and after the Effective Date to the Termination Date: - 5 -

- 2.2.1 PowerStream agrees to provide and perform, at the request of the Town, the Services for the benefit of the Town or the Town's Affiliates, as the case may be; and
- 2.2.2 the Town agrees to provide the Facilities for the benefit of PowerStream or PowerStream's Affiliates, as the case may be, as the successor in title to Markham Hydro Distribution Inc., the named Tenant in the Lease, in accordance with the provisions of the Lease, as amended in writing from time to time. PowerStream covenants and agrees to comply with the provisions of the Lease, as amended from time to time.
- 2.3 <u>Standard of Services</u>. Notwithstanding the provisions of section 7.1 herein, PowerStream shall provide the Services in a prudent business manner in accordance with the policies and service levels applicable to such Services as set out in Schedules C and D inclusively or such practices, policies and service levels as may be amended from time to time pursuant to Section 2.4 hereof. PowerStream shall provide the Services in accordance with all Applicable Laws. Notwithstanding the foregoing, "Applicable Laws" shall not include any bylaws, guidelines, directions, rules or standards of the Town introduced, proclaimed or implemented after the date hereof that affects the provision of the Services by PowerStream hereunder or the terms hereof.
- 2.4 <u>Amendments</u>. At any time during the term of this Agreement the Town may request changes in the Services that the Town receives or the practices, policies or performance levels applicable to the Services received by the Town by submitting such requests in writing to PowerStream. Within a reasonable time, but in any event not more than thirty (30) Business Days after receiving written notice of a request, PowerStream shall advise the Town whether the change requested will have an impact on the delivery of the Services, acting reasonably, and whether or not the request will have an impact on the associated Fees and whether PowerStream authorizes the implementation of the change under the revised terms specified by the Town or rejects the change proposed. Minor adjustments to existing reports shall not trigger fee increases or the imposition of one-time fees. Pending PowerStream's response, the Town shall continue to receive the applicable Services in accordance with the latest approved terms for the provision of such Services.

#### 2.5 <u>Fees</u>.

2.5.1 PowerStream Fees rendered by PowerStream shall be those as set out on Schedules A and B, or as mutually agreed upon by the Parties in writing from time to time. For clarity purposes, the PowerStream Fees set out on Schedules A and B for years 2008 and 2010 have been agreed upon by the Parties and such fees have been paid by the Town in full and no outstanding amounts are payable in respect of those years as of the date of this Agreement.

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- 2.5.2 Fees for the Facilities provided by the Town shall be those as set out on Schedule A, or as mutually agreed upon by the Parties in writing from time to time. For clarity purposes, the Fees for the Facilities set out on Schedule A for years 2008 and 2010 have been agreed upon by the Parties and such fees have been paid by PowerStream in full and no outstanding amounts are payable in respect of those years as of the date of this Agreement.
- 2.5.3 The Parties shall review the PowerStream Fees on an annual basis, prior to or on November 1<sup>st</sup> (the "Fee Review Date"). PowerStream shall base the PowerStream Fees for the following year on reasonable estimates. If the Parties are unable to agree on the adjustments to the PowerStream Fees within thirty (30) days of the Fee Review Date then the dispute shall be settled by the dispute resolution procedure in accordance with Section 8.12 herein.
- 2.5.4 Unless otherwise specified herein, PowerStream Fees shall be invoiced to the Town on a quarterly basis. The final invoice sent by PowerStream to the Town for Streetlight Maintenance Services only, shall adjust the annual Fees to reflect actual rather than budgeted costs.
- 2.5.5 Fees for the Facilities shall be invoiced to PowerStream in accordance with the Lease.
- 2.5.6 The Parties agree that payment of PowerStream Fees and other charges provided for hereunder will be due and payable in arrears not later than thirty (30) days after the date of invoice.
- 2.5.7 All PowerStream Fees and the Facilities shall comply with the requirements of the Affiliate Relationships Code.
- 2.6 <u>Co-operation by Town</u>. The Town shall co-operate with PowerStream to assist it in the provision of the Services. Without limiting the generality of the foregoing, the Town will:
  - 2.6.1 assign a minimum of two (2) representatives of the Town to co-ordinate with PowerStream the provision of the Services to the Town to deal with financial and operational issues respectively;
  - 2.6.2 prepare and provide to PowerStream, in a mutually acceptable format, all information reasonably required by PowerStream to permit proper delivery of the Services;
  - 2.6.3 establish, incorporate and maintain as part of the practices, policies and service levels applicable to such Services, in consultation with PowerStream, operating procedures to satisfy the Town's requirements for accuracy and auditing;

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- 2.6.4 train, if necessary, personnel to assist in the provision of the required information to PowerStream to permit PowerStream to provide the Services; and
- 2.6.5 provide PowerStream assistance in collecting amounts owed to the Town. The Town may place any of such unpaid amounts on the collector's roll and enforce any other rights or remedies of the Town pursuant to section 398(2) of the *Municipal Act*, S. O. 2001, c. 25.

#### 2.7 Customer Information.

- 2.7.1 PowerStream acknowledges that the ownership of all data in respect of water and sewer customers of the Town as such data relates to: water and sewer information, water and sewer consumption history and charges, fire protection information, customer information including name, billing address, legal description, service address, the final twelve (12) months of meter readings for each customer, outstanding water and sewer invoices, customer credit and collection information, and information with regard to work orders and asset management systems is and shall remain the property of the Town. PowerStream shall ensure that all of the data contemplated by this Section 2.7.1 is backed up in accordance with current PowerStream procedures and can be restored in1-2 Business Days. The Town acknowledges that PowerStream can only back up data collected over a maximum period of 7 years.
- 2.7.2 The Town acknowledges that the ownership of data in respect of electricity customers of PowerStream or any of its Affiliates is and shall remain the property of PowerStream
- 2.7.3 Requests for data by the Town under Section 2.7.1 shall be made in writing, which may include electronic mail, by an individual designated by the Town to the attention of Bill Schmidt, Director of Information and Technology at PowerStream or such other individual designated by PowerStream. PowerStream shall within 1 Business Day advise the Town of the effort required to provide such data and such data shall be provided by PowerStream to the Town no later than 2 Business Days from the date the request is made by the Town or within such other, longer period of time as set out in the response from PowerStream.
- 2.7.4 Each Party, its employees and agents shall abide by all Applicable Laws, including the requirements of the Affiliate Relationships Code to the extent that it applies, related to the collection, use, retention, destruction and disclosure of any personal data which has been collected, used, retained, destroyed and disclosed in connection with the Services and the Facilities provided by such Party hereunder.

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#### 3. CONFIDENTIAL INFORMATION

- 3.1 <u>Confidentiality Obligation</u>. Commencing upon the Effective Date and continuing thereafter, each Party:
  - 3.1.1 shall treat as confidential, keep in safe custody and not disclose to any third party any Confidential Information provided to it by the other Party; and
  - 3.1.2 use such Confidential Information only to the extent necessary to comply with this Agreement.
- Each of the Parties shall establish and enforce procedures to protect Confidential 3.2 Information disclosed to it by the other Party and shall restrict disclosure of such Confidential Information to only those employees, officers, agents and professional advisors of it and its Affiliates who need to know such information in connection with such Party's performance of this Agreement and in accordance with MFIPPA or any other applicable legislation. If a Party or its Affiliate is required by order of any Governmental Authority or Applicable Law or the rules of a stock exchange to disclose Confidential Information disclosed to it by the other Party, it shall promptly notify the other Party of the request for disclosure and shall cooperate with the other Party if that other Party opposes the request for disclosure and wishes to seek confidential treatment for such Confidential Information that is required to be disclosed. Each of the Parties acknowledges that no adequate remedy at law exists for a material breach or threatened material breach of this Section 3.2 the continuation of which unremedied will cause the other Party to suffer irreparable harm, and agrees that the other Party is entitled, in addition to other remedies which may be available at law or in equity, to immediate injunctive relief from any breach of this Section 3.2 and to specific performance of its rights. Promptly following the Termination Date, each Party agrees to use commercially reasonable efforts to deliver to the other Party (the "Disclosing Party") the Confidential Information (including all electronic and other copies thereof) disclosed to it (the "Receiving Party") by the Disclosing Party that the Receiving Party possesses or, upon request by a Disclosing Party, the Receiving Party shall confirm to the Disclosing Party that such Confidential Information has been destroyed in accordance with the Disclosing Party's instructions but, in no event if such Confidential Information is not returned to the Disclosing Party or destroyed in accordance with its instructions, such Confidential Information shall not be disclosed by the Receiving Party to any other person. Notwithstanding the forgoing, (i) PowerStream acknowledges that the Town and its Affiliates are subject to MFIPPA and PowerStream agrees to act in accordance with applicable provincial laws relating to privacy as they apply to the provision of the Services by PowerStream; and (ii) the Town acknowledges that PowerStream and its Affiliates are subject to the Personal Information Protection and Electronic Documents Act (Canada) and the Town agrees to act in accordance with applicable federal laws relating to privacy as they apply to the provision of the Facilities by the Town.

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## 4. TERM.

- 4.1 <u>Term</u>. This Agreement will be effective as at the Effective Date and shall terminate three (3) years after the Effective Date, unless terminated earlier pursuant to Section 5.1 or extended by renewal of the term pursuant to Section 4.2 (the "Termination Date").
- 4.2 Extension of Term. If either Party gives notice in writing to the other Party by not later than sixty (60) days prior to the Termination Date, requesting the continuation of Services or the provision of the Facilities, as the case may be (an "Extension Notice") for an additional one year period, the Parties agree to negotiate, in good faith, in order to determine the terms and conditions on which such Services or the provision of the Facilities will be provided for a renewal term of one year or such longer period as is mutually agreed to. Notwithstanding anything in this Section 4.2 to the contrary, there shall be no obligation upon any Party having been provided with an Extension Notice to extend the term of this Agreement.

#### 5. TERMINATION.

- 5.1 <u>Termination</u>. This Agreement, except for subsections 2.5.1, 2.5.2, 2.5.4 to 2.5.7 inclusive, and Sections 3.1,3.2 and 7.1 to 7.5 inclusive, which shall survive the termination of this Agreement, shall terminate on the Termination Date and may be terminated prior thereto as follows:
  - 5.1.1 by the mutual written consent of the Parties hereto;
  - 5.1.2 by either Party effective upon not less than twelve (12) months written notice to the other Party in respect of the Facilities or the Services, save and except for water services provided by PowerStream to the Town as set out on Schedule B hereto, which shall require PowerStream to provide the Town with eighteen (18) months written notice for termination of such service;
  - 5.1.3 by either Party effective upon not less than thirty (30) days written notice of any material breach or default of any provision or obligation of this Agreement by a Party, provided that such notice will not be effective to terminate this Agreement in the event the other Party cures the default during such notice period; and
  - 5.1.4 immediately, by either Party if the other Party becomes insolvent or is a party to any bankruptcy or receivership proceeding or any similar action affecting the affairs, property or solvency of such Party.
  - 5.1.5 <u>Termination Without Prejudice.</u> Any such termination of this Agreement shall be without prejudice to any other remedies which any Party may have against the other arising out of such breach of default and

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shall not affect any rights or obligations of any Party arising under this Agreement prior to such termination.

#### 6. FORCE MAJEURE.

6.1 Force Majeure. Performance of any obligation under this Agreement, other than the payment of Fees pursuant to Section 2.5.6, may be suspended by either Party without liability to the extent that an act of God, war, fire, earthquake, explosion, governmental expropriation, governmental law or regulation or any other occurrence beyond the reasonable control of such Party or labour disruption, strike or injunction (if such labour event is not caused by the bad faith or unreasonable conduct of such Party) delays, prevents, restricts, limits or renders commercially unfeasible the performance of any such obligation. The affected Party may invoke this provision by promptly notifying the other Party of the nature and estimated duration of the suspension. No Party hereto invoking this provision shall be liable for any failure to perform or any delay in the performance of its obligations in this Section 6.1.

#### 7. DISCLAIMER, LIMIT OF LIABILITY AND INDEMNITY

- 7.1 Disclaimer. The Services provided by PowerStream are provided without any warranty whatsoever, other than as is set forth in Section 2.3 hereof. In particular, PowerStream makes no warranty as to the suitability of any of the Services for the specific purposes or needs of the Town. The warranty contained in this Agreement is the only warranty made by PowerStream with respect to the Services. PowerStream specifically excludes any other warranties or conditions express or implied, including, but not limited to, implied warranties or conditions of merchantability, merchantable or satisfactory quality or fitness for a particular purpose, and those arising from a course of dealing or usage of trade.
- 7.2 Indemnity by the Town. The Town agrees to indemnify, defend and hold harmless PowerStream from any and all claims, litigation, damages, losses, causes of action or expenses (including legal fees and disbursements) ("Claims") suffered or incurred by PowerStream from third parties or otherwise in connection with:
  - 7.2.1.1 a breach of the Town's obligations under this Agreement insofar as PowerStream has complied with its obligations under this Agreement; and
  - 7.2.1.2 any negligence on the part of the Town, its employees, contractors or agents in its provision of the Facilities.
- 7.3 Notwithstanding the provisions of Section 7.2, the Town shall be under no obligation to indemnify and save harmless PowerStream from any Claims resulting from the negligence or wilful misconduct of PowerStream in its provision of the Services hereunder.

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- 7.4 <u>Indemnity by PowerStream</u>. PowerStream agrees to indemnify, defend and hold harmless the Town from any and all Claims suffered or incurred by the Town from third parties or otherwise in connection with:
  - 7.4.1 a breach of PowerStream's obligations under this Agreement insofar as the Town has complied with its obligations under this Agreement; and
  - 7.4.2 any negligence on the part of PowerStream, its employees, contractors or agents in its provision of the Services hereunder.
- 7.5 Notwithstanding the provisions of Section 7.4, PowerStream shall be under no obligation to indemnify and save harmless the Town from any Claims resulting from the negligence or wilful misconduct of the Town in its provision of the Facilities hereunder.
- 7.6 <u>Insurance</u>. PowerStream shall provide and keep in force a comprehensive liability insurance policy with coverage equal to or greater than Five Million Dollars (\$5,000,000) (Canadian) of sufficient coverage in respect of the Services performed by it under the terms of this Agreement. The Town shall provide and keep in force insurance in respect of the Facilities as required under the terms of this Agreement.

## 8. MISCELLANEOUS

- Audit. PowerStream shall maintain accurate and complete books and records with 8.1 respect to (i) the Services provided hereunder, (ii) the PowerStream Fees, and (iii) any information provided by the Town to PowerStream for the provision of the Services. The Town shall maintain accurate and complete books and records in respect to (i) the Facilities provided hereunder, (ii) the Fees for the Facilities, and (iii) any information provided by PowerStream for the provision of the Facilities. Each Party shall keep its accounts and records in accordance with Canadian generally accepted accounting principles from time to time approved by the Canadian Institute of Chartered Accountants (or a successor institute) with respect to the computation of Fees and other charges payable pursuant to this Agreement. Each Party shall be entitled to audit such books and records in order to confirm compliance with the terms of this Agreement. Each Party shall make such books and records available to individuals designated by the other Party and provide any assistance it may reasonably require in order to conduct audits and inspections, provided that:
  - 8.1.1 audits and inspections shall be made at reasonable times and on at least ten (10) Business Days prior notice; and
  - 8.1.2 audits of Fees shall be made not later than twenty four (24) months after such Fees have been paid by a Party to the other Party.

Each Party agrees to provide the other Party with reasonable facilities for such audits and inspections and copies of documents, where necessary, appropriate and

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permitted by law. If a Party is not satisfied with the information provided (the "Unsatisfied Party"), the Unsatisfied Party may retain, at its own expense, an independent auditor, to review the books and records referred to above. The Party requested to provide additional information (the "Requested Party") may refuse to disclose to the Unsatisfied Party or its agents any information that the Requested Party is prevented from disclosing as a result of a confidentiality obligation to another person provided that the Requested Party shall use commercially reasonable efforts to obtain consents to permit disclosure of such information if such information is reasonably required in order to conduct an audit and inspection by the Requesting Party under this Section 8.1 and the Requesting Party or its agents has requested access to such information. Each of the Parties agree that any third party conducting an audit or inspection shall be subject to the confidentiality provisions of Sections 3.1 and 3.2 and may be required by the Requested Party to enter into a confidentiality and non-disclosure agreement in form and substance reasonably acceptable to the Requested Party and each of the Parties agree that should an independent auditor be deemed by the Requested Party to be a competitor of the Requested Party, the Parties shall mutually agree to the review and audit procedures prior to such review and audit.

- 8.2 <u>Governing Law</u>. This Agreement shall be governed by and construed in accordance with the law of the Province of Ontario and the laws of Canada applicable therein.
- 8.3 <u>Successors</u>. This Agreement will enure to the benefit of and be binding on the respective successors and assigns of each of the Parties.
- 8.4 Time of Essence. Time shall be of the essence of this Agreement
- 8.5 Notices. Unless otherwise expressly provided herein, any notice, consent or other communication (a "Notice") given pursuant to or in connection with this Agreement shall be in writing and shall be sufficiently given to the person to whom it is addressed if transmitted by facsimile, delivered in person to or for such person at the address of such person indicated below or at such other address as such person shall have provided in writing to the other Party in accordance with this provision. Any Notice provided in accordance with this provision shall be deemed to have been sufficiently given or made on the date on which it was so transmitted by facsimile or delivered provided that if such day is not a Business Day or delivery occurs after normal business hours of the recipient, the Notice shall be deemed given or made on the Business Day following transmission or delivery, as the case may be.

To PowerStream:

PowerStream Inc. 161 Cityview Boulevard Vaughan, Ontario L4H 0A9

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Attention: Dennis Nolan Executive Vice President, Corporate Services and Secretary

Fax: (905) 532-4616

E-Mail: dennis.nolan@powerstream.ca

To the Town:

The Corporation of the Town of Markham Anthony Roman Centre 101 Town Centre Boulevard Markham, Ontario L3R 9W3

#### For Financial matters or matters relating to the Facilities: Attention: Barbara Cribbett Treasurer

East /	005	470 7760
Fax: (	(905)	479-7769

E-Mail: bcribbet@markham.ca

For Operational issues:

Attention: Steven Andrews Director of Asset Management

Fax: (905) 479-7766

E-Mail: sandrews@markham.ca

or to such other address as such Party shall have notified to the other Party hereto. Any communication so addressed and delivered shall be deemed to have been sufficiently given or made on the date on which it was received.

- 8.6 Entire Agreement. This Agreement, together with the recitals and the Schedules attached hereto, constitutes the entire agreement between the Parties hereto with regard to the subject matter hereof and supersedes and cancels all previous negotiations, agreements, commitments and writings in respect of the subject matter hereof. This Agreement may not be modified or amended in any respect except by written instrument signed by the Parties hereto.
- 8.7 <u>Waiver</u>. The failure of any Party to this Agreement at any time to require performance by the other Party of any provision hereof shall in no way affect the full right to require such performance at any time thereafter of any other provision

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hereof and no waiver by any Party hereof of any breach of condition, covenant or agreement shall constitute a waiver except in respect of the particular breach giving rise to such waiver. Any such waiver shall be effective only if made in writing by the Party entitled to waive the provision.

- 8.8 <u>Independent Contractor</u>. By virtue of this Agreement, no Party hereto constitutes any other Party hereto as its agent, partner, joint venturer, franchisee or legal representative and no Party has express or implied authority to bind any other Party hereto in any manner whatsoever. Unless otherwise contemplated in the Services or the Facilities or approved in writing by the other Party, no Party hereto will assume or create any obligation or responsibility whatsoever, express or implied, on behalf of or in the name of that other Party.
- 8.9 <u>Assignment</u>. This Agreement and the privileges herein granted shall not be assigned by either Party except with the prior written consent of the other, such consent not to be unreasonably withheld. Notwithstanding the foregoing, either party or its permitted assignee may, as security only, assign, transfer, pledge, grant a security interest in or otherwise dispose of its rights and interests under this Agreement to a trustee or lending institution, including such an assignment, transfer or other disposition upon or pursuant to the exercise of remedies by such trustee or lending institution.
- 8.10 <u>Further Assurances</u>. Each of the Parties hereto from time to time at the request and expense of the other Party hereto and without further consideration, will execute and deliver such other instruments of transfer, conveyance and assignment and take such further action as such other Party may require to more effectively complete any matter provided for herein.
- 8.11 <u>Severability</u>. Any covenant or provision hereof determined to be void or unenforceable in whole or in part will be deemed not to affect or impair the validity or, enforceability of any other covenant or provision hereof and the covenants and provisions hereof are declared to be separate and distinct.

#### 8.12 Arbitration.

8.12.1 In the event of any dispute or claim between the Parties, arising out of, or relating to, in any way connected with this Agreement or its interpretation or the fulfilment of the obligations of the Parties hereunder (a "Dispute"), such Dispute shall be referred internally by either Party by written notification to Dennis Nolan, Executive Vice President, Corporate Services and Secretary at PowerStream and John Livey, Chief Administrative Officer at the Town for resolution (the "Internal Dispute Resolution"). If the Dispute is not resolved within 60 Business Days of a Dispute being referred to the Internal Dispute Resolution then such Dispute shall be settled by binding arbitration ("Binding Arbitration"). Binding Arbitration shall be conducted in accordance with the Arbitration Act, 1991 (Ontario), as amended from time to time.

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- 8.12.2 It shall be a condition precedent to the right of a Party to this Agreement to submit a Dispute to Binding Arbitration that such Party shall have given written notice of its intention to do so to the other Party to this Agreement and such written notice shall state the particulars of such Dispute. Within ten (10) Business Days of such notice being provided, the Parties to this Agreement shall mutually appoint a single arbitrator to determine the Dispute. The arbitrator shall fix a time, which shall not be later than ten (10) Business Days following his or her appointment, and a place in Vaughan, Ontario, for the purpose of hearing the evidence and representations of the Parties. Each of the Parties shall co-operate with the arbitrator and shall provide him or her with all information in their possession or under their control necessary or relevant to the matter being determined. Within ten (10) Business Days after the conclusion of the arbitration hearing, or such longer period as may be required by the arbitrator appointed under this subsection 8.12.2, the arbitrator shall make an award and reduce the same to writing and deliver one copy of his or her decision to each Party.
- 8.12.3 If the Parties fail to agree on an arbitrator within the time period specified in subsection 8.12.2 above, then, unless the parties otherwise agree, the Dispute shall be submitted to ADR Chambers for final resolution, which submission shall be by written notice which may be provided by either Party to ADR Chambers and to the other Party to this Agreement. Within five (5) Business Days following the date of any notice given by either Party pursuant to this subsection 8.12.3, an arbitrator shall be selected by random draw made by ADR Chambers. The arbitrator so selected shall perform both the settlement conference and the trial in the matter. The Parties further agree to be bound by the rules of the ADR Chambers in force from time to time.
- 8.12.4 There shall be no right of appeal from the arbitrator's award except in accordance with the *Arbitration Act, 1991* (Ontario). The Parties agree that a judgment upon the arbitration award may be entered in any court in Canada or any court having jurisdiction, or that an application may be made to such court for judicial recognition of the award and/or an order of enforcement thereof. The Parties agree that the arbitrator selected pursuant to subsections 8.12.2 and 8.12.3 shall determine costs (legal fees and disbursements) as part of the arbitrator's award.
- 8.13 <u>Counterparts</u>. This Agreement may be executed by the Parties hereto in several counterparts, each of which when so executed and delivered shall be an original and all such counterparts shall together constitute one and the same instrument.

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IN WITNESS WHEREOF, this Agreement has been executed by the Parties hereto on the date first above written.

# POWERSTREAM INC.

Per:

Name: Dennis Nolan Title: EVP Corporate Services & Secretary

# THE CORPORATION OF THE TOWN OF MARKHAM

Per:

Name: Frank Scarpitti Title: Mayor

Per:

Name: Sheila Birrell Title: Clerk

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Schedule A Facilities Terms

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# Explanation of Pricing

- As a result of PowerStream vacating the building at 8100 Warden Avenue in February 2008, the Town of Markham will charge 1/12 of the annual rent of \$605,000 or \$50,166.67.
- \$5.00 per square foot (annualized) will be charged for the month of February only for the garage/warehouse. This payment would be: 48,586 square feet x \$5.00 per square foot divided by 12 = \$20,244.17
- 3. Total of items 1 & 2 is \$70,410.84
- Outdoor storage space will be charged at a rate of \$10,000 per month from September 1, 2008 to December 2009.
- 5. 2008 cost is therefore \$110,410.84
- 6. 2009 cost is therefore \$120,000.00

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Memorandum of Understanding Between: PowerStream Inc. and The Corporation of the Town of Markham Dated February 6, 2008

# MEMORANDUM OF UNDERSTANDING dated this CHAday of February, 2008

Between:

#### POWERSTREAM INC. ("PowerStream")

And

## THE CORPORATION OF THE TOWN OF MARKHAM ("Markham")

WHEREAS Markham owns the property known municipally as 8100 Warden Avenue, Markham, Ontario ("8100");

AND WHEREAS PowerStream Inc., as the successor at law to Markham Hydro Distribution Inc. has leased a portion of 8100 pursuant to a lease dated May 5, 2003, (the "Existing Lease") for a term of ten years, from January 1, 2003 to December 31, 2012;

AND WHEREAS Markham received an expression of interest from a third party in June, 2007, to lease the part of the premises at 8100 that PowerStream rents from Markham, being the garage and warehouse areas (the "Premises");

AND WHEREAS Markham desires vacant occupancy of the Premises by March 1, 2008 in order to accommodate the third party expression of interest;

AND WHEREAS PowerStream will benefit from the occupancy of the Premises by the third party by increases in revenues from the sale of electricity;

AND WHEREAS PowerStream is willing to vacate the Premises on mutually acceptable terms by March 1, 2008;

AND WHEREAS PowerStream has secured a temporary facility for its operational use, located at 550 Cochrane Drive, Markham (the "Temporary Facility");

NOW THEREFORE, the parties agree that the following principles will form the basis of the agreement between them to facilitate PowerStream vacating the Premises prior to March 1, 2008.

- PowerStream will relocate all of its plant, equipment, personnel, vehicles and any other movable from the Premises by March 1, 2008.
- PowerStream shall be permitted to continue to occupy the 93,540 square feet of the outside storage yard including existing outbuildings and roadways, the rear storage lot (presently used for scrap hydro poles, PowerStream trailers, TransPower storage yard, and other

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construction materials) together referred to as the "Outside Storage Facilities", until December 31, 2009, or as mutually agreed. No rent shall be payable for use of the Outside Storage Facilities for the period up to and including August 31, 2008. For the period from September 1, 2008 to December 31, 2009, PowerStream shall pay Markham rent of \$10,000 per month, for as long as it occupies the Outside Storage Facilities. In the event that PowerStream's use of the Outside Storage Facilities is substantially reduced during this time, the rent will be adjusted on a proportional basis.

3. Markham shall reimburse PowerStream, upon delivery of documentation satisfactory to the Town's Treasurer, for 50% of the costs PowerStream incurs to move its plant, equipment, personnel, vehicles and other movables from 8100 to the Temporary Facility and 2800 Rutherford Road, Vaughan, Ontario. Markham covenants and agrees that the moving costs eligible for reimbursement are:

- Material moving costs (e.g. office furniture and contents, racking, warehouse inventory).
- b. Fleet moving costs (e.g. hoists, tools, air equipment).
- Renovations for Lines, Stores, Metering and Locates staff offices/facilities.
- Locker room equipment and installation.
- Temporary truck covering at Temporary Facility (erection and removal).
- Installation of security fencing at Temporary Facility (erection and removal).
- g. IT, telephone, security system and electrical installation (e.g. block heaters, power to temporary buildings) at Temporary Facility and 2800 Rutherford Road, Vaughan, Ontario.
- Costs associated with all required permits and site applications for Temporary Facility.
- Other direct costs incurred by PowerStream as a result of relocation to the Temporary Facility and 2800 Rutherford Road, Vaughan, Ontario.
- 4. The Parties covenant and agree to execute such further documents as are within their power and necessary in order to give full effect to the provisions of this Agreement, including, without limitation, an amendment to the Existing Lease to delete the Premises from the demised lands and to amend and delete the rent payable in respect of the outside storage area.
- Except as set out herein, all other provisions of the Existing Lease shall remain the same.

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 Markham and PowerStream acknowledge and agree that this Memorandum of Understanding sets out the principles of the agreement between them for the early termination of the existing 8100 lease in respect of the Premises

IN WITNESS WHEREOF this Memorandum of Understanding has been executed by the parties as of the (HL day of HL), , 2008.

NO NO TO AS ime 02/1908 CHW SOUCHOR APPROVED TOWN OF MARKHAM DOUNCE \_\_\_\_\_ REFOLUTION 1\_ 2 REPORT ONTH IC YW FEB. 12/08 BYENNI \_

THE CORPORATION OF THE TOWN OF MARKHAM Per

Frank Scarpitti, Mayor Per: Sheila Birrell, Clerk

## POWERSTREAM INC.

Per: (

Name:Dennis Nolan Title: EVP Corporate Services & Secretary

R Per: Name John Glicksman Title: EVP CFO

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Schedule B Cashier Service at Markham Town Hall

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#### **Cashiering Service at Markham Town Hall**

#### Terms and Pricing

This Schedule conveys the service expectations and service deliverables for the Town of Markham in its delivery of cashiering services to PowerStream beginning on January 24, 2008 and lasting for the three-year term of this contract. All of the service expectations listed below will be accompanied by full training and refresher training provided by PowerStream as required including documentation.

#### Service Expectations

On a daily basis, Town Cashiering staff will be required to do the following:

- Open for business at 8:30 am
- Log into PowerStream's Customer Information System
- Accept payments related to PowerStream by cheque, by cash, by Interac from customers and occasionally from Field Customer Service Representatives who have collected
- Input payments into PowerStream's cash management system
- Set aside any post-dated cheques and forward them to PowerStream's Head Office
- Day-End, Month-End and Year-End routines as determined by PowerStream will be broadcast to Town Cashiering staff
- Town staff or customer to advise PowerStream at the Head Office location in Vaughan of payments made by customers who are at risk of disconnection or deserve to be reconnected once they have made their payments
- Prepare courier packages which could include customer related enquiries
- Prepare deposits for armoured courier pickup at a generally specified time each day during regular working hours
- Answer basic questions related to customer bills on account history and basic industry issues; any payment arrangements will be made through PowerStream's Head Office
- Close the cashier service at 4:30 pm
- · Balance payment batches as often as necessary throughout the day
- For any shortages, the Town of Markham will be responsible for the cost of the outage amount (Note: this section must stay for accountability reasons – same as currently in place at the City of Vaughan where PowerStream is the service provider to the City)
- Print each posted and balanced payment batch summary and copies of the matching deposit slips and send via courier to PowerStream's Head Office
- Any correspondence, PAP / EPP applications, name change information, copies
  of deposit slips, new service applications and the like should be couriered to
  PowerStream's Head Office at the next opportunity
- Prepare daily separate armoured courier pickup acknowledgements for both cash and cheques

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#### Deliverables

PowerStream will provide:

- Deposit bags
- Deposit slips
- · Armoured Courier service
- · Staff training and documentation
- · Any customer related information or rate schedules
- · Point of sale Interac Machines including ribbons, rolls plus PowerStream receipts
- 3 'Paid' Stamps
- 3 'Entered' stamps
- · One 'Deposit to the Credit of PowerStream Inc.' Stamp

The Town of Markham will provide:

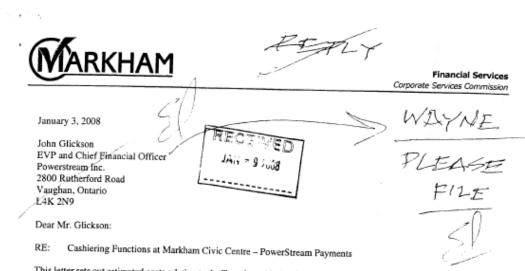
- Staff to handle the payment and customer service expectations of customers and the Town of Markham
- · Cooperation to determine the source and correction of any errors
- A telephone programmed to call toll-free to PowerStream's Head Office for priority support on issues of importance especially including issues requiring customers to be reconnected or to avoid being disconnected
- A display space for a few customer related information pieces plus water and electricity rate schedules
- A local printer to be able to print screens for enquiring customers and for batch backup.

#### Annual Pricing

- One time 2008 set up cost of \$600.00
- 2009 annual cost \$55,627

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 Add 3% for wage/increases/inflation for cost of \$57,296 in 2009 and \$59,015 in 2010.



This letter sets out estimated costs relating to the Town's cashiering function for taking PowerStream payments in the new year at the Civic centre. The costs itemized herein are our best estimate as of this date. There may be other incidentals later. The Town will be reimbursed by PowerStream for the costs in Section 1 (below).

Section 1

- Cashier salary: \$53,419 (2007 rates). This cost would escalate annually based on the union contract;
- Three point of sale Interac machine telephone lines: \$200 set up cost plus monthly operating costs for the four lines (including the Hot line below) \$184 or \$2,208 per year. The machine costs are not borne by the Town:
- "Hot line" telephone and line to PowerStream Contact Centre for customer inquiries: \$400. Any necessary signage will be in addition to this amount.
- PowerStream logo to be affixed to Payment Drop Box at Civic Centre. Any associated costs to implement

The set up costs total \$600. Annual operating costs estimated at \$55,627 which include salary and monthly telephone costs (plus associated taxes). Note that salary costs would increase based on union contracts. In addition, telephone lines will also likely be subject to change.

In addition, but not limited to, the following items that PowerStream will provide and fund:

Section 2

- All IT costs for connection to and from the Town and PowerStream's computer applications and hook-ups, including desk top applications, on-going support, licenses, etc;
- Courier costs and deposit bags and deposit slips; ٠
- Cashiering stamps 3 "Paid" stamps, 3 "Entered" stamps and one "Deposit to the Credit of PowerStream Inc";
- Any literature relating to PowerStream that is to be displayed at Civic centre:
- Staff training and documentation; ٠
- Other incidental or associated costs with the implementation of this transfer of functions.

The Corporation of the Town of Markham - 101 Town Centre Boulevard, Markham, Ontario L3R 9W3 Website: www.markham.ca - Tel: 905-477-7000 - Fax 905-479-7769

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The final costs will be provided to you following completion of the installation of the machines and the implementation of the Town accepting PowerStream customer payments. Recurring costs will be provided on an annual basis.

Yours truly,

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Paul Wealleans Director, Taxation

QAFinance/Revenue/Director/2007 Tax Issues/Powerstream Costs Dec 2007.doc

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# Schedule C Water Meter Reading and Billing

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#### SCHEDULE C

# SERVICE DESCRIPTION FOR WATER METER READING AND WATER BILLING AND REMITTANCE

#### GENERAL SERVICES PROVIDED

# Billing of all water/sewer services.

- As required, PowerStream to explain the methodology used to produce estimated readings and the adjustment/correction once regular reads are collected.
- PowerStream shall be responsible for the work quality of their meter readers.
- PowerStream shall be responsible for submitting any work orders relating to water meters to the Town and/or Town's contractor in a timely manner.

#### **Revenue Management & Collections**

- Payment by customers of water accounts are in conjunction with electricity accounts and the amounts owing are treated as one (unless prevented by the Ontario Energy Board from doing so).
- Upon request, PowerStream shall investigate & provide account details to the Town for specific customers where consumption varies from historic consumption levels.
- PowerStream shall provide billing & collection for Waterworks customer services as per the Town's approved user fee schedule for the following services:
  - Frozen meter replacement
  - Water turn on and/or turn off
  - Water meter removal, replacement and/or reinstallation
  - Water meter testing
- PowerStream shall provide written notices to the customer to have the ARB installed or repaired
- Coordination of appointments for repairs to water meter remote readout devices.

# CUSTOMER ACCOUNT MANAGEMENT

Resolution of Returned Mail

Management of outgoing mail.

#### SERVICE LEVELS

 PowerStream will include with its regular bill mailings one (1) bill insert per mailing (containing Waterworks information supplied by the municipality) at no cost. Availability is at the discretion of PowerStream. There may be third party costs associated with bill inserts.

## **Telephone and Written Inquiry Handling**

Response to telephone and written inquiries regarding water/sewer and electric will meet or exceed the mandated requirements as set out by the Ontario Energy Board:

- Telephone Response 65% of calls answered within 30 seconds.
- Written Response to Inquiry Within 10 business days, 80% of the time.

Annual statistics are reported to the Ontario Energy Board.

#### REPORTING STATISTICS

- Monthly Billing Summary best efforts by the fifth working day and no later than the 10<sup>th</sup> calendar day.
- Monthly Active Account Count List of Water Accounts best efforts by the fifth working day (broken down between residential and commercial) and no later than the 10<sup>th</sup> calendar day.

#### Water Meter Serial Number Corrections

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PowerStream shall update the water meter serial numbers in their database as provided by the Town from time to time. These corrections should be merged into PowerStream's database within 20 business days of receipt.

#### Work Orders Statistics

PowerStream shall provide the Town monthly reports of outstanding work orders.

#### **Customer Billing Data**

PowerStream should provide customer billing data to the Town in electronic format at the end of each billing month. The billing data should include the customers billed in the current month,

separated into residential, general and industrial customers. Data is used in various Waterworks analyses.

#### PRICING

PowerStream will charge the following prices for providing the water meter reading, billing and payment & collection services listed above. An adjustment based on actual accounts will be made at the end of Q1 2009 and at the end of Q1 2010. Remittance is on the 10<sup>th</sup> day after month end.

- 2008: \$1,363,337
- 2009: \$1,401,200
- 2010: \$1,426,190

The prices listed above are cost based and are marked up by PowerStream's weighted average cost of capital of 7.3%. The following process was used to arrive at the costs. The meter reading service is obtained form a competitive bidding process.

- 1. Determined the direct costs associated with providing the service.
- 2. Determined the indirect costs associated with providing the service.
- Determined what percentage of each budgetary account of the various Customer Services Departments are attributable to providing the services.
- Determined what costs are related only to providing the service and PowerStream wouldn't incur if it didn't provide the service
- 5. Adjusted all costs for 2% inflation for years 2009 and 2010
- 6. Summed all the costs related to providing the water services.
- Adjusted the total cost for 7.3% in order to ensure a ROI of 7.3% as required by the ARC.
- The adjusted amount is the price charged to the Town of Markham.

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# Schedule D Street Lighting Services

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#### Schedule D Street Lighting Services Provided by PowerStream Inc. to the Town of Markham

#### Service Summary

Street lighting service for the Town of Markham is broken into five categories:

- 1. Street Light Maintenance
  - a. Replacement of defective fixtures
  - b. Burned out lights and ballasts
  - c. Damaged poles and hardware
- 2. Re-lamping Program
  - Replace all street light bulbs in 1 selected area out of the 5 geographic based on a 5 year area rotation cycle.
- 3. Accident (e.x. hit by car) and Vandalism
  - Repair of broken street light poles.
  - b. Repair of damaged hardware.
  - c. Excludes damages where costs are recovered through insurance or by
  - direct payment.
- 4. Street Light Faults
  - Locating cable failure.
  - b. Contracting labour to expose underground cable.
  - c. Repairing damaged or faulty cables.
- Pole Replacement (not a service covered in the street light contract).
   a. Replace aging poles as a part of the maintenance process.

#### **Costing Methodology**

PowerStream will obtain pricing through a competitive bidding process in order to get the lowest cost for Town of Markham. PowerStream will manage the contract to ensure that service standards and quality are maintained. A fee of 20% will be charged.

Pricing is estimated at \$800,000 per year (including contract management fee) based on the experience in 2006 and 2007 and a Forecast for 2008. The actual costs will be charged.

Work Order	Costs		
	2006A	2007A	2008F
Maintenance	462,371	585,117	381,430
Faults/Burn Offs	115,655	173,736	210,000
Accidents/Vandalism	89,310	82,461	65,000
Relamping	118,499	22,427	143,982
Total	785,835	863,742	800,412

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Jan. 11, 2008

Mr. Alan Laver Town Of Markham 101 Town Centre Boulevard Markham, Ontario L3R 9W3

#### Subject: 2008 Streetlight Maintenance & Re-lamping

Dear Alan

At your request, we are providing the proposed costing for streetlight maintenance and re-lamping program for the Town of Markham. It should be quoted for the amount noted **plus GST**.

In 2007 PowerStream Inc. selected a new service provider to perform street lighting services in the Town of Markham. This was effective Sept 15, 2007 and is scheduled to remain in effect until June 30, 2009.

The estimated cost for 2008 general streetlight maintenance (excluding re-lamping and hit & runs) is \$381,430.00. This value includes the approximate number of lights repaired annually using a **unit price per fixture(\*)** and others that are repaired at a time & material cost and ESA annual fees.

The estimated cost to re-lamp 4,000 units is \$143,982.80 plus GST.

Costs associated with accident (hit & run) and vandalism is estimated to be \$65,000.00 for 2008.

The repair costs for underground streetlight fault has been averaged over the past several years and for 2008 it is estimated at **\$210,000.00**. This estimate will vary with the actual number of faults that may occur.

If you find this information to be acceptable please forward 2 separate Purchase Orders to cover the following expenses.

1)	General Street light maintenance		- \$381,430.00
,	+ hit and runs		- \$ 65,000.00
	+ U/G faults		- \$210,000.00
		Total	\$656,430.00
		Plus GST	

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#### Re-lamping program Total - \$143,982.80 Plus GST

Please note that the costs provided in this letter are estimates only and actual costs will depend on the actual events that occur in 2008 and other pending considerations.

This estimate does not include additional costs associated with planned replacement of equipment.

Should you have any question regarding this information please contact me at 905-417-6984.

Yours truly,

2)

Leo McGinty Manager, Lines Maintenance PowerStream

(\*) Previous to the recent contract award, repair costs were charged at a time and material rate. There is an estimated savings of 11% using a per unit rate.

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# Schedule E Pricing Summary

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#### PRICING SUMMARY

Town of Markham/PowerSteam Joint Services Pricing Summary 2008 to 2010

# Services Provided by Town of Markham to PowerStream (In Dollars)

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Schedule - Service	2008	2009	2010
A - Facilities	110,411	120,000	nil
B - Cashiering	56,227	57,296	59,015

#### Services Provided by PowerStream to Town of Markham

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Service	2008	2009	2010
C - Water Services	1,363,337	1,401,200	1,426,190
D - Street Lighting	800,000	800,000	800,000

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#### **EMPLOYEE HEADCOUNT, COMPENSATION AND BENEFITS**

#### 2 HEAD COUNT

Prior to the creation of PowerStream in June 2004, its three predecessor utilities had 377 staff positions. PowerStream set a target to reduce this to 310 positions by June 2006. PowerStream purchased Aurora Hydro Connections Limited ("AHCL") on November 1, 2005 and combined its operations with those of PowerStream's in the spring of 2006. At the time of purchase, AHCL had 33 staff positions. PowerStream set a target to reduce this to 27 staff positions by eliminating contract and temporary staff and by attrition through retirement.

The pre-amalgamation utilities, including Aurora, had a total of 410 positions (377
PowerStream employees and 33 AHCL employees). PowerStream set a base target of
337 staff positions by December 31, 2006.

From its inception in June, 2004, PowerStream has experienced strong customer growth. Moreover, it continues to operate in an environment of increasing regulatory, technical and other requirements. Both of these factors have caused PowerStream's workload to increase with a corresponding increase in the number of staff that is required to carry out that work.

Directors and managers are required to justify the need for all new staff positions to the Executive Management Team (EMT). The EMT considers such requests and determines what is reasonable in the circumstances. The EMT's recommendation is reviewed by both the Human Resources and the Audit and Finance Committees of the Board before presentation to the Board of Directors for review and approval.

Table 1 is a year-over-year comparison of budgeted staff positions for the period 2006 to
2009 and the corresponding growth in PowerSream's customer base over the same
period.

Budgeted Staff Positions	Predecessor LDCs	2006	2007	2008	2009
Starting level	410	337	359	378	387
New requirements		14	16	7	8
Increases due to growth		8	3	2	6
Positions eliminated	(73)				-
Budgeted Staff level	337	359	378	387	401
Staff increase (decrease)	(73)	22	19	9	14
% change	-18%	7%	5%	2%	4%
Customer Growth	2006 Board Approved	2006 Actual	2007 Actual	2008 Projected	2009 Projected
Number of customers	213,500	228,556	236,377	243,780	251,637
Increase (decrease) %		7.1%	3.4%	3.1%	3.2%

# Table1: Budgeted Staffing Levels

PowerStream's 2009 budgeted number of staff positions (i.e., "headcount") is 401. This represents an increase of 64 positions over the post-merger target of 337. The additional 64 positions comprise 45 additional staff positions to handle new or increased regulatory and other requirements, and 19 additional staff positions due to growth. The result is a net increase of 64 staff positions in 2009, relative to 2006 EDR (Table 2).

Twenty-three Full Time Equivalents (FTEs) of co-op and summer students and 10 Board of Directors bring PowerStream's total 2009 complement to 434 (401 + 23 +10). The use of co-op and summer students permits PowerStream to operate with a lower number of permanent staff positions and provides a degree of flexibility. PowerStream receives tax credits that reduce the cost of its apprentice and student employment programs. These credits have been shown as a reduction in the tax expense.

38 PowerStream hires contract and temporary staff to bridge short-term gaps created by 39 approved leaves or vacant positions. Temporary staff may also be hired from time-to-40 time to assist with special projects where a specialized skill set is required for a limited 41 period of time. The number of contract and temporary staff, together with the number of

42 full-time and part-time employees, comprise the budgeted head count in any given year.

Table 2 summarizes the year-over-year change in head count (or FTEs) for the period 2006 to 2009 in six separate categories. Head count is defined here as the total number of full time, part-time, apprentices, co-op and summer student, temporary and contract staff working at PowerStream in a calendar year. In calculating FTEs, staff working parttime or part of the year are prorated.

48

Table 2:	Head	Count	(2006 to	o 2009)
----------	------	-------	----------	---------

	2006 EDR	2006	2007	2008	2009
Senior Management Team <sup>(1)</sup>	17	16	17	18	18
Management <sup>(2)</sup>	99	71	70	66	66
Non-Union <sup>(2)(3)</sup>	17	47	51	50	54
Unionized	237	226	232	253	263
Sub-total	360	360	370	387	401
Board Of Directors (1)		10	10	10	10
Students <sup>(3)</sup>	0	11	20	23	23
Total	370	381	400	420	434

49 <u>Notes:</u> 50 1. 51 52 2. 53 54 3.

1. In the "2006 EDR", the "Senior Management Team" line was called "Executives" and included the President, Vicepresidents and Board of Directors. For 2006 to 2009 it is as defined below.

2. In the "2006 EDR" column, non-union positions were included in the "Management" line. For 2006 to 2009 it is as defined below.

3. In the "2006 EDR" column the "Non-Union" line includes FTEs for summer and co-op students.

# 55 Senior Management Team

56 PowerStream's Senior Management Team includes the President and CEO, Vice-

57 Presidents and Directors. The Directors are employees, not Board Directors, who are

58 responsible for a number of departments and/or have cross-department responsibilities.

59 A new position, Director of Rates, was created in 2006.

#### 60 Management

61 The Management category consists of Managers and Supervisors.

#### 62 Non-Union

The Non-Union category consists of engineers, finance professionals, information
 technology staff, human resources staff and administrative and executive assistants.

# 65 **Unionized Positions**

The unionized workforce at PowerStream is represented by the International Brotherhood of Electrical Workers (IBEW), Local 636. Unionized staff consists of the various trade positions, commonly referred to as "outside" workers and administrative and clerical staff, commonly referred to as "inside" workers. Both inside and outside workers are covered under a single Collective Agreement.

The increase in unionized positions in the period 2006-2009 is due mainly to the hiring of additional staff for the apprenticeship program. The apprenticeship program is discussed below, in more detail. Additional staff is required to accommodate the workload from customer and distribution system growth but this has been offset in part by reductions made possible by combining operations of the predecessor utilities.

# 76 Apprenticeship Program

PowerStream has determined that the average age of its outside line staff is 43.5 years
of age. Workforce demographics for these staff are shown in Table 3, below.

79

# Table 3: Demographics – Outside Line Staff

Age by Category	Number of Staff	%
Greater than 50	16	21.6%
40-49	40	54.1%
30-39	12	16.2%
Less than 30	6	8.1%
Total	74	

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Years to Retirement <sup>(1)</sup>	Number of Staff	%
6 or less	8	10.8%
8-10	18	24.3%
Total (10 or less)	26	35.1%

80

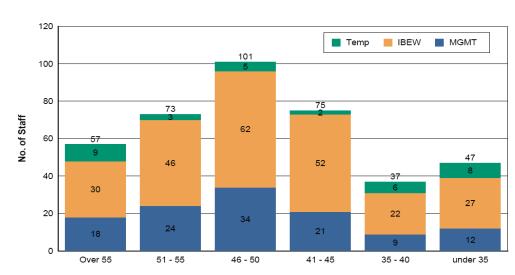
84

85

Note: Years to retirement is based on when employee can retire with an unreduced pension or age 65 whichever comes first.

86 Table 3 shows that 76 percent of the outside line work force is over 40 years of age. 87 Based on age and years of service, 11 percent are expected to retire within the next six 88 years and 35 percent expected to retire over the next ten years. PowerStream must 89 ensure that it maintains the level of technical manpower required to serve its customers 90 in a safe and effective manner. It takes nearly five years to achieve "journeyman" status 91 (i.e., fully qualified) and then a further two years to reach full proficiency. In order to 92 address this demographic reality and continued growth, in the period 2006 to 2009, 93 PowerStream will have hired a total of 31 apprentices: 18 linepersons, four control room, 94 two station maintenance, two protection and control, two metering and three engineering 95 design.

96 Figure 1 below shows PowerStream's entire workforce demographics.



# Figure 1: Workforce Demographics – Staff by Age Groups

98

97

# 99 TOTAL COMPENSATION

100 Table 4 summarizes the year-over-year changes in total compensation of the employees

101 in each of six categories, for the period 2006-2009.

1	02
1	02

# Table 4: Total Compensation by Group (\$)

	2006 EDR	2006	2007	2008	2009
Senior Management Team (1)(2)	\$ 2,780,401	\$ 3,409,314	\$ 3,866,369	\$ 4,263,066	\$ 4,390,958
Board of Directors <sup>(1)</sup>	\$-	\$ 252,052	\$ 328,692	\$ 311,472	\$ 320,826
Management <sup>(2)</sup>	\$10,982,881	\$ 8,479,562	\$ 8,902,772	\$ 8,239,143	\$ 8,486,313
Non-Union <sup>(2)</sup>	\$ 644,674	\$ 4,710,985	\$ 5,413,659	\$ 5,825,441	\$ 6,405,884
Unionized	\$16,668,986	\$20,333,526	\$ 21,861,757	\$22,648,116	\$24,139,242
Total	\$31,076,942	\$37,185,438	\$ 40,373,248	\$41,287,238	\$43,743,224

- 103 <u>Notes</u>:
- 104 1.1n the "2006 EDR", the "Senior Management Team" line was called "Executives" and included the 105 President, Vice-presidents and Board of Directors. For 2006 to 2009, it is as defined in the Headcount 106 section above.

1072. In the "2006 EDR" column, non-union non-management positions were included in the "Management"108 line. For 2006 to 2009, it is as defined in the Headcount section above.

109 3. The "2006 EDR" column amounts represent 2004 historical test year amounts.

110 In the period 2006-2009, Total Compensation increased by a total of \$12.7 million or 41

111 percent. This figure is misleading, however, because the \$31.1 million "2006 EDR"

- amount does not include \$1.2 million in health, dental and life insurance benefits, while the totals for all other years do include the value of these benefits. If the value of health, dental and ,life insurance benefits are added to the 2006 EDR total, the total increases to \$32.3 million and the increase over the period 2006 to 2009 becomes \$11.5 million or 36 percent.
- 117 The increase in Total Compensation in the period 2006-2009 is due to a number of
- 118 factors. These factors are set out in Table 5 and explained below.
- 119

# Table 5: Changes in Total Compensation 2006 to 2009 (\$000)

2006 Board approved amount		\$32,265
Contract and inflationary increases	15.9%	\$5,130
Subtotal		\$37,395
Increase in number of staff	17.3%	\$6,469
Subtotal		\$43,864
Other changes		(121)
2009 Total Compensation		\$43,743

120Note: The 2006 EDR amount has been adjusted to include health, dental and life121insurance benefits which were not included in the 2006 Board-approved amount.

The 2006 Board Approved amount is based on a 2004 Historical Test Year and represents compensation at 2004 levels. In the period 2005 to 2009, the annual inflation adjustment under the Collective Agreement was three percent. Wages of its management and non-union staff were adjusted by the same amount. These annual increases result in a 15.9 percent increase in adjusted compensation over the period 2006 to 2009. In the same period, PowerStream's staffing complement increased by 64 persons or 17.3 percent.

The contract/inflationary wage increases and the increase in the number of staff are the principal drivers of changes in Total Compensation in the period 2006-2009. Applying these two factors to the 2006 Board Approved compensation of \$32.3 million, total compensation in 2009 would increase to be \$43.8 million. Budgeted compensation for 2009 is \$43.5 million or \$0.3 million less than the projected amount. The difference is due to the fact that most of the staff additions are in the Union, Non-union and Student

- 135 categories and compensation levels in these categories are lower than in the Executive
- 136 and Management categories.

#### 137 **Average Yearly Base Wages**

- 138 Table 6 is a summary of the year-over-year average base wages, by category, in the
- 139 period 2006 to 2009.
- 140

# Table 6: Compensation - Average Yearly Base Wages (\$)

	2006 EDR	2006	2007	2008	2009
Senior Management Team <sup>(1)</sup>	139,987	160,392	166,342	169,232	174,309
Board of Directors		23,835	31,226	29,200	30,077
Management	97,457	91,218	94,406	95,618	98,487
Non-union	37,922	60,767	56,683	58,812	62,059
Unionized	54,765	62,427	62,789	63,035	64,500

141 Notes:

142 In the "2006 EDR", the "Senior Management Team" line was called "Executives" and included the 1. 143 President, Vice-presidents and Board of Directors. For 2006 to 2009, it is as defined in the Headcount 144 section above.

145 2. In the "2006 EDR" column, non-union non-management positions were included in the "Management" line. For 2006 to 2009, it is as defined in the Headcount section above.

146 147 3. The "2006 EDR" column amounts represent 2004 historical test year amounts.

148 Senior Management Team salaries •

149 In 2005, following the creation of PowerStream, an independent consultant was retained 150 to review the compensation structure for management and director level employees. 151 The consultant conducted salary surveys of comparable companies in terms of size,

152 both within and outside of the utility sector. On the basis of the results of this review,

153 PowerStream adopted a new salary structure for Director level positions.

154 In 2007, PowerStream retained an independent consultant to review the compensation 155 structure of the executive level (President and Vice-President) employees. The 156 consultant was asked to create a compensation philosophy, evaluate positions based on 157 a point-factor system and analyze the compensation structure of comparable positions 158 within the marketplace. The consultant recommended that executive salaries be brought into line with the new compensation philosophy and be adjusted upwards in order toremain competitive with the market.

#### 161 • Unionized salaries

In 2005, PowerStream negotiated a three-year Collective Agreement with the IBEW.
Under the terms of this agreement, all bargaining unit employees were entitled to an
annual three percent wage increase. The Collective Agreement remained in effect until
March 31, 2008. The Collective Agreement also covered the unionized employees of
AHCL, effective November 1, 2005.

In early 2008, a new three-year Collective Agreement was negotiated. This agreement also provide for a three percent annual general wage increase for all bargaining unit employees in each of 2008, 2009 and 2010. This general wage increase has also been applied to management/non-union salary ranges as an inflationary increase.

# 171 Average Yearly Overtime

Table 7 summarizes the year-over-year changes in average annual overtime paymentsin the period 2006-2009, for each of six categories of employees.

174

# Table 7: Compensation – Average Yearly Overtime (\$)

	2006 EDR	2006	2007	2008	2009
Senior Management Team <sup>(1)</sup>	-	-	-	-	-
Board of Directors	-	-	-	-	-
Management <sup>(1)</sup>	1,918	1,621	2,138	-	-
Non-Union	-	812	317	555	-
Unionized	5,759	8,376	10,288	5,141	5,296

<sup>175</sup> 176

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4. The "2006 EDR" column amounts represent 2004 historical test year amounts.

Notes: 1. There is no overtine

<sup>1.</sup> There is no overtime budgeted for Management for 2008-2009.

In the "2006 EDR", the "Senior Management Team" line was called "Executives" and included the President, Vice-presidents and Board of Directors. For 2006 to 2009, it is as defined in the Headcount section above.

<sup>3.</sup> In the "2006 EDR" column, non-union non-management positions were included in the "Management" line. For 2006 to 2009, it is as defined in the Headcount section above.

Overtime is budgeted, annually, based on historical data. Due to the nature of PowerStream's work, however, certain unforeseen situations may arise in any given year. For example, in 2007 a major ice storm struck PowerStream's service territory. This resulted in significant damage to the physical plant. As a result, work crews were required to work significantly more hours than originally budgeted in order to safely and quickly restore power to customers.

# 190 Average Yearly Incentive Pay

Average Yearly Incentive Pay is commonly referred to at PowerStream as the
Performance Incentive Program ("PIP"). Executives, Management and all permanent
Non-union employees are eligible to participate annually in this program.

194 In the PIP, employees are rewarded for both the achievement of goals specifically 195 related to their job, and for the achievement of overall corporate goals. The corporate 196 goals are identified and tracked in a "balanced scorecard".

More senior staff have a greater weighing of corporate goals in their PIP reflecting theirgreater span of influence.

PIPs span a calendar year and the assessments are done after year-end, when results are known. Executive PIP payments are reviewed and approved by the HR Committee of the Board of Directors. All other payments are approved by the Executive and Directors.

#### 203 Table 8 summarizes the average annual incentive per employee in each of four

# 204 categories.

205

#### Table 8: Compensation – Average Yearly Incentive (\$)

	2006 EDR	2006	2007	2008	2009
Senior Management Team <sup>(1)</sup>	8,584	28,154	32,236	32,009	32,969
Board of Directors	0	0	0	0	0
Management	610	4,550	5,276	4,814	4,958
Non-union	0	2,131	1,868	2,089	2,244

206	No
207	
208	
209	
010	

210

 $\overline{2}11$ 

212

 otes:
 In the "2006 EDR", the "Senior Management Team" line was called "Executives" and included the President, Vice-presidents and Board of Directors. For 2006 to 2009, it is as defined in the Headcount section above.

2. In the "2006 EDR" column, non-union non-management positions were included in the "Management" line. For 2006 to 2009, it is as defined in the Headcount section above.

3. The "2006 EDR" column amounts represent 2004 historical test year amounts.

#### 213 Benefits

In order to attract and retain staff at all levels, PowerStream offers a comprehensive and competitive employee benefits package. These benefits include medical and dental coverage, long term disability and life insurance, various forms of leaves and a company-sponsored defined retirement plan. These benefits are also designed to ensure and address the health and overall wellness needs of staff.

Benefits also include the company cost of Canada Pension Plan contributions,
 Employment Insurance, Employer Health Tax and Workers Safety Insurance premiums.

For unionized staff, benefits are a negotiated item. Changes to the plan may only be achieved through the collective bargaining process.

Table 9 sets out the year-over-year changes in the annual cost of providing employee

benefits. Increases over the 2006-2009 period reflect both inflationary expenses and the

225 current demographic profile of PowerStream's employees.

226

# Table 9: Average Actual Cost of Employee Benefits (\$)

	2006 EDR	2006	2007	2008	2009
Senior Management Team <sup>(1)</sup>	14,982	30,844	34,898	35,596	36,664
Board of Directors		1,370	1,909	1,947	2,006
Management (2)	10,953	21,840	23,925	24,404	25,136
Non-Union	0	17,332	17,878	18,236	18,783
Unionized	9,809	19,228	21,062	21,484	22,128

Notes:

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232 233  In the "2006 EDR", the "Senior Management Team" line was called "Executives" and included the President, Vice-presidents and Board of Directors. For 2006 to 2009, it is as defined in the Headcount section above.

2. In the "2006 EDR" column, non-union non-management positions were included in the "Management" line. For 2006 to 2009, it is as defined in the Headcount section above.

3. The "2006 EDR" column amounts represent 2004 historical test year amounts.

#### 234 **Pension Expenses**

PowerStream contributes to an employee pension benefit as provided through the Ontario Municipal Employees Retirements Savings Plan (OMERS). Pension contributions increase proportionally to increases in base earnings and are allowed on incentive pay but not on overtime earnings. Temporary employees are not eligible to participate in the plan.

Table 10 summarizes the year-over-year changes in the annual cost of employee pension benefits.

242

#### Table 10: Pension Premiums (\$)

	2006	2007	2008	2009
Pension Premiums	2,003,435	2,194,221	2,260,048	2,327,849

#### 243 **Post-Retirement Benefits**

PowerStream provides post-retirement benefits to a certain segment of its retired population based on the policies that were in effect at its predecessor utilities. In 2005, PowerStream successfully negotiated an end to these benefits for existing Vaughan staff with less than twelve years of service at that time. In the result, PowerStream expects the cost of providing post-retirement benefits will decline over time as eligible membership decreases.

Table 11 summarizes the year-over-year changes in the annual cost of post-retirement benefits.

252

258

#### Table 11: Post Retirement Benefits Costs (\$)

				2006	2007	2008	2009
	Pos	st Reti	irement Benefits Costs	1,157,681	1,076,643	1,080,000	1,080,000
25 25		Notes	s: The actual 2006-2007 amou	inte for Post R	Petirement Renefit	Costs were det	armined through an
25	55	1.	actuarial evaluation (based or				
25 25		2.	The 2008 actuarial valuation has been filed with the Boa				• •

Budget, based on the previous actuarial evaluation.

2009 EDR Application

# LOSS ADJUSTMENT FACTOR

# 2 OVERVIEW

As electricity travels along wires and through transformers and other devices, resistance in the conductor causes some electricity to be converted to heat energy and lost. As a result when electricity comes from the provincial grid and flows to customers, more electricity is required from the grid than actually reaches the customers. This fact of physics is usually referred to as "line losses" or simply "losses".

8 There are also losses resulting from the theft of power and meter reading or billing9 errors.

10 The loss adjustment factor is applied to a customer's metered consumption for billing 11 purposes. It is designed to result in billed consumption that reflects the amount of 12 electricity PowerStream has to purchase in order to meet each customer's requirements 13 taking into account distribution line losses.

The total loss factor for a year is determined by dividing the total kWhs purchased during the year by the total kWhs billed to customers during the year (metered consumption before applying any loss adjustment factor). PowerStream's total loss factors for the previous six years are provided in Table 1.

18

#### Table 1: PowerStream Total Loss Factors

2002	2003	2004	Average	2005	2006	2007	Average	
Actual	Actual	Actual	2002-2004	Actual	Actual	Actual	2005-2007	
1.0355	1.0376	1.0333	1.0355	1.0289	1.0303	1.0427		

19 PowerStream's total loss factor is well below the Board's threshold of 5% cited in section

20 10.5 of the 2006 EDR Handbook. The average for the three years ending 2007 of 1.0340

is an improvement over the average for the three years ending 2004 of 1.0355.

22 There are a number of activities that PowerStream has undertaken that, collectively,

- 23 help reduce distribution losses by addressing both non-technical and technical issues.
- 24 These initiatives are described in detail in Exhibit D1, Tab 1, Schedule 11.

PowerStream has adopted the method used in the 2006 EDR Handbook for calculating
the loss adjustment factor as an average of losses over the three most recent years.
PowerStream's proposed loss adjustment factors are based on the average of the three
years from 2005 to 2007. These are provided in Table 2 together with, for comparative
purposes, the previous (PowerStream and Aurora Hydro) and the current (harmonized)
approved loss adjustment factors.

# 31 Table 2: PowerStream Approved and Proposed Loss Adjustment Factors

	PowerStream May 1, 2006	Aurora Hydro May 1, 2006	Harmonized Nov. 1, 2007	Proposed May 1, 2009
Total Loss Factor - Secondary Metered Customer < 5,000 kW	1.0393	1.0639	1.0368	1.0346
Total Loss Factor - Secondary Metered Customer > 5,000 kW	1.0145	N/A	1.0145	1.0145
Total Loss Factor - Primary Metered Customer < 5,000 kW	1.0289	1.0533	1.0265	1.0244
Total Loss Factor - Primary Metered Customer > 5,000 kW	1.0045	N/A	1.0045	1.0045

The vast majority of customers fall into the Secondary Metered Customer < 5,000 kW</li>
 category. PowerStream proposes reducing the loss adjustment factor for this category
 from 1.0368 to 1.0346.

Note that several different "total loss factors" are derived to be used as the lossadjustment factor for billing in different situations as described in the next section.

# 37 LOSS ADJUSTMENT FACTOR CALCULATIONS

38 PowerStream has calculated loss factors using the same method as in its approved 39 2007 rate harmonization filing (EB-2007-0074) and based on the 2006 EDR Handbook 40 (section 10.5 and schedule 10-5). As can be seen in Table 2 above, there are several 41 different loss factors depending on whether or not the customer is a large use customer 42 with average monthly peak demand > 5,000 kW and how the customer is metered. The Total Loss Factor ("TLF") to be used as the billing loss factor adjustment is
calculated as the Supply Facility Loss Factor ("SFLF") multiplied by the Distribution Loss
Factor ("DLF").

46 PowerStream proposes to use the current Board approved SFLF of 1.0045. The supply 47 facility loss factor is to account for losses that occur from the point that power is taken off 48 the transmission grid to the point where it enters PowerStream's distribution lines. 49 Losses occur mainly from the transformation of the power from the grid voltage to the 50 distribution system voltage.

51 The DLF is calculated in Table 3 on the next page and represents the losses in the local52 distribution (under 50kV) system.

53 PowerStream proposes to use the current approved loss adjustment factor for primary 54 metered large use (>5000 kW demand) customers of 1.0045, which represents the 55 SFLF. For secondary metered large use (>5000 kW demand) customers PowerStream 56 proposes to use the current approved Loss adjustment factor of 1.0145, which 57 represents the SFLF and the secondary metered loss factor of 1.0100 described in the 58 next paragraph.

59 PowerStream proposes to use the current Board approved secondary metered loss 60 factor of 1.0100. This secondary metered loss factor is a default value (2006 EDR 61 Handbook, Schedule 10-5) representing the losses that occur in the line transformer 62 where the voltage is stepped down from the distribution voltage (typically 27.6kV) to the 63 customer's service voltage (typically 600V for commercial/240V for residential). Where 64 the customer is metered before the line transformer this is referred to as "primary 65 metered". If the customer is metered after the line transformer, this is referred to as 66 "secondary metered".

The DLF has been calculated in Table 3 by taking the total purchased (wholesale) kWhs
and adjusting for consumption by Large Use customers on which losses are calculated
as discussed above, and comparing this with the kWhs billed (retail) to customers before
application of a loss factor, again excluding Large Use customers.

- 71 PowerStream calculated an average distribution loss factor ("DLF") of 1.0300 over the
- 72 last three years as shown in Table 3.

#### Table 3: PowerStream Loss Adjustment Factors- Detailed Calculation

	Description	2005	2006	2007	Total
	"Wholesale" kWh (IESO)	7,030,201,674	6,948,341,694	7,124,043,575	21,102,586,943
	With Supply Facility factor of 1.0045				
А	removed	6,998,707,490	6,917,214,230	7,092,128,995	21,008,050,715
в	"Wholesale" kWh for Large Use customer(s) (IESO)	401,950,361	273,918,905	41,455,576	717,324,842
С	Net "Wholesale" kWh (A)-(B)	6,596,757,129	6,643,295,326	7,050,673,419	20,290,725,873
D	"Retail" kWh (Distributor)	6,832,435,064	6,744,270,701	6,832,453,515	20,409,159,280
	"Retail" kWh for Large Use				
Е	customer(s)	397,970,654	271,206,836	41,045,125	710,222,615
F	Net "Retail" kWh (D)-(E)	6,434,464,410	6,473,063,865	6,791,408,390	19,698,936,665
G	Distribution Loss Factor (DLF) [(C)/(F)]	1.0252	1.0263	1.0382	
	Distribution Loss Factor -Three Year				
Н	average				1.0300

74 The Total Loss Factors to be used for the billing Loss Adjustment Factor and the SFLF

and DLF used to derive these are shown in Table 4 on the next page.

# Table 4: Proposed Loss Adjustment Factors

	PowerStream Approved May 1, 2006	Aurora Approved May 1, 2006	Harmonized Approved Nov. 1, 2007	Proposed May 1, 2009
Total Loss Factor - Secondary Metered Customer < 5,000 kW	1.0393	1.0639	1.0368	1.0346
Total Loss Factor - Secondary Metered Customer > 5,000 kW	1.0145	N/A	1.0145	1.0145
Total Loss Factor - Primary Metered Customer < 5,000 kW	1.0289	1.0533	1.0265	1.0244
Total Loss Factor - Primary Metered Customer > 5,000 kW	1.0045	N/A	1.0045	1.0045
Supply Facilities Loss Factor				1.0045
Distribution Loss Factor – Secondary Metered Custome	er < 5,000 kW			1.0300
Distribution Loss Factor – Secondary Metered Custome	er > 5,000 kW			1.0100
Distribution Loss Factor - Primary Metered Customer < 5,000 kW				1.0198
Distribution Loss Factor - Primary Metered Customer > 5,000 kW				1.0000
Total Loss Factor = Distribution Loss Factor multiplied	by the Supply Facility Loss I	Factor		

77

#### **DISTRIBUTION SYSTEM LOSSES**

Exhibit D1, Tab 1, Schedule 10 demonstrates that PowerStream's average loss
adjustment factor is well below the threshold amount of 5% used in the 2006 EDR
Handbook (Section 10.5). PowerStream does take steps, nevertheless, to reduce
distribution system losses.

6 Distribution system losses for any period are the difference between, collectively, the

7 electricity measured at the points of purchase and the electricity measured at the points

- 8 of sale during the period. There are two types of losses: non-technical and technical.
- 9 Non-technical losses occur from:
- 10 Fraud
- Meter reading errors
- Billing errors
- Unmetered loads
- 14 Technical losses occur in:
- Power transformers
- Distribution transformers
- Overhead and underground lines
- Secondary metering devices
- 19 Secondary overhead and underground lines

#### 20 NON-TECHNICAL LOSSES

PowerStream's meter readers watch for evidence of fraud and report such instances after meter-reading routes are completed. PowerStream outsources its meter reading function; however, the contract includes quality assurance provisions. PowerStream uses exception reports from its Customer Information System (CIS) to help isolate metering or meter-reading errors. PowerStream does calculations to accurately capture the impact of significant unmetered loads such as street lighting and cable TV amplifiers.

27

#### 28 **TECHNICAL LOSSES**

Feeders are the main power lines that distribute power from transformer stations connected to Hydro One's 230kV transmission lines - to supply the areas where customers are located. Feeders are a component of the distribution system that offer good opportunities for loss reduction. Heavily loaded and/or long feeders tend to have higher line losses.

Reductions to distribution system losses are frequently the result of initiatives that
 involve reductions in load or a reduction in feeder lengths while managing loads within
 PowerStream's Planning Guidelines.

PowerStream performs an annual review of peak loading to identify feeders that are loaded above the desired level. These feeders are then studied to determine where existing switches should be opened or closed and where additional switches should be installed to reduce loading. On occasion new feeders are installed in order to reduce the load on existing feeders, and thereby line losses.

42 In 2008, PowerStream installed three pole-type capacitor bank installations based on the 43 results of a survey of several sites that demonstrated the poorest power factor readings 44 within the service area. Capacitor banks are devices that when placed in the distribution 45 system, reduce system losses, improve the power factor, help sustain the appropriate 46 voltage level and increase system capacity. Capacitors are typically installed close to 47 customers that have heavy industrial loads and they provide the "reactive power" 48 required by these loads (e.g., electricity that magnetizes the coils in electric motors). 49 This means that the current required at the customer location does not need to flow all 50 the way from the generators, transmission line and distribution lines to get to the load, 51 thereby reducing losses.

52 Powerstream also works to reduce losses with respect to transformation. Power 53 transformers and line transformers are purchased with the lowest economically viable 54 losses. Transformers have losses based on the load they deliver (load losses) and also 55 have losses without delivering load (no load losses). Manufacturers vary their designs 56 based on what is specified between these two loss components, and their initial cost for 57 a utility to purchase the units reflects the requirements. An industry standard formula has 58 typically been used that weights the ratio of the no load and load losses along with the 59 initial purchase price. Purchasing through this calculation ensures that over the life of the 50 transformer, that total losses are economically compared. PowerStream uses this 51 methodology when procuring transformers.

62 PowerStream works with commercial customers with dedicated transformers to make 63 sure that these are "right sized" for the customer's load. Transformers supplied to 64 customers that have a large capacity relative to the actual load will typically have higher 65 losses than transformers where the load and capacity are more closely matched.

66 There are four initiatives that System Planning is conducting or will conduct with respect67 to losses. These are:

# 68 1. <u>Line Loss Study (2008)</u>

An initial line loss study will investigate some specific feeder configurations to establish relative losses for different types of feeders. This will be accomplished by obtaining feeder data from the Geographic Information System (GIS), identifying long feeders and short feeders, calculating line losses for several using CYMDIST (System Modeling Software) at annual peak load and at monthly peak load periods, proposing alternatives to decrease feeder line losses and proposing recommendations for future studies and line loss activities.

# 76 2. <u>Conductor Size Study (2009)</u>

The larger the conductor, the lower the losses. PowerStream will review its
distribution system for those areas where smaller conductor sizes and high loads
occur.

# 80 3. Feeder Imbalance Study (2009)

81 Balanced three phase circuits have lower losses than unbalanced three phase

82 circuits. PowerStream will review its distribution system for those feeders where83 the unbalance loads exceeds industry standards.

# 84 4. <u>Power Factor Survey II</u>

- 85 A second survey will be done to determine if there are additional optimal
- 86 locations for pole type capacitor bank installations.

# PAYMENTS IN LIEU OF TAXES (PILS)

#### 2 OVERVIEW

PowerStream is required to make payments in lieu of income taxes and capital taxes ("PILs") based on its taxable income and taxable capital. For 2009, PowerStream has calculated a PILs amount of \$9.0M for inclusion in rates on net income before taxes of \$27.3M. This represents a reduction in of \$2.3M from the 2006 Board Approved PILs amount of \$11.3M on a similar amount of net income before taxes of \$27.2M. This is due to lower tax rates in 2009 and a greater reduction in arriving at taxable income.

9 The tax model that PowerStream used to calculate PILS follows the general principles
10 and methodologies of the 2006 EDR Tax Model developed by the Board for 2006 rate
11 applications. See Exhibit D2, Tab 1, Schedule 2 for more details.

12 PowerStream's taxes are summarized in Table 1, below:

13

# Table 1: Summary of Taxes (\$000)

	2006 OEB Approved	2006 Actual	2007 Actual	Br	2008 idge Year	т	2009 est Year
Net income before taxes	\$ 27,213	\$ 30,947	\$ 35,248	\$	28,061	\$	27,264
Taxable Income	\$ 27,797	\$ 31,384	\$ 35,294	\$	22,220	\$	23,615
Taxes	\$ 11,350	\$ 12,796	\$ 14,111	\$	8,569	\$	9,040
Effective Tax rate	40.8%	40.8%	40.0%		38.6%		38.3%

Note: 2006 OEB Approved, 2008 BY and 2009 TY are distribution only; 2006 Actual and 2007 Actual include all revenues and expenses. Taxes includes Ontario Capital Tax (and Large Corporations Tax in the 2006 OEB Approved). 2009 TY includes PILS gross up.

14 Information for 2006 is taken from the tax return and net income before taxes (NIBT) and

15 taxable income (TI) is based on all revenues and expenses. In 2006 actual taxes were

16 \$1.4 million higher than the Board approved 2006 EDR. Taxes in the 2006 EDR were

- based on a 2004 historical test year. Actual 2006 TI was higher than in the 2006 EDR
- 18 due to revenue growth and the absence of the \$1.7 million in excess interest expense
- 19 used to calculate TI and taxes in the 2006 EDR.

Information for 2007 is taken from the tax return. NIBT and TI are based on all revenues
and expenses and the increase in 2007 over 2006 is mainly due to non-distribution
revenue of \$4.4M. Taxes payable in 2007 are \$1.3 million higher than in 2006 due to the
increased TI.

The 2008 TI includes only distribution income and expenses. NIBT in 2008 is estimated to be lower than 2007 due to the absence of non-distribution income included in the 2007 amount. TI in 2008 decreases from 2007 due to the lower NIBT and a much larger adjustment between NIBT and TI. The larger reduction from NIBT to TI is due in large part to Capital Cost Allowance on additions to buildings and distribution system being much higher than depreciation for accounting. Taxes in 2008 are estimated to be \$5.5 million lower than 2007 due to much lower TI and lower tax rates.

The 2009 TI includes only distribution income and expenses. In 2009 TI will increase by \$1.4M over 2008 due mainly to a smaller adjustment between NIBT and TI. This is mainly due to an increase in expenses booked for accounting but not deductible for tax. Taxes are forecast to increase by \$0.5M over 2008 on increased TI. The taxes on the higher TI and higher capital taxes are offset in part by the lower tax rates.

The tax rates used to calculate taxes are based on legislated changes at the time the rate application was prepared and are summarized in Table 2, below:

	2006 OEB Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
Federal Income					
Тах	22.12%	22.12%	22.12%	19.50%	19.00%
Ontario Income Tax	14.00%	14.00%	14.00%	14.00%	14.00%
Total Income Tax	36.12%	36.12%	36.12%	33.50%	33.00%
Ontario Capital Tax	0.300%	0.300%	0.285%	0.285%	0.225%
Capital Tax Exemption	\$ 10M	\$ 10M	\$ 12.5M	\$ 15M	\$ 15M

Table 2: Tax Rates

38

3 4

# TAX CALCULATIONS

2 Table 3, below summarizes the PILS calculations.

#### Table 3: Summary Tax Calculation (\$000)

	 06 OEB oproved	2006 Actual	2007 Actual	Bri	2008 dge Year	Те	2009 est Year
Taxable Income (Loss)	\$ 16,447	\$ 31,384	\$ 35,294	\$	22,220	\$	15,897
Combined Income Tax Rate	36.12%	36.12%	36.12%		33.50%		33.00%
Total Income Tax	\$ 5,941	\$ 11,336	\$ 12,748	\$	7,444	\$	5,246
Large Corporations Tax (LCT)	\$ 381	\$ -	\$ -	\$	-	\$	-
Ontario Capital Tax (OCT)	\$ 1,455	\$ 1,458	\$ 1,491	\$	1,199	\$	1,322
Grossed up Income Tax	\$ 9,300	\$ 11,336	\$ 12,748	\$	7,444	\$	7,830
Grossed up LCT	\$ 596	\$ -	\$ -	\$	-	\$	-
Ontario Capital Tax (OCT)	\$ 1,455	\$ 1,458	\$ 1,491	\$	1,199	\$	1,322
Tax credits and adjustments	\$ (0)	\$ 2	\$ (128)	\$	(74)	\$	(112)
Total PILs Expense	\$ 11,350	\$ 12,796	\$ 14,111	\$	8,569	\$	9,040

Note: 2006 OEB Approved, 2008 BY and 2009 TY are distribution only; 2006 Actual and 2007 Actual include all revenues and expenses. Gross up does not apply to 2006 Actual, 2007 Actual and 2008 BY as taxable income already includes PILs.

5 Taxable income (TI) for 2009 will be \$23.6M after the addition of PILs. The increase in

6 taxes over 2008 reflects the higher TI and increased capital tax and is offset in part by

7 the reduction in the income tax rate from 33.5% to 33.0%.

# 8 Table 4 summarizes the Ontario Capital Tax calculations.

9

# Table 4: Summary Ontario Capital Tax Calculation (\$000)

10

	_	2006 OEB Approved	2006 Actual		2007 Actual	Br	2008 Bridge Year		2009 est Year
Taxable Capital	\$	495,054	\$	496,012	\$ 535,602	\$	548,095	\$	602,520
Less exemption	\$	10,000	\$	10,000	\$ 12,500	\$	15,000	\$	15,000
Taxable Capital	\$	485,054	\$	486,012	\$ 523,102	\$	533,095	\$	587,520
Capital Tax Rate		0.300%		0.300%	0.285%		0.225%		0.225%
Capital Tax	\$	1,455	\$	1,458	\$ 1,491	\$	1,199	\$	1,322

11

12 PowerStream has estimated capital taxes using the calculations in the CT23 Ontario tax

13 form.

- 14 Table 5 summarizes the differences between Net Income before Taxes and Taxable
- 15 Income.
- 16

# Table 5: Reconciliation between Net Income and Taxable Income (\$000)

	2006 OEB Approved		2006 Actual		2007 Actual		2008 Bridge Year		-	2009 st Year
Income before PILs/Taxes	\$	15,863	\$	30,947	\$	35,248	\$	28,061	<del>4</del> 7	18,225
Additions (deductions)										
Amortization of tangible assets	\$	26,649	\$	29,127	\$	30,779	\$	33,045	<del>41</del>	36,538
Amortization of intangible assets			\$	341	\$	222		\$1		\$1
Capital cost allowance (CCA)	\$	(26,190)	\$	(28,566)	\$	(31,797)	\$	(36,072)	\$	(39,195)
Recapture of CCA					\$	290				
Cumulative eligible capital deduction	\$	(785)	\$	(747)	\$	(695)	\$	(646)	\$	(601)
Interest and penalty on taxes					\$	247				
Excess interest - 2006 EDR	\$	(1,726)	\$	-						
Taxable Capital Gains			\$	311	\$	2,165				
Gain on disposal booked			\$	(1,071)	\$	(4,493)				
Ontario Tax Credits			\$	36	\$	17				
Capital taxes booked less actual capital tax	\$	(68)	\$	66	\$	53	\$	(1,199)	\$	-
Capitalized interest			\$	(1,278)	\$	(1,393)	\$	(1,314)	\$	(959)
Reserves from financial statements- change	\$	2,524	\$	2,116	\$	3,330	\$	(420)	\$	1,080
Deferred financing fees deductible/deducted in prior year	\$	(420)	\$	(57)	\$	545	\$	585	\$	628
Scientific Research expensed less T661 claim					\$	309				
Miscellaneous other items	\$	600	\$	159	\$	574	\$	179	\$	179
Net Additions (deductions)	\$	584	\$	437	\$	152	\$	(5,841)	\$	(2,328)
Taxable Income (Loss)	\$	16,447	\$	31,384	\$	35,400	\$	22,220	\$	15,897

Note: 2006 OEB Approved, 2008 BY and 2009 TY are distribution only; 2006 Actual and 2007 Actual include all revenues and expenses. Income before PILS for 2006 OEB Approved and 2009 TY is before any PILS proxy is added to the revenue requirement.

# 17 CALCULATION DETAILS

18 The revenue requirement used to calculate 2008 and 2009 taxable income and PILs for 19 this rate application contains only distribution income and expenses. Disallowed and 20 non-recoverable expenses have been identified and removed.

The full amount of the capital tax exemption has been allocated to the distributionbusiness and claimed in full.

There are no loss carry forward amounts available in 2009. No loss carry forwardamounts were available in 2007 and losses are not expected in 2008.

The full amount of Capital Cost Allowance ("CCA") has been claimed and includes the
effect of the 2001 Fair Market Value ("FMV") bump.

The full amount of Eligible Capital Expenditure has been claimed and includes the effectof the 2001 FMV bump.

The deemed interest amount is used in computing target net income which is the starting point in determining taxable income. No adjustment was made to interest expense in arriving at taxable income; deemed interest expense was used in the calculation of PILs for 2009.

PowerStream capitalizes interest on construction work in progress as per the OEB
 Accounting Procedures Handbook guidelines. In 2009 this amount is forecast to be \$1.8
 million. This amount has been deducted in calculating taxable income and from additions
 for capital cost allowance.

For purposes of the tax calculation, PowerStream has assumed that the rate year (May
1, 2009 to April 30, 2010) is the same as the tax year (calendar 2009).

Ontario Corporate Minimum Tax has not been included in the PILs calculation as this willnot apply.

41 Tax credits for apprentices and co-op students have been claimed in calculating PILs.

Smart Meter capital expenditures up to December 31, 2007 and Conservation and
Demand Management ("CDM") capital expenditures have been included in rate base,
have been treated the same as any other capital expenditure for tax purposes and have
been included in additions for CCA.

46 For regulatory purposes, Powerstream has included stranded meter costs in its rate 47 base as approved by the Board in the Smart Meter Combined Proceeding (EB-2007-48 0063). These are the costs related to meters that have been removed from service as a 49 result of the installation of a Smart Meter. In its audited financial statements, 50 PowerStream has removed the stranded meter costs from the fixed asset accounts and 51 recorded this in the Smart Meter deferral account for future recovery. PowerStream has 52 calculated PILs with the cost of the stranded meters remaining in the Undepreciated 53 Capital Cost and has taken the full amount of CCA allowed.

- 54 The amounts calculated and discussed in this section are for income and capital taxes 55 only. Property taxes, including Payments in Lieu of Property Taxes, have been budgeted 56 and included in Other Distribution Expenses.
- 57 PowerStream has received and paid re-assessments for 2001 and 2002, and no other 58 years have been re-assessed at this time. PowerStream has filed an objection on these 59 re-assessments which if successful would result in a refund of less than \$100,000. This 60 has not been considered in calculating 2009 PILs.
- 61 PowerStream pays dividends to its shareholders regularly from "after tax income" and no 62 tax deduction is received on these payments. Estimated dividends have been taken into 63 account in arriving at the 2009 balance sheet amounts reducing taxable capital for the 64 Ontario capital tax calculation.

PowerStream records balances in variance and deferral accounts on its balance sheet to be cleared at a later date. For tax purposes these have been treated on the same basis as for accounting with no adjustment made between accounting and taxable income for these items. Net income before taxes for 2009 does not include any income from reversal of prior year provisions against variance and deferral accounts. PowerStream Inc. (ED-2004-0420)

PILs Calculations for 2009 EDR Application (EB 2008-0244) October 10, 2008

# **Model Overview**

Select a worksheet link

Tab	ShortName Title I		Instruction	Link				
P		PILS Calculationa		P0 Administration				
P0	Admin	Administration	Enter administrative information about the Application	P0 Administration				
P1	UCC	Undepreciated Capital Costs (UCC)	Enter actual balances and projected asset additions & retirements	P1 Undepreciated Capital Costs (UCC)				
P2	CEC	Cumulative Eligible Capital (CEC)	Enter actual balance, projected changes and deduction rates	P2 Cumulative Eligible Capital (CEC)				
P3	Interest	Interest Expense	Enter deemed and projected actual interest amounts	P3 Interest Expense				
P4	LCF	Loss Carry-Forward (LCF)	Enter details of historical losses available to offset projected taxable income	P4 Loss Carry-Forward (LCF)				
P5	Reserves	Reserve Balances	Enter balance amounts and projected changes in tax and accounting reserves	P5 Reserve Balances				
P6	TxblIncome	Taxable Income	Enter amounts required to calculate taxable income	P6 Taxable Income				
P7	CapitalTax	Capital Taxes	Enter rate base amounts	P7 Capital Taxes				
P8	TotalPILs	Total PILs Expense	Enter tax credit amounts	P8 Total PILs Expense				
Y		Reference Information		Y1 Tax Rates and Exemptions				
Y1	TaxRates	Tax Rates and Exemptions	Enter applicable rates and exemption amounts	Y1 Tax Rates and Exemptions				
Y2	CCA	Capital Cost Allowances (CCA)	Enter asset classes and applicable rates for CCA deductions	Y2 Capital Cost Allowances (CCA)				
Z		Model Parameters		Z1 Model Variables				
Z1	ModelVariables	Model Variables		Z1 Model Variables				
Z0	Disclaimer	Software Terms of Use		Z0 Software Terms of Use				

Filed: october 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D2 Tab 1 Schedule 3 **PowerStream Inc. (ED-2004-0420)** PILs Calculations for 2009 EDR Application (EB 2008-0244) October 10, 2008

# **P0** Administration

Enter administrative information about the Application

Application Version		
Name of Applicant		PowerStream Inc.
License Number		ED-2004-0420
Test Year		2009
File Number(s)		EB 2008-0244
Date of Application		10-Oct-2008
Contact:		
	Name	Tom Barrett
	email	tom.barrett@powerstream.ca
	phone	905-532-4640
		· · · · · · · · · · · · · · · · · · ·
Date of previous Test Year approval		31-Mar-2006

Filed: october 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D2 Tab 1 Schedule 3

#### PowerStream Inc. (ED-2004-0420)

PILs Calculations for 2009 EDR Application (EB 2008-0244) October 10, 2008

#### P1 Undepreciated Capital Costs (UCC)

Enter actual balances and projected asset additions & retirements

Class	Description	UCC Balance 31 Dec/07 <sup>1</sup>	Less: Non- Distribution Portion	Less: Disallowed FMV Increment	UCC 2008 Opening Balance	2008 Projected Additions	2008 Projected Retirements	UCC Before 1/2 Yr Adjustment	1/2 Year Reduction	Reduced UCC	Rate %	2008 CCA	UCC 31 Dec/08
1	Distribution System - post 1987	335,500,865			335,500,865			335,500,865		335,500,865	4.0%	13,420,035	322,080,830
1.1	Buildings (acq'd post Mar 19/07)					22,372,305		22,372,305	11,186,153	11,186,153	6.0%	671,169	21,701,136
2	Distribution System - pre 1988	73,841,730			73,841,730			73,841,730		73,841,730	6.0%	4,430,504	69,411,226
8	General Office/Stores Equip	25,182,249			25,182,249	5,736,009	30,000	30,888,258	2,853,005	28,035,254	20.0%	5,607,051	25,281,207
10	Computer Hardware/ Vehicles	4,334,104			4,334,104	1,218,400	537,000	5,015,504	340,700	4,674,804	30.0%	1,402,441	3,613,063
10.1	Certain Automobiles										30.0%		
12	Computer Software	1,417,340			1,417,340	1,188,391		2,605,731	594,195	2,011,535	100.0%	2,011,535	594,195
13.1	Leasehold Improvement Vaughan	159,240			159,240			159,240		159,240		105,329	53,911
13.2	Leasehold Improvement 2005	105,973			105,973			105,973		105,973		43,854	62,119
13.3	Leasehold Improvement Markham Hydro	367,163			367,163			367,163		367,163		83,187	283,976
13.4	Leasehold Improvement # 4	65,432			65,432			65,432		65,432		18,662	46,770
14	Franchise										6 years		
17	New Electrical Generating Equipment Acq'd after Feb 27/00 Other Than Bldgs	655.207			655,207			655.207		655,207	8.0%	52,417	602,790
43.1	Certain Energy-Efficient Electrical Generating Equipment										30.0%		
45	Computers & Systems Software (acq'd post Mar 22/04)	1,921,658			1,921,658			1,921,658		1,921,658	45.0%	864,746	1,056,912
45.1	Computers & Systems Software (acq'd post Mar 17/07)					4,253,511		4,253,511	2,126,756	2,126,756	55.0%	1,169,716	3,083,796
46	Data Network Infrastructure Equipment (acq'd post Mar 22/04)					985,000		985,000	492,500	492,500	30.0%	147,750	837,250
47	Distribution System post Feb 22/05	57,606,597			57,606,597	35,865,515		93,472,112	17,932,758	75,539,355	8.0%	6,043,148	87,428,964
13.5	5												
45.1	Smart Meters - Computers & Systems Software										55.0%		
47	Smart Meters - Distribution System post Feb 22/05										8.0%		
	WIP	40,156,399			40,156,399			40,156,399		40,156,399			40,156,399
	L									<u>++</u>			
	TOTAL	541,313,957			541,313,957	71,619,131	567,000	612,366,088	35,526,066	576,840,023		36,071,543	576,294,545

<sup>1</sup> per Schedule 8 of 2007 corporate tax return

#### PowerStream Inc. (ED-2004-0420)

PILs Calculations for 2009 EDR Application (EB 2008-024 October 10, 2008

#### P1 Undepreciated Capital Costs (UCC)

Enter actual balances and projected asset addition

Class	Description	2009 Projected Additions	2009 Projected Retirements	UCC Before 1/2 Yr Adjustment	1/2 Year Reduction	Reduced UCC	Rate %	2009 CCA	UCC 31 Dec/09
1	Distribution System - post 1987			322,080,830		322,080,830	4.0%	12,883,233	309,197,597
1.1	Buildings (acq'd post Mar 19/07)			21,701,136		21,701,136	6.0%	1,302,068	20,399,068
2	Distribution System - pre 1988			69,411,226		69,411,226	6.0%	4,164,674	65,246,553 21,598,006
8	General Office/Stores Equip	1,575,600	50,000	26,806,807	762,800	26,044,007	20.0%	5,208,801	
10	Computer Hardware/ Vehicles	1,082,600	537,000	4,158,663	272,800	3,885,863	30.0%	1,165,759	2,992,904
10.1	Certain Automobiles						30.0%		
12	Computer Software	753,960		1,348,155	376,980	971,175	100.0%	971,175	376,980
13.1	Leasehold Improvement Vaughan			53,911		53,911		53,911	
13.2	Leasehold Improvement 2005			62,119		62,119		43,854	18,265
13.3	Leasehold Improvement Markham Hydro			283,976		283,976		83,187	18,265 200,789
13.4	Leasehold Improvement # 4			46,770		46,770		18,662	28,108
14	Franchise								
17	New Electrical Generating Equipment Acq'd after Feb 27/00 Other Than Bldgs			602,790		602,790	8.0%	48,223	554,567
43.1	Certain Energy-Efficient Electrical Generating Equipment						30.0%		
45	Computers & Systems Software (acq'd post Mar 22/04)			1,056,912		1,056,912	45.0%	475,610	581,302
45.1	Computers & Systems Software (acq'd post Mar 17/07)	2,607,540		5,691,336	1,303,770	4,387,566	55.0%	2,413,161	3,278,175
46	Data Network Infrastructure Equipment (acq'd post Mar 22/04)	696,000		1,533,250	348,000	1,185,250	30.0%	355,575	1,177,675
47 13.5	Distribution System post Feb 22/05	75,312,399		162,741,363	37,656,200	125,085,163	8.0%	10,006,813	152,734,550
	Smart Meters - Computers & Systems Software						55.0%		
47	Smart Meters - Distribution System post Feb 22/05						8.0%		
	WIP			40,156,399		40,156,399			40,156,399
	TOTAL	82,028,099	587,000	657,735,644	40,720,550	617,015,094		39,194,707	618,540,936

<sup>1</sup> per Schedule 8 of 2007 corporate tax return

Filed: october 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D2 Tab 1 Schedule 3

October 10, 2008

# P2 Cumulative Eligible Capital (CEC)

Enter actual balance, projected changes and deduction rates

		2008		2009			
CEC Opening Balance <sup>1</sup>	 		9,227,586				8,581,655
Eligible Capital Property (ECP) Acquisitions							
Other Adjustments							
Subtotal	 x 3/4 =				x 3/4 =		
Non-taxable portion of a non-arm's length transferor's gain realized on the transfer of an ECP to the Corporation after December 20, 2002	x 1/2 =				x 1/2 =		
Amount transferred on amalgamation or wind-up of subsidiary	 						
Subtotal before deductions	 		9,227,586				8,581,655
ECP Dispositions (net)							
Other Adjustments							
Subtotal	 x 3/4 =				x 3/4 =		
Balance before tax deduction			9,227,586				8,581,655
Tax Deduction	 Rate:	7.0%	645,931		Rate:	7.0%	600,716
CEC Ending Balance			<u>8,581,655</u>				<u>7,980,939</u>

<sup>1</sup> 2008 amount per ending balance on Schedule 10 of 2007 corporate rax return

Filed: october 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D2 Tab 1 Schedule 3

# P3 Interest Expense

Enter deemed and projected actual interest amounts

	2008	2009	
Deemed Interest Expense (A)	17,540,024	18,694,506	
3900-Interest Expense			-
Add: Capitalized Interest (USA #6040)			Enter credit to P&L as positive number
Add: Capitalized Interest (USA #6042)			Enter credit to P&L as positive number
Less: non-debt interest expense (USA #6035)			
			Enter other adjustments for tax purposes
			This schedule only applied to 2006 EDR and is not relevant
			for 2009 EDR.
Total Interest Projected (B)			
Excess Interest Expense			(B) less (A); if negative: zero

# PowerStream Inc. (ED-2004-0420)

PILs Calculations for 2009 EDR Application (EB 2008-0244) October 10, 2008

# P4 Loss Carry-Forward (LCF)

Enter details of historical losses available to offset projected taxable income

	Balance 31 Dec/07 <sup>1</sup>	Less: Non- Distribution Portion	Utility Balance 31 Dec/07	2008	2009
Non-Capital LCF:					
Opening Balance					
Application of LCF to reduce taxable income					
Ending Balance					
Net Capital LCF:					
Opening Balance					
Application of LCF to reduce taxable capital gains					
Ending Balance					

<sup>1</sup> per Schedule 7-1 of 2007 corporate tax return

## PowerStream Inc. (ED-2004-0420)

PILs Calculations for 2009 EDR Application (EB 2008-0244) October 10, 2008

## P5 Reserve Balances

Enter balance amounts and projected changes in tax and accounting reserves

	Balance 31 Dec/07 <sup>1</sup>	Less: Non- Distribution Portion	Utility Balance 31 Dec/07	Changes (+/-) in 2008	Balance 31 Dec/08	Changes (+/-) in 2009	Balance 31 Dec/09
Capital Gains Reserves ss.40(1)							
Tax Reserves not deducted for book purposes:							
Reserve for doubtful accounts ss. 20(1)(I)							
Reserve for goods and services not delivered ss. 20(1)(m)							
Reserve for unpaid amounts ss. 20(1)(n)	2,553,849	2,553,849					
Debt & Share Issue Expenses ss. 20(1)(e)							
TOTAL	2,553,849	2,553,849					
Accounting Reserves not deducted for tax purposes:							
General Reserve for Inventory Obsolescence (non-specific)	300.000		300,000		300,000		300.000
General reserve for bad debts	850.000		850,000		850,000		850.000
Accrued Employee Future Benefits:			000,000		000,000		000,000
- Medical and Life Insurance							
- Short & Long-term Disability							
- Accumulated Sick Leave							
- Termination Cost							
- Other Post-Employment Benefits	7,240,564		7,240,564	1,080,000	8,320,564	1,080,000	9,400,564
Provision for Environmental Costs							
Restructuring Costs							
Accrued Contingent Litigation Costs							
Accrued Self-Insurance Costs							
Other Contingent Liabilities	2,354,601		2,354,601	(1,500,000)	854,601		854,601
Bonuses Accrued and Not Paid Within 180 Days of Year-End							
ss. 78(4)							
Unpaid Amounts to Related Person and Not Paid Within 3							
Taxation Years ss. 78(1)							
Accrued donation	760,000	760,000					
TOTAL	11,505,165	760,000	10,745,165	(420,000)	10,325,165	1,080,000	11,405,165

<sup>1</sup> per Schedule 13 of 2007 corporate tax return

# P6 Taxable Income

Enter amounts required to calculate taxable income

		2006 EDR Approved					
	T2 S1 line #	Tax Return	Less: Non- Distribution Portion	Utility Only	2008 Projection	2009 @ existing rates	2009 @ new dist. rates
Income/(Loss) before PILs/Taxes (Accounting) <sup>1</sup>		24,995,035	372,383	24,622,652	28,061,479	19,004,562	18,224,517
Additions:							
Interest and penalties on taxes	103	45,219		45,219	5,000	5,000	5,000
Amortization of tangible assets	104	27,870,567	94,782	27,775,785	33,044,507	36,538,357	36,538,357
Amortization of intangible assets	106	86,005		86,005	1,200	1,200	1,200
Recapture of capital cost allowance from Schedule 8	107						
Gain on sale of eligible capital property from Schedule	108						
Income or loss for tax purposes- joint ventures or partnerships	109	2,585		2,585	8,500	8,500	8,500
Loss in equity of subsidiaries and affiliates	110						
Loss on disposal of assets	111						
Charitable donations	112	112,000		112,000	15,000	45,000	45,000
Taxable Capital Gains	113	110,978		110,978			
Political Donations	114	6,871		6,871	1,000	1,000	1,000
Deferred and prepaid expenses	116						
Scientific research expenditures deducted -financials	118						
Capitalized interest	119						
Non-deductible club dues and fees	120	578		578	40,000	40,000	40,000
Non-deductible meals and entertainment expense	121	37,680		37,680	40,000	40,000	40,000
Non-deductible automobile expenses	122	10,191		10,191	10,000	10,000	10,000
Non-deductible life insurance premiums	123						
Non-deductible company pension plans	124						
Tax reserves beginning of year	125	162,000		162,000			
Reserves from financial statements- end of year	126	5,549,863		5,549,863	10,325,165	11,405,165	11,405,165
Soft costs on construction and renovation of buildings	127						
Book loss on joint ventures or partnerships	205						
Capital items expensed	206	6,360		6,360			
Debt issue expense	208						

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# P6 Taxable Income

Enter amounts required to calculate taxable income

		2006 EDR Approved					
	T2 S1 line #	Tax Return	Less: Non- Distribution Portion	Utility Only	2008 Projection	2009 @ existing rates	2009 @ new dist. rates
Income/(Loss) before PILs/Taxes (Accounting) 1		24,995,035	372,383	24,622,652	28,061,479	19,004,562	18,224,517
Development expenses claimed in current year	212						
Financing fees deducted in books	216	107,407		107,407			
Gain on settlement of debt	220						
Non-deductible advertising	226						
Non-deductible interest	227						
Non-deductible legal and accounting fees	228						
Recapture of SR&ED expenditures	231						
Share issue expense	235						
Write down of capital property	236						
Amounts received in respect of qualifying environment	007						
trust per paragraphs $12(1)(z.1)$ and $12(1)(z.2)$	237						
Capital tax booked (2008 & 2009 at existing rates		1 292 467		1 202 467			1 221 020
income before PILS is before capital taxes expense)		1,282,467		1,282,467			1,321,920
Pensions		8,527		8,527			
Contributions capitalized on books		18,721,281		18,721,281	19,705,099	19,733,101	19,733,101
Dividends credited to investment account		3,482,654		3,482,654			
Other non-deductible expense		100,000		100,000			
Carrying charges booked for accounting		245,132		245,132			
Ontario Specified Tax Credits					74,000	75,000	75,000
Refund interest		55,764		55,764			
Wrife-off of deferred charges booked		111,695		111,695			
Amortization of debt issue costs		73,078		73,078	585,000	628,000	628,000
Bond issue cost amortization		14,877		14,877			
Organizational costs expensed		42,817		42,817			
Total Additions		58,246,596	94,782	58,151,814	63,854,471	68,530,323	69,852,243

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# P6 Taxable Income

Enter amounts required to calculate taxable income

	2006 EDR Approved			ed			
	T2 S1 line #	Tax Return	Less: Non- Distribution Portion	Utility Only	2008 Projection	2009 @ existing rates	2009 @ new dist. rates
Income/(Loss) before PILs/Taxes (Accounting) <sup>1</sup>		24,995,035	372,383	24,622,652	28,061,479	19,004,562	18,224,517
Deductions:							
Gain on disposal of assets per financial statements	401	320,268		320,268			
Dividends not taxable under section 83	402						
Capital cost allowance from Schedule 8	403	26,445,431	58,343	26,387,088	36,071,543	39,194,707	39,194,707
Terminal loss from Schedule 8	404						
Cumulative eligible capital deduction from Schedule 10 CEC	405	823,996		823,996	645,931	600,716	600,716
Allowable business investment loss	406						
Deferred and prepaid expenses	409						
Scientific research expenses claimed in year	411						
Tax reserves end of year	413	57,845		57,845			
Reserves from financial statements - balance at beginning of year	414	3,438,020		3,438,020	10,745,165	10,325,165	10,325,165
Contributions to deferred income plans	416						
Book income of joint venture or partnership	305						
Equity in income from subsidiary or affiliates	306	1,563,222		1,563,222			
Ontario Capital tax per CT23	1	1,350,011		1,350,011	1,199,464	1,321,920	1,321,920
20(1)(e) deferred financing fees		614,718		614,718			
S13(7.4) election capitalized contributions	]	18,721,281		18,721,281	19,705,099	19,733,101	19,733,101
Rebate cheque abd postage cost capitalized		73,390		73,390			
Interest capitalized for accounting, deducted for tax					1,314,000	958,900	958,900
Total Deductions		53,408,182	58,343	53,349,839	69,681,203	72,134,509	72,134,509

# P6 Taxable Income

Enter amounts required to calculate taxable income

		20	06 EDR Approv	ed			
	T2 S1 line #	Tax Return	Less: Non- Distribution Portion	Utility Only	2008 Projection	2009 @ existing rates	2009 @ new dist. rates
Income/(Loss) before PILs/Taxes (Accounting) <sup>1</sup>		24,995,035	372,383	24,622,652	28,061,479	19,004,562	18,224,517
NET INCOME (LOSS) FOR TAX PURPOSES		29,833,449	408,822	29,424,627	22,234,747	15,400,376	15,942,251
Charitable donations from Schedule 2		112,000	6,175	105,825	15,000	45,000	45,000
Taxable dividends deductible under section 112 or 113, from Schedule 3 (item 82)		3,482,683		3,482,683			
Non-capital losses of preceding taxation years from Schedule 4							
Net-capital losses of preceding taxation years from Schedule 4							
Limited partnership losses of preceding taxation years from Schedule 4							
TAXABLE INCOME (LOSS)		26,238,766	402,647	25,836,119	22,219,747	15,355,376	15,897,251

<sup>1</sup> 2008 Projection and 2009 @ existing rates = 'Distribution Net Income before Tax.; 'Test' = Deemed Return On Equity

# P7 Capital Taxes

Rates and exemptions from sheet Y1

Enter rate base amounts

	2008	2009	
OCT (Ontario Capital Tax):			
Rate Base	498,997,248	542,396,333	Average for year
Less: Exemption	15,000,000	15,000,000	
Deemed Taxable Capital	483,997,248	527,396,333	
Tax Rate	0.225%	0.225%	
OCT payable	1,088,994	1,186,642	
From Detailed Calculation Model	1,199,464	1,321,920	Capital tax is calculated on year end balances
			which is how the actual expense will be based.
Federal LCT (Large Corporations Tax):			
Rate Base	498,997,248	542,396,333	
Less: Exemption	50,000,000	50,000,000	
Deemed Taxable Capital	448,997,248	492,396,333	
Tax Rate			
LCT payable			

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# **P8 Total PILs Expense**

Enter tax credit amounts

	2008	2009 at	2009 at new	
	Projection	Existing Rates	Revenue Req.	
Regulatory Taxable Income/(Loss)	22,219,747	15,355,376	15,897,251	from sheet P6
Combined Income Tax Rate	33.50%	33.00%	33.00%	"t" (from sheet Y1)
Total Income Taxes	7,443,615	5,067,274	5,246,093	
Investment & Miscellaneous Tax Credits	74,000	75,000	75,000	Input amounts
Income Tax Payable	7,369,615	4,992,274	5,171,093	<i>"¡"</i>
Large Corporations Tax (LCT)				from sheet P7
Ontario Capital Tax (OCT)	1,199,464	1,321,920	1,321,920	from sheet P7
Grossed-up Income Tax			7,718,049	= i / (1 - t)
Grossed-up LCT				= LCT/(1-t)
Total PILs Expense	8,569,080	6,314,194	9,039,969	Enter these results on sheet E4
				-
Taxable income grossed up for PILS	22,219,747	15,355,376	24,937,220	

# Y1 Tax Rates and Exemptions

Enter applicable rates and exemption amounts

### 2008 INCOME TAXES

Income R	lange	Inc	SBD		
From	То	Federal	Ontario	Combined	Clawback
\$0	\$300,000	11.50%	5.50%	17.00%	
\$300,000	\$400,000	11.50%	5.50%	17.00%	
\$400,000	\$1,128,519	19.50%	5.50%	25.00%	4.67%
\$1,128,519		19.50%	14.00%	33.50%	

### 2009 INCOME TAXES

Income R	SBD				
	ange	Inc	360		
From	То	Federal	Ontario	Combined	Clawback
\$0	\$300,000	11.50%	5.50%	17.00%	
\$300,000	\$400,000	11.50%	5.50%	17.00%	
\$400,000	\$1,128,519	19.00%	5.50%	24.50%	4.67%
\$1,128,519		19.00%	14.00%	33.00%	

### 2008 CAPITAL TAXES

	LCT	ОСТ
Exemption	\$50,000,000	\$15,000,000
Capital Tax Rate		0.225%
Surtax Rate		

### **2009 CAPITAL TAXES**

	LCT	ОСТ
Exemption	\$50,000,000	\$15,000,000
Capital Tax Rate		0.225%
Surtax Rate		

# PowerStream Inc. (ED-2004-0420)

PILs Calculations for 2009 EDR Application (EB 2008-0244) October 10, 2008

# Y2 Capital Cost Allowances (CCA)

Enter asset classes and applicable rates for CCA deductions

Class	Description	Rate	Years	½ Year Rule
1	Distribution System - post 1987	4.0%		YES
1.1	Buildings (acq'd post Mar 19/07)	6.0%		YES
2	Distribution System - pre 1988	6.0%		YES
8	General Office/Stores Equip	20.0%		YES
10	Computer Hardware/ Vehicles	30.0%		YES
10.1	Certain Automobiles	30.0%		YES
12	Computer Software	100.0%		YES
13.1	Leasehold Improvement Vaughan		25	YES
13.2	Leasehold Improvement 2005		4	YES
13.3	Leasehold Improvement Markham Hydro			YES
13.4	Leasehold Improvement # 4			YES
14	Franchise		6	NO
17	New Electrical Generating Equipment Acq'd after Feb 27/00 Other Than Bldgs	8.0%		YES
43.1	Certain Energy-Efficient Electrical Generating Equipment	30.0%		YES
45	Computers & Systems Software (acq'd post Mar 22/04)	45.0%		YES
45.1	Computers & Systems Software (acq'd post Mar 17/07)	55.0%		YES
46	Data Network Infrastructure Equipment (acq'd post Mar 22/04)	30.0%		YES
47	Distribution System post Feb 22/05	8.0%		YES

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# Z1 Model Variables

CRLF	
CRLF2	
ApprovedYr	2006 EDR Approved
RMpilsRel	r1.1 β
FakeBlank	
FolderPath	K:\Rates Group\2009 FTY\2009 Tax Model\
	·
	1

Filed: october 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit D2 Tab 1 Schedule 3 RateMaker PILs r1.1  $\beta$  © Elenchus Research Associates

## SOFTWARE TERMS OF USE

Elenchus Research Associates' intent in licensing *RateMaker PILs* (the "Model") is to provide utilities with a generic tool to assist in the development of cost of service applications for electricity distribution rates under the Forward Test Year approach. Certain adaptations of the Model may be required to meet regulatory requirements for any given rate application. It is the responsibility of the utility to ensure all data and documentation included in such an application, including output from the Model, will fulfill regulatory requirements. In particular, utilities should consult their tax adviser(s) to ensure the Model produces a complete and accurate calculation of expected PILs in accordance with applicable tax rules and legislation. Please see Appendix A in the *RateMaker.xls* documentation for complete terms of the software license.

Terms accepted?

YES

Filed: octo **20**, **10 is 30 a** mer Power Stream Inc. EB-2008-0244 Exhibit D2 Tab 1 Schedule 3



### **POWERSTREAM - Future Test Year Tax model**

#### **Ontario Capital Tax**

#### 2009 - Test Year

### ONTARIO CAPITAL TAX

(From Ontario CT23) PAID-UP CAPITAL

	2009 Estimated	Non-Distribution Elimination	Wires Only
Paid-up capital stock	149,433,000	164,376	149,268,624
Retained earnings (if deficit, use negative sign)	66,300,000	72,930	66,227,070
Capital and other surplus excluding	14,324,000	15,756	14,308,244
appraisal surplus			0
Loans and advances	310,700,000	341,770	310,358,230
Bank loans	70,000,000	77,000	69,923,000
Bankers acceptances			0
Bonds and debentures payable			0
Mortgages payable			0
Lien notes payable			0
Deferred credits			0
Contingent, investment, inventory and similar reserves			0
Other reserves not allowed as deductions	11,405,000	12,546	11,392,455
Share of partnership(s), joint venture(s) paid-up capital	53,500	53,500	0
Sub-total	622,215,500	737,878	621,477,622

#### Subtract:

Amounts deducted for income tax purposes in excess of amounts booked Deductible R&D expenditures and ONTTI costs deferred for income tax Total (Net) Paid-up Capital

### 18,978,433 20,876 18,957,557 0 603,237,067 717,002 602,520,065

#### **ELIGIBLE INVESTMENTS**

Bonds, lien notes, interest coupons			0
Mortgages due from other corporations			0
Shares in other corporations			0
Loans and advances to unrelated corporations			0
Eligible loans and advances to related corporations			0
Share of partnership(s) or joint venture(s) eligible investments	41,300	41,300	0
			0
Total Eligible Investments	41,300	41,300	0

#### TOTAL ASSETS

Deduct Investment in partnership(s)/joint venture(s)

#### Total assets as adjusted

Add: (if deducted from assets)

Contingent, investment, inventory and similar reserves Other reserves not allowed as deductions

Non-Distribution Elimination	Wires Only
	729,900,000
	0
55,400	0
	Elimination

		0
729,955,400	55,400	729,900,000
		•

# 0

Deduct Amounts deducted for income tax purposes in excess of amounts booked Deductible R&D expenditures and ONTTI costs deferred for income tax	18,978,433		<u>18,978,433</u> 0
Deduct Appraisal surplus if booked			0
Other adjustments (if deducting, use negative sign)			0
Total Assets	710,976,967	55,400	710,921,567
Investment Allowance Taxable Capital	35,041	41,300	0
Net paid-up capital Investment Allowance	603,237,067 35,041	717,002 41,300	602,520,065 0
Taxable Capital	603,202,025	675,702	602,520,065
Capital Tax Calculation Deduction from taxable capital	15,000,000		15,000,000
Net Taxable Capital		[	587,520,065
Rate		[	0.225%
Ontario Capital Tax (Deductible, not grossed-up)		[	1,321,920



### **POWERSTREAM - Future Test Year Tax model**

# Ontario Capital Tax

## 2008 - Bridge Year

#### ONTARIO CAPITAL TAX (From Ontario CT23) PAID-UP CAPITAL

	2008 Estimated	Non-Distribution Elimination	Wires Only
Paid-up capital stock	149,433,000		149,433,000
Retained earnings (if deficit, use negative sign)	61,200,000		61,200,000
Capital and other surplus excluding	14,324,000		14,324,000
appraisal surplus			0
Loans and advances	260,000,000		260,000,000
Bank loans	70,000,000		70,000,000
Bankers acceptances			0
Bonds and debentures payable			0
Mortgages payable			0
Lien notes payable			0
Deferred credits			0
Contingent, investment, inventory and similar reserves			0
Other reserves not allowed as deductions	10,325,165		10,325,165
Share of partnership(s), joint venture(s) paid-up capital			0
Sub-total	565,282,165	0	565,282,165

#### Subtract:

Amounts deducted for			
income tax purposes in			
excess of amounts			
booked	17,153,632		17,153,632
Deductible R&D			
expenditures and ONTTI			
costs deferred for income			
tax			0
Total (Net) Paid-up Capital	548,128,533	0	548,128,533

#### ELIGIBLE INVESTMENTS

Bonds, lien notes, interest coupons Mortgages due from other corporations Shares in other corporations Loans and advances to unrelated corporations Eligible loans and advances to related corporations Share of partnership(s) or joint venture(s) eligible investments

#### **Total Eligible Investments**

#### TOTAL ASSETS

Total assets per balance sheet
Mortgages or other liabilities deducted from assets
Share of partnership(s)/ joint venture(s) total assets

#### Deduct

Investment in partnership(s)/joint venture(s)

		0
		0
		0
		0
		0
41,200		41,200
		0
41,200	0	41,200

2008 Estimated	Non-Distribution Elimination	Wires Only
695,100,000		695,100,000
		0
55,300		55,300

	0

Total assets as adjusted	695,155,300	0	695,155,300
Add: (if deducted from assets)			
Contingent, investment, inventory and similar reserves Other reserves not allowed as deductions			0
Deduct			
Amounts deducted for income tax purposes in			
excess of amounts booked	17,153,632		17,153,632
Deductible R&D expenditures and ONTTI			
costs deferred for income tax			0
Deduct			
Appraisal surplus if booked			0
Other adjustments (if deducting, use negative sign)			0
Total Assets	678,001,668	0	678,001,668
Investment Allowance	33,308	0	33,308
Taxable Capital			
Net paid-up capital	548,128,533	0	548,128,533
Investment Allowance	33,308	0	33,308
Taxable Capital	548,095,225	0	548,095,225
Capital Tax Calculation	15 000 000		45 000 000
Deduction from taxable capital	15,000,000		15,000,000
Net Taxable Capital			533,095,225
Rate			0.225%
Ontario Capital Tax (Deductible, not grossed-up)			1,199,464

1

### DEFERRAL AND VARIANCE ACCOUNTS

### 2 OVERVIEW

PowerStream received final approval from the Board to recover its regulatory assets
accumulated to December 31, 2004 in connection with its 2006 EDR Application. The
corresponding rate riders expired on April 30, 2008.

6 Subsequent to December 31, 2004, PowerStream recorded additional amounts in a number of

7 other variance and deferral accounts. Table 2, on the next page, shows the balances in these

8 accounts as at December 31, 2007.

9 PowerStream is now seeking approval for the disposition of some, but not all, of these

10 balances for the reasons described in the next section of this schedule. PowerStream

11 proposes to refund \$27.9 million over a period of two years – from May 1, 2009 to April 30,

12 2011 – by means of the customer class specific rate riders shown in Table 1 below.

Charge (Credit)										
Class	Rate	Per								
Residential	\$(0.0019)	kWh								
GS < 50 KW	\$(0.0019)	kWh								
GS > 50 Non TOU	\$(0.8029)	kW								
Large Users	\$(1.1177)	kW								
Small Scattered Load	\$ 0.0011	kWh								
Sentinel Lighting	\$(3.2643)	kW								
Street Lighting	\$(0.7314)	kW								

## Table 1: Proposed Regulatory Asset Recovery Rate Riders

13 Exhibit E, Tab 1, Schedule 2 is the model that provides the detailed calculations supporting

14 the proposed rate riders.

### 15 STATUS OF DEFERRAL AND VARIANCE ACCOUNTS

- 16 The balances of PowerStream's deferral and variance accounts at December 31, 2007 are
- 17 summarized in Table 2 below.

Description	Total
Retail Settlement Variance Accounts	(23,848)
Smart Meters	12,869
Estimated over-recovery of PILs	(2,787)
Deferred OMERS pension costs	2,374
Deferred OEB annual cost assessments	984
Regulatory Asset recoveries/ repayments	2,443
Other Variance and Deferral Accounts	8
Total	(7,957)

Table 2: Variance and Deferral Accounts as at December 30, 2007
Asset (Liability) in Thousands of Dollars

18 The Board has indicated that it will deal with the deferral and variance accounts for Smart

19 Meters and PILs in separate proceedings. PowerStream has excluded the balances recorded

20 in these accounts (\$10.1M) from the amounts proposed for disposition.

PowerStream has also excluded the balance recorded in Account 1588- RSVA<sub>Power</sub>, Subaccount Global Adjustment; the excluded amount is \$10.0M. The charges and billing rates are set by the IESO with the intention of being self-correcting over time and, in PowerStream's view, there is some evidence that this is occurring.

25 Table 3, below, lists the individual accounts and the balance in each of them. PowerStream is

seeking approval to clear a net balance of \$27.9M and refund the amount to customers.

Account Description	Account Number	Assets (Liabilities)
Low Voltage	1550	(377,952)
RSVA - Wholesale Market Service Charge	1580	(12,079,645)
RSVA - One-time Wholesale Market Service	1582	410,051
RSVA - Retail Transmission Network Charge	1584	(771,760)
RSVA - Retail Transmission Connection Charge	1586	(9,002,536)
RSVA - Power (excluding Global Adjustment)	1588	(13,895,272)
Other Regulatory Assets (including sub-accounts)	1508	3,531,268
Retail Cost Variance Account - Retail	1518	110,102
Other Deferred Credits	2425	(148,224)
Subtotal		(32,223,968)
Recovery of Regulatory Asset Balances	1590	4,324,919
Net amount to be collected or (refunded)		(27,899,049)

# Table 3: Deferral and Variance Account Balances for Disposal Asset (Liability) in Thousands of Dollars

Assets represent amounts to be recovered from customers and liabilities represent amountsto be refunded to customers. These accounts are discussed below.

Low Voltage or LV is the difference between the amounts included in rates and billed to customers and the cost to PowerStream of Hydro One's charges for using its LV lines to transmit electricity from its transformer stations to PowerStream's distribution system. PowerStream's current rates are over-collecting costs due to PowerStream's purchase (in both 2006 and 2007) of some of the Hydro One's LV lines in its service area and the consequential lower LV charges from Hydro One. PowerStream is proposing lower LV charges to customers for 2009.

36 "RSVA - Wholesale Market Service Charge" is the difference between the cost to 37 PowerStream of the IESO's charges for operating the IESO-administered markets and the 38 IESO-controlled grid – Wholesale Market Services ("WMS") – and the amounts that Power 39 Stream billed to customers. Since market opening, customers have been billed the Board-40 approved WMS rate of \$0.0062 per kWh. In recent years, however, the costs charged by the 41 IESO have been much lower resulting in the large liability shown in Table 3.

42 "RSVA - One-time Wholesale Market Service" is the difference between the amount of the
43 IESO's charges that are not already incorporated in the WMS rate, as specified by the Board,
44 and the amount that PowerStream billed to customers for the same services using the Board-

45 approved WMS rate. As there have been no separate Board-approved rates for the one-time
46 WMS since market opening, this asset represents all specified one-time WMS charges from
47 2005 through 2007.

48 "RSVA - Retail Transmission Network Charge" is the difference between the amount of the 49 IESO's charges for transmission network services and the amount that PowerStream billed to 50 customers using the network service component of its Board-approved rates for retail 51 transmission service ("RTS"). Part of this liability pertains to the period from November 1, 52 2007 (when the IESO's charges were decreased) to May 1, 2008 (when PowerStream's new 53 RTS rates reflecting this decrease went into effect).

54 "RSVA - Retail Transmission Connection Charge" is the net of the IESO's charges for 55 transmission connection services and the amount that PowerStream billed to customers using 56 the connection service component of its Board-approved RTS rates. Part of this liability 57 pertains to the period from November 1, 2007 (when the IESO's charges were decreased) to 58 May 1, 2008 (when PowerStream's new RTS rates reflecting this decrease went into effect).

59 "RSVA - Power (excluding Global Adjustment)" is the difference between the amount that that 60 PowerStream billed to customers for electricity and the amount that the IESO billed to 61 PowerStream for electricity excluding from the latter, for this purpose, the amount of the 62 Global Adjustment. This liability arose in large part due to the lower actual losses experienced 63 by PowerStream from 2005 to 2007 relative to the Board-approved loss factors for billing 64 purposes. PowerStream is proposing to reduce these loss factors.

65 "Other Regulatory Assets" is, for the most part, a combination of the Board's cost
66 assessments and PowerStream's pension contributions to OMERS that were deferred, in
67 effect, prior to May 1, 2006 because these amounts were not reflected in PowerStream's
68 rates. PowerStream's rates began to reflect these costs effective May 1, 2006.

69 "Retail Cost Variance Account – Retail" is the difference between PowerStream's costs to
70 provide services to electricity retailers and PowerStream's revenue from the fees it charges for
71 these services. PowerStream is not proposing to update these fees.

"Other Deferred Credits" is, for the most part, the difference between the interest accrued and the approved balance from the 2006 EDR, on load aggregation savings prior to market opening. (The predecessor utilities of PowerStream were members of an association that received consolidated billing from Ontario Power Generation. This arrangement resulted in lower demand charges).

77 "Recoveries" is the difference between the amounts that PowerStream charged or credited to 78 customers by means of its Board-approved rate riders for the recovery of regulatory assets 79 and the Board-approved amounts for 2004 arising from the 2006 EDR Application. This asset 80 is the result of PowerStream over-refunding the net liability represented by the Board-81 approved amounts for 2004. There are two causes of this over-refunding. One is 82 PowerStream's subsequent growth; that is, the rate riders have been applied to more kWhs or 83 kWs than were used to calculate the rate riders. The other cause is a higher-than-actual 84 estimate of the amount that would be recovered by April 30, 2006 in the 2006 EDR 85 Application. This latter factor overstated the amount to be refunded.

Table 4 shows the changes to these accounts from January 1, 2005 to December 31, 2007.

#### Table 4: Deferral and Variance Account Continuity Schedule

(SHEET 2b - Regulatory Ascels - Continuity Schedule) NAME OF UTILITY PowerStream inc. NAME OF CONTACT Tom Barrett E-mail Address <u>tom Sarrett@powerstream.ca</u> PHONE NUMBER 905-532-4640		LICENCE NUMBER ED-2004-0420 DOCID NUMBER ED-2008-0244 Date 12-Dep-05											
							2005						
				Prin	olpai					Interest			Total
Account Decoription	Account Number	Opening Balance Jan-1	Additions (note 6)	Reductions (note 6)	Adjustments - instructed by Board (note 2)	Adjustments - other (Note 3)	Closing Balance Dec 31	Opening Interest Amounts as of Jan-1-05	interect Jan-1 to Deo81- 05	Adjustments - Instructed by Board (note 2)	Adjustments - other (Note 3)	Closing Balance Dec 31	Balance Dec 31
RSVA - Wholesale Market Service Charge	1580	\$ 10.240.908	\$ 5,448,118				\$ 15.689.026	\$ 1,526,091	\$ 779,284			\$ 2,305,375	\$ 17,994,401
RSVA - One-time Wholesale Market Service	1582	\$ 499,170	\$ 347,559				\$ 846,729	\$ 39,227	5 43,374			\$ 82,601	\$ 929,330
RSVA - Retail Transmission Network Charge	1584	\$ 3,884,322	\$ 802,452				\$ 4,685,774	\$ 558,178	\$ 269,472			\$ 827,650	
RSVA - Retail Transmission Connection Charge	1586	\$ (35,622,299)		\$ (4,490,742)			\$ (40,113,041)	\$ (2,891,747)	\$ (2,712,723)			\$ (5,604,470)	
RSVA - Power (excluding Global Adjustment)	1588	\$ 4,733,666		\$ (2,497,136)		*	\$ 2,236,530	\$ 901,451	\$ (72,838)	*	ş -	\$ 828,613	
Sub-Totals		\$ (16,264,234)	\$ 6,598,130	\$ (6,987,878)	ş -	ş .	\$ (16,653,982)	\$ 133,200	\$ (1,693,431)	ş .	ş -	\$ (1,560,231)	\$ (18,214,213)
Other Deviction Associate Only Associate OCD One Association	45204												
Other Regulatory Assets - Sub-Account - OEB Cost Assessments Other Regulatory Assets - Sub-Account - Pension Contributions	1508a 1508b	\$ 266,779	\$ 856,009 \$ 1,558,012				\$ 1,122,788 \$ 1,558,012	\$ 2,955	\$ 38,603 \$ 22,244			\$ 41,558 \$ 22,244	
Other Regulatory Assets - Sub-Account - Pension Contributions Other Regulatory Assets - Sub-Account - Other 7	15080 1508c	ş - 5 -	\$ 1,558,012 \$				\$ 1,558,012 \$ -	ş .	5 -			\$ 22,244	a 1,580,256
Retail Cost Variance Account - Retail	1518	\$ 717,442	ş .	\$ (9.085)			\$ 708.357	· ·	5 50.146			\$ 50.146	¥
Retail Cost Variance Account - STR	1548	5 -	5 .	• (5,665)			\$ -	5 .	5 -			5 -	5 .
Misc. Deferred Debits	1525	\$ 628,625	*			\$ (269.226)	\$ 359,399	s .	\$ 43,306			\$ 43.306	*
LV Variance Account	1550	5 -	5 -			* (===(===)	5 -	5 -	5 -			5 -	5 -
Qualitying Transition Costs 5	1570	\$ 3.941.764	n/a	n/a		\$ (672,367)	\$ 3,269,397	\$ 677,861	\$ 258,996			\$ 936.857	\$ 4,206,254
Pre-Market Opening Energy Variances Total 5	1571	\$ 11,927,525	n/a	n/a			\$ 11,927,525	\$ 2,279,011	\$ 826,338			\$ 3,105,349	
Extra-Ordinary Event Costs	1572	ş -	5.					5 .	5 -			5 -	5 -
Deferred Rate Impact Amounts	1574	•• •	ş .				ş .	5.	5 .			ş -	ş -
Other regulatory liabilities	2405	÷.	5 -				· ·	5	5			5 -	5 -
Other Deferred Credits	2425	\$ (2,546,413)				5 -	\$ (2,301,892)	5.	5 -			5 -	\$ (2,301,892)
Sub-Totals		\$ 14,935,722	\$ 2,658,542	\$ (9,085)	ş -	\$ (941,593)	\$ 16,643,586	\$ 2,959,827	\$ 1,239,633	5 -	5 -	\$ 4,199,460	\$ 20,843,046
Recovery of Regulatory Asset Balances	1590	\$ (6,436,371)	\$ (674,286)				\$ (7,110,657)	\$ (112,713)	\$ (496,216)			\$ (608,929)	\$ (7,719,586)
Total		\$ (7,764,882)	\$ 8,582,385	\$ (6,996,963)	ş -	\$ (941,593)	\$ (7,121,053)	\$ 2,980,314	\$ (950,014)	ş -	ş -	\$ 2,030,300	\$ (5,090,753)
Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08 Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08: Interest t	o Apr 30-09												
Total Claim The following is not included in the total claim but is included on a	memo hari												
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Capital	1555a		s -				ε.	s -	s -		1	5 -	5 -
Smart Neter Cepital and Recovery Offset Variance - Sub-Account - Recoveries (a)	1555b	Ŧ	5 -				ş -	5 -	5 -			5 -	5 -
Smart Neter Cepital and Recovery Offset Variance - Sub-Account - Stranded Meter Costs		+	5 -				ş -	5 -	5 -		l	5 -	5 -
Smart Meter OM&A Variance	1556	5 -	5 .				5 -	5 -	5 -			5 -	5 -
Deferred Payments in Lieu of Taxes	1562	\$ (487,878.00)	\$ (1,359,711.00)				\$ (1,847,589)	\$ 382,649.00	\$ (93,988.00)			\$ 288,661	\$ (1,558,928)
Deferred PILs Contra Account ®	1563	ş -	\$ 159,504.00				\$ 159,504	ş -	\$ 13,546.00			\$ 13,546	\$ 173,050
2006 PILs & Taxes Variance	1592	\$ -	5 -				ş -	5 -	5			5 -	ş -
Conservation and Demand Management Expenditures and Recoveries			\$ (4,955,950.00)				\$ (4,955,950)		5			ş -	\$ (4,955,950)
CDM Contra	1566	ş -	\$ 4,955,950.00				\$ 4,955,950	\$.	ş -			ş -	\$ 4,955,950
RSVA - Power (including Global Adjustment)	1588	\$ 4,733,666	-	\$ (4,017,384.00)			\$ 716,282	\$ 901,451.00				\$ 569,834	
RSVA - Power - Sub-Account - Global Adjustment *	1588g		ş .	\$ (1,520,248.00)			\$ (1,520,248)	5 -	\$ (258,779.00)			\$ (258,779)	\$ (1,779,027)
RSVA - Power (excluding Global Adjustment)		\$ 4,733,666	\$ -	\$ (2,497,136)	ş -	ş -	\$ 2,236,530	\$ 901,451	\$ (72,838)	ş -	ş -	\$ 828,613	\$ 3,065,143

Notes

<sup>1</sup> As per general ledger, if does not agree to Dec-31-04 balance filed in 2005 EDR then provide supplementary analysis

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

<sup>9</sup> Provide supporting statement indicating nature of this adjustments and periods they relate to

<sup>4</sup> Not included in sub-total

<sup>6</sup> Closed April 30, 2002

<sup>6</sup> For ROVA accounts only, report the net additions to the account during the year. For all other accounts, record the additions and reductions separately.

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

<sup>9</sup> Iss3 is software combanes of the statistic to be a statisti

2009 EDR Application

#### Table 4: Deferral and Variance Account Continuity Schedule

(8HEET 2b - Regulatory Accets - Continuity Schedule) NAME OF UTILITY PowerStream inc. NAME OF CONTACT Tom Barrett E-mail Address tom.barrett@powerstream.ca PHONE NUMBER 905-532-4640

Interview         Interview         Interview         Interview         Total           Anomed Description         Anomed Descripion         An			2006											
Answer         Opening Bases Bases         Addemsing (set is) Bases			Principal						2000		Interest			Total
HSM Nobese Munti Biological Agent Biological Mark Bio	Appoint Description			Additions (note 6)		Adjustments - instructed by Board	other		Amounts as of		Adjustments - instructed by Board			
Bit/A Incertain Municipal Multiplication         Bit/A. =		1580	\$ 15,689,026		\$ (8,528,075)			\$ 7,160,951	\$ 2,305,375	\$ 404,690			\$ 2,710.065	\$ 9,871,016
Bits/:         Field:         Test Transmon Methol Orage Bits/:         Field:         Test Transmon Methol Distribution				\$ 6.920	+ (-(									
HBM Paser (actually (lisou Agustment)         Unit of the actual	RSVA - Refail Transmission Network Charge	1584		4 -1	\$ (976.050)					\$ 135,679				
Due-Totals         Vie-Totals         Vie-Tot	RSVA - Retail Transmission Connection Charge	1586	\$ (40,113,041)		\$ (700,738)			\$ (40,813,779)	\$ (5.604,470)	\$ (1,079,854)			5 (6,684,324)	\$ (47,498,103)
Other Regulatory Assets - Blur-Account - CBE Oost Assessments         Total Status	RSVA - Power (excluding Global Adjustment)	1588	\$ 2,236,530	\$ 993,191	\$ -	5 -	5 -	\$ 3,229,721	\$ 828,613	\$ 129,044			\$ 957,657	\$ 4,187,378
Other Regulatory Assets -Sub-Account - Person Controllations         1980s         1         1980s         0         6         2         2         8         8         9         1071s         8         2         27220s           Other Regulatory Assets -Sub-Account - Netal         1611s         5         2         2         4         3         7121s         5         6         4         5         7121s         5         6         5         -         6         6         -         5         -         6         6         -         5         -         6         6         -         5         -         6         6         -         5         -         6         6         7212s1         5         6         6         7212s1         5         6         7212s1         5         7212s1	Sub-Totals		\$ (16,653,982)	\$ 1,000,111	\$ (10,204,863)	5 -	5 -	\$ (25,858,734)	\$ (1,560,231)	\$ (380,787)	5 -	5 -	\$ (1,941,018)	\$ (27,799,752)
Other Regulatory Assets -Sub-Account - Person Controllutions         1986 8         1986 8         0         \$         2174 8         8         8         9         1071 88         2         2         2         8         8         9         1071 88         2         2         8         8         9         1071 88         2         2         2         8         8         1071 88         2         2         2         4         5         0         5         0         5         0         5         0         5         0         5         0         5         0         5         0         6         1071 88         5         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2         2 <th<< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<<>														
Other Registanty Assets -BunAccourt - Other 7         1501c         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1         1 <th< td=""><td>Other Regulatory Assets - Sub-Account - OEB Cost Assessments</td><td>1508a</td><td>\$ 1,122,788</td><td>\$ 84,393</td><td></td><td></td><td></td><td>\$ 1,207,181</td><td>\$ 41,558</td><td>\$ 63,644</td><td></td><td></td><td>\$ 105,202</td><td>\$ 1,312,383</td></th<>	Other Regulatory Assets - Sub-Account - OEB Cost Assessments	1508a	\$ 1,122,788	\$ 84,393				\$ 1,207,181	\$ 41,558	\$ 63,644			\$ 105,202	\$ 1,312,383
Initial Cost Variance Account - Retail Relatio Cost Variance Account - STR     1918     5     721,241     5     5     6       Mite: Deterred Retail Variance Account - STR     1918     5     722,624     5     391,901     41,306     6     192,94     6     8     4,408       Variance Account - STR     1926     5     326,226     6     192,226     6     192,226     4     6,42,24     6     391,901     6     1,228     4     6,42,045       Variance Account - STR     1927     5     3,262,227     6     (62,224)     5     391,901     6     1,228     4     6,42,045       Deterred Relation Code     1927     5     3,262,227     5     -     -     -     5     1,228     4     1,228,228     2,228,228     5     -     -     -     -     3     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -     -	Other Regulatory Assets - Sub-Account - Pension Contributions		\$ 1,558,012	\$ 606,820				\$ 2,164,832	\$ 22,244	\$ 84,954			\$ 107,198	\$ 2,272,030
Inte: Deters Debits         1948         5         0         5         0         0         5         0         0         5         0         0         5         0         0         0         5         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0	Other Regulatory Assets - Sub-Account - Other 7	1508c	\$ •					5 -	s -					•
Mile: Detree Detrie     1935     8     394,399     9     442,691       UV Variance Account     1935     8     394,399     9     420,641     9       UV Variance Account     1970     8     2364,2324     9     3,264,224     9     3,264,224     9     3,264,224       Pre-Matel Operation Costs     1970     8     2364,2324     9     3,264,224     9     3,264,224     9     3,264,224       Detrem Atter Ingenzy Variances Total S     1971     8     1,322,324     1     8     3,264,224     9     3,264,224     9     3,264,224     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     3,264,24     9     9     2,20,27     9     9     2,20,27     9     9     2,20,27     9     9     2,20,23,25     9     9     1,20,24     9     9     2,20,27,22     9			\$ 708,357	\$ 22,694					\$ 50,146	\$ 38,157			\$ 88,303	\$ 819,354
UV Water & Acount       1550       5       124       6       6       6       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       5       2.884       2.832.825       2.332.825       2.332.825       2.332.825       2.332.825       2.332.825       2.332.825       2.332.825       2.332.825       2.332.825       2.332.825       2.34.723.82       4.182.826.84       2.83			••						5				+	ş -
Counting Transition Costs 5         1972         3         2.248.327         5         9.34.8877         5         7.41.68         3         1.01.025         5         4.280.548           Environ Contrary Event Costs         1972         5         2.248.327         5         9.34.8877         5         7.41.68         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         6         2.027.3251         5         6         2.027.3251         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5			\$ 359,399	\$ 32,504										
Pie-Keit Opening Energy Vartances Totals 5         11927         8         11927 558         5         11927 558         5         2108 349         5         270,575         5         3         327,559         5         3         327,559         5         3         327,559         5         3         327,559         5         3         327,559         5         3         327,559         5         3         327,559         5         3         327,559         5         3         3         327,559         5         3         327,559         5         3         3         327,559         5         3         3         337,559         5         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3         3	LV Variance Account		Ŷ		\$ (62,824)									
Extra colling y sett costs Other regulatory labilities       1972       5       5       1       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       5       10273251       5       5       5       12073251       5       5       5       12073251       5       5       12073251       5       5       12073251       5       5       12073251       5       5       12073251       5       12073251       5       12073251       5       12073251       5       12073251       5       12073251       5       12073251       5       12073251       5       12073251       5       12073251       5       12073251       5       1207	Qualitying Transition Costs 5													
Deferred Rule impact Anounis         1574         5         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>\$ 11,927,525</td><td>\$ 3,105,349</td><td>\$ 270,575</td><td></td><td></td><td></td><td>\$ 15,303,449</td></t<>								\$ 11,927,525	\$ 3,105,349	\$ 270,575				\$ 15,303,449
Other regulatory isolities:         24/35         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$ </td <td></td> <td></td> <td>ş -</td> <td>5.</td> <td></td> <td></td> <td></td> <td>5 -</td> <td>ş -</td> <td></td> <td></td> <td></td> <td>5 -</td> <td>5 -</td>			ş -	5.				5 -	ş -				5 -	5 -
Other Detension         24:5         \$         201-70alis         \$         (2,301,822)         \$         .         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$<         \$<         \$<         \$	Deferred Rate Impact Amounts		ş -	*									¥	
Bub-Totals         8         15,643,586         5         746,604         5         2         5         17,120,041         5         4,199,460         5         53,681         5         -         5         4,723,141         5         21,673,162           Recovery of Regulatory Asset Balances         1593         5         7,100,677         5         3,822,426         5         5         5         (142,960)         5         (524,733)         5         (4,113,004)           Total         5         (7,21,053)         5         5,669,141         5         (10,475,012)         5         5         5         5         5         1,887,360         5         (10,033,574)           Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08         Interest to Apr 30-08         In			Ψ.	*	\$ (207,325)								7	
Recovery of Regulatory Asset Balances         1590         C (1/10,657)         3,922,425         0         5         (3,189,231)         5         (600,959)         5         (11,25,50)         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5         5		2425							*					
Total         \$         (7,121,053)         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$       <	Sub-Totals		\$ 16,643,586	\$ 746,604	\$ (270,149)	5 -	5 -	\$ 17,120,041	\$ 4,199,460	\$ 553,681	ş -	s -	\$ 4,753,141	\$ 21,873,182
Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08         Contraction (a)         Contraction (b)         Contraction (b) <th< td=""><td>Recovery of Regulatory Asset Balances</td><td>1590</td><td>\$ (7,110,657)</td><td>\$ 3,922,426</td><td></td><td></td><td></td><td>\$ (3,188,231)</td><td>\$ (608,929)</td><td>\$ (315,844)</td><td></td><td></td><td>\$ (924,773)</td><td>\$ (4,113,004)</td></th<>	Recovery of Regulatory Asset Balances	1590	\$ (7,110,657)	\$ 3,922,426				\$ (3,188,231)	\$ (608,929)	\$ (315,844)			\$ (924,773)	\$ (4,113,004)
Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08: Interest to Apr 30-08: Interes	Total		\$ (7,121,053)	\$ 5,669,141	\$ (10,475,012)	ş.	s -	\$ (11,926,924)	\$ 2,030,300	\$ (142,950)	ş -	ş -	\$ 1,887,350	\$ (10,039,574)
Total Claim           The following is not included in the total olaim but is included on a memo basi           Breat Metry Optical virtures - Bub-Accourt - Optical and Recovery Offset Virtures - Bub-Accourt - Reptice and Recovery Offset Virtures - Bub-Accourt - Recovers (a)         15555         5         62,702         5         62,702         5         6         6         6         6         7         6         6         7         6         6         7         7         6         6         7         7         6         6         7         7         6         6         7         7         6         6         7         7         8         7         7         8         7         7         8         7         7         8         7         7         7         8         7         7         7         8         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7         7	Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08													
Breat Mater Capital and Recovery Offset Variance - Sub-Accourt - Capital and Recovery Offset Variance - Sub-Accourt - Recovertes (a)         1555         \$         62,702         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         6470,927)         \$         \$         6470,927)         \$         6470,927)         \$         \$         6470,927)         \$         \$         6470,927)         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$		o Apr 30-09												
Binal Mater Capital and Recovery Offset Variance - Sub-Account - Bio-Account	The following is not included in the total claim but is included on a r	merno basi												
Brank Mark Capital and Recovery Offset Variance - Sub-Account - Shanded Meter Costs         15555         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$ <th< td=""><td>Smart Meter Cepital and Recovery Offset Variance - Sub-Account - Cepital</td><td></td><td>ş -</td><td>\$ 62,702</td><td></td><td></td><td></td><td></td><td>ş -</td><td></td><td></td><td></td><td></td><td></td></th<>	Smart Meter Cepital and Recovery Offset Variance - Sub-Account - Cepital		ş -	\$ 62,702					ş -					
Smart Meter OM&A Variance         1556         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$	Smart Meter Capital and Recovery Offset Variance - Sub-Account - Recoveries (a)	1555b	ş -		\$ (470,927)			\$ (470,927)	ş -	\$ (6,153)			\$ (6,153)	\$ (477,080)
Deferred Payments in Lleu of Taxes         1562         \$ (1,847,598)         \$ (369,093)         \$ (2,216,682)         \$ 288,661         \$ (105,413,00)         \$ 183,248         \$ (2,033,434)           Deferred Plus Contra Account <sup>8</sup> 1563         \$ 159,304         \$ 49,702         \$ 209,206         \$ 18,248         \$ 17,215         \$ 26,421           2005 Plus A Traxes Variance         1552         \$ (4,955,950)         \$ 53,129         \$ (4,402,821)         \$ -         \$ 5         \$ (4,402,821)           COM Contra         1565         \$ (4,955,950)         \$ 563,129         \$ (4,402,821)         \$ -         \$ 5         \$ (4,402,821)           RBVA - Power (including Global Adjustment)         1588         \$ 716,282         \$ 8,744,223         \$ 9,460,505         \$ 569,834         \$ 401,551         \$ 9,71,385         \$ 10,23,189           RBVA - Power - Sub-Account - Global Adjustment <sup>4</sup> 1588         \$ 1,522         \$ 7,751,032         \$ 9,460,505         \$ 569,834         \$ 401,551         \$ 9,71,385         \$ 10,23,245	Smart Neter Capital and Recovery Offset Variance - Sub-Account - Stranded Meter Costs	1555c	ş -	ş -				ş -	ş -				ş -	ş -
Deferred PILs Contra Account <sup>8</sup> 1563         159,504         \$ 49,702         \$ 209,206         \$ 13,545         \$ 3,669,00         \$ 17,215         \$ 226,421           2005 PILs & Taxes Variance         1592         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         200,206         \$ 13,545         \$ 3,669,00         \$ 17,215         \$ 226,421           2005 PILs & Taxes Variance         1592         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         <	Smart Meter OM&A Variance	1556	ş -	s -				s -	ş -				ş -	ş -
2005 PILs & Taxes Variance         1592         \$         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         5         -         6         -         -         -         6         -         -         -         5         -         5         -         5         -         5         -         6         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <th< td=""><td>Deferred Payments in Lieu of Taxes</td><td>1562</td><td>\$ (1,847,589)</td><td></td><td>\$ (369,093)</td><td></td><td></td><td>\$ (2,216,682)</td><td>\$ 288,661</td><td>\$ (105,413.00)</td><td></td><td></td><td>\$ 183,248</td><td>\$ (2,033,434)</td></th<>	Deferred Payments in Lieu of Taxes	1562	\$ (1,847,589)		\$ (369,093)			\$ (2,216,682)	\$ 288,661	\$ (105,413.00)			\$ 183,248	\$ (2,033,434)
2005 PLLs & Taxes Variance         1592         \$         -         \$         \$         \$         \$         \$         \$         \$         \$         \$         Concervation and Demand Management Expenditures and Recoveries         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$         \$	Deferred PILs Contra Account <sup>®</sup>	1563	\$ 159,504		\$ 49,702			\$ 209,206	\$ 13,546	\$ 3,669.00			\$ 17,215	\$ 226,421
COM Contra         1566         4,955,950         (553,129)         5<4,402,821         5         5         4,402,821           RBVA - Power (Including Global Adjustment)         1588         715,282         5         9,460,505         5         558,834         \$<401,551	2005 PILs & Taxes Variance	1592	ş -					5 -	5 -				5 -	5 -
R8VA - Power (Including Global Adjustment)         1588 \$ 716,282 \$ 8,744,223         \$ 9,460,505 \$ 569,834 \$ 401,551         \$ 971,385 \$ 10,431,890           R8VA - Power - Sub-Account - Global Adjustment 4         1588g \$ (1,520,248) \$ 7,751,032         \$ 6,230,784 \$ (258,779) \$ 272,507         \$ 13,728 \$ 13,728 \$ 6,244,512	Conservation and Demand Management Expenditures and Recoveries	1565	\$ (4,955,950)	\$ 553,129				\$ (4,402,821)	ş -				ş -	\$ (4,402,821)
R8VA - Power (Including Global Adjustment)         1588         716,282         8,744,223         \$ 9,460,505         \$ 569,834         401,551         \$ 971,385         \$ 10,431,890           R8VA - Power - Bub-Account - Global Adjustment 4         1588g         \$ (1,520,248)         \$ 7,751,032         \$ 6,230,784         \$ (258,779)         \$ 272,507         \$ 13,728         \$ 6,244,512	CDM Contra	1566	\$ 4,955,950	\$ (553,129)				\$ 4,402,821	ş -				ş -	\$ 4,402,821
R8VA - Power - Sub-Account - Global Adjustment 4 1588g \$ (1,520,248) \$ 7,751,032 \$ 5,244,512 \$ 5,244,512														
	RSVA - Power (Including Global Adjustment)	1588	\$ 716,282	\$ 8,744,223				\$ 9,460,505	\$ 569,834	\$ 401,551			\$ 971,385	\$ 10,431,890
R8/A - Power (exclusing Global Adjustment) \$ 2,235,530 \$ 993,191 \$ - \$ - \$ - \$ 3,229,721 \$ 828,613 \$ 129,044 \$ - \$ - \$ 957,657 \$ 4,167,378	RSVA - Power - Sub-Account - Global Adjustment 4	1588g	\$ (1,520,248)	\$ 7,751,032				\$ 6,230,784	\$ (258,779)	\$ 272,507			5 13,728	\$ 6,244,512
	RSVA - Power (excluding Global Adjustment)		\$ 2,236,530	\$ 993,191	ş -	ş -	5 -	\$ 3,229,721	\$ 828,613	\$ 129,044	ş -	s -	\$ 957,657	\$ 4,187,378

Notes

<sup>1</sup> As per general ledger, if does not agree to Dec-31-04 balance filed in 2006 E0 <sup>2</sup> Provide supporting statement indicating whether due to denial of costs in 200

<sup>9</sup> Provide supporting statement indicating nature of this adjustments and period

<sup>4</sup> Not included in sub-total

<sup>6</sup> Closed April 30, 2002

<sup>6</sup> For RSVA accounts only, report the net additions to the account during the ye

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

<sup>9</sup> 1563 is a contra-account and is not included in the total but is shown on a me

<sup>9</sup> Interest projected on December 31, 2006 closing principal balance.

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit E Tab 1 Schedule 1 Page 8 of 10

#### Table 4: Deferral and Variance Account Continuity Schedule

(SHEET 2b - Regulatory Access - Continuity Schedule) NAME OF UTILITY PowerStream Inc. NAME OF CONTACT Tom Barrett E-mail Address PHONE NUMBER tom.barrett@powerstream.ca 905-532-4640

r		2007											
				Princ	olpai					Interect			Total
Assount Description	Account Number	Opening Balance Jan- 1	Additions (note 6)	Reductions (note 6)	Transfer of Board Approved Amounts to 1590 per 2006 EDR	Adjustments - other (Note 3)	Closing Balance Dec 31	Opening Balance Jan- 1	interect Jan-1 to Dec31-07	Transfer of Board Approved Amounts to 1500 per 2005 EDR	Adjustments - other (Note 3)	Closing Balance Deo 31	Balance Dec 31
RSVA - Wholesale Market Service Charge	1580	\$ 7,160,951	\$ (8.244.244)		\$ (10.268.678)		\$ (11,351,971)	\$ 2,710.065	\$ 267.779	\$ (3.058.815		\$ (80.971)	5 (11,432,942)
RSVA - One-time Wholesale Market Service	1582	\$ 853,649			\$ (505,498)		\$ 347,151					\$ 43,123	
RSVA - Retail Transmission Network Charge		\$ 3,710,724			\$ (3.645.579)		\$ (806,981)				,	\$ 81,190	
RSVA - Retail Transmission Connection Charge		\$ (40.813.779)	\$ (1,620,782)		\$ 34,780.083		\$ (7,654,478)				, 	\$ (911,997)	
RSVA - Power (excluding Global Adjustment)	1588	\$ 3.229.721	\$ (11,122,557)		\$ (4,733,611)		\$ (12,626,447)					\$ (549,524)	
Sub-Totals		\$ (25.858.734)		s .	\$ 15,625,717	s .	\$ (32,092,726)				5 -	\$ (1,418,179)	
		• (20,000,004)	• (21,035,765)	•	•	•	• (22/022/22)	¢ (1,241,210)	• (2,120,127)	• 1,040,070	*	<ul> <li>(1)-10(1)2)</li> </ul>	· · · · · · · · · · · · · · · · · · ·
Other Regulatory Assets - Sub-Account - OEB Cost Assessments	1508a	\$ 1.207.181	s -		\$ (337,543)		\$ 869.638	\$ 105.202	\$ 51,436	5 (42.274	1	\$ 114,364	\$ 984.002
Other Regulatory Assets - Sub-Account - Pension Contributions	1508b	\$ 2,164,832			+ ()		\$ 2.164.832			• • • • • •		\$ 209,565	
Other Regulatory Assets - Sub-Account - Other 7		5 .					5 -		5 .			5 .	5 -
Retail Cost Variance Account - Retail	1518	\$ 731.051	\$ 84.273		\$ (714.452)		5 100.872	5 88.303	\$ 76,588	\$ (161,409	1	\$ 3,482	5 104.354
Retail Cost Variance Account - STR	1548	5 -	*		+ (		5 -	5 .		4 (101)100		5 -	5 .
Misc. Deferred Debits		\$ 391,903	\$ 35,752		\$ (427,655)		5 -	\$ 62,605	\$ 56,988	\$ (119,593	1	5 -	5 -
LV Variance Account	1550	\$ (62,824)	\$ (289,105)		+ ()		\$ (351,929)			4 (100)000	-	\$ (5,973)	5 (357,902)
Qualifying Transition Costs 5	1570	\$ 3,269,521	\$ 88,174		\$ (3.357.695)		5 -	\$ 1.011.025		\$ (1.090.919		5 .	5 .
Pre-Market Opening Energy Variances Total 5	1571	\$ 11.927.525	5 -		\$ (11.927.525)		5 -	5 3.375.924		5 (4,100,332		s .	5 .
Extra-Ordinary Event Costs	1572	5 -	•		• (,•==,,•==)		5 .	5 .		· (-)		s .	5 -
Deferred Rate Impact Amounts	1574	ş -					5 -	5 -				s .	5 .
Other regulatory liabilities	2405	\$ (207.325)	\$ 143,843				\$ (63,482)		\$ (7,067)			\$ (7.067)	
Other Deferred Credits	2425	\$ (2,301,823)	\$ 2		\$ 2,399,174		\$ 97,353		\$ (890,832)	\$ 713,875		\$ (176,957)	
Sub-Totals		\$ 17,120,041	5 62.939	s .	\$ (14.365.696)	s .	5 2,817,284				5 -	\$ 137,414	
Recovery of Regulatory Asset Balances	1590	\$ (3,188,231)	\$ 5,160,687		\$ (1,260,021)		\$ 712,435	\$ (924,773)	\$ 503,687	\$ 2,151,676		\$ 1,730,590	\$ 2,443,025
Total		\$ (11,926,924)	\$ (16,636,083)	ş -	ş -	s -	\$ (28,563,007)	\$ 1,887,350	\$ (1,437,525)	ş -	ş -	\$ 449,825	\$ (28,113,182)
Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08													
Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08: Interest to	Apr 30-09												
Total Claim													
The following is not included in the total claim but is included on a n	nemo basi												
Smart Meter Cepital and Recovery Offset Variance - Sub-Account - Cepital	1555a	\$ 62,702	\$ 9,747,187				\$ 9,809,889	ş -				ş .	\$ 9,809,889
Smart Meter Cepital and Recovery Offset Variance - Sub-Account - Recoveries (a)	1555b	\$ (470,927)	\$ (1,530,624)				\$ (2,001,551)	\$ (6,153)	\$ 127,991			\$ 121,838	\$ (1,879,713)
Smart Neter Capital and Recovery Offset Variance - Sub-Account - Stranded Meter Costs	1555c	ş .	\$ 4,436,903				\$ 4,436,903	5 -				\$ .	\$ 4,436,903
Smart Meter OM&A Variance	1556	ş -	\$ 502,535				\$ 502,535	5 -	\$ 878			\$ 878	\$ 503,413
Deferred Payments in Lieu of Taxes	1562	\$ (2,216,682)	\$ (203,564)				\$ (2,420,246)	\$ 183,248	\$ (111,617)			\$ 71,631	\$ (2,348,615)
Deferred PILs Contra Account ®	1563	\$ 209,205					\$ 209.206	\$ 17.215				\$ 17.215	5 226,421
2006 PILs & Taxes Variance	1592	5 -	\$ (633,969)				\$ (633,969)	5 -	5 (31,187)			\$ (31,187)	5 (665,156)
Conservation and Demand Management Expenditures and Recoveries	1565	\$ (4,402,821)	\$ 3,755,818				\$ (647,003)				1	\$ -	\$ (647,003)
CDM Contra	1566	\$ 4,402,821	\$ (3,704,432)				\$ 698,389	5 -				\$ -	\$ 698,389
1													
RSVA - Power (including Global Adjustment)	1588	\$ 9,460,505	\$ (7,534,232)		\$ (4,733,611)		\$ (2,807,338)	\$ 971,385	\$ 21	\$ (1,318,981)	)	\$ (347,575)	\$ (3,154,913)
RSVA - Power - Sub-Account - Global Adjustment 4	15880	\$ 6.230.784	\$ 3,588,325		5 -		\$ 9,819,109	5 13.728	5 188.221	5 -		\$ 201,949	\$ 10.021.058
RSVA - Power (excluding Global Adjustment)		\$ 3,229,721	\$ (11,122,557)	s -	\$ (4,733,611)	5 -	\$ (12,626,447)				5 -	\$ (549,524)	
			<ul> <li></li></ul>	,	+ (V)/aa/a///		<ul> <li>'releaside)</li> </ul>		. (100,200)			- (242,224)	4 (14)(14)(4)(1)

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Notes <sup>1</sup> As per general ledger, if does not agree to Dec-31-04 balance fied in 2005 EU <sup>1</sup> As per general ledger, if does not agree to Dec-31-04 balance field in 2005 EU

<sup>2</sup> Provide supporting statement indicating whether due to denial of costs in 200

<sup>9</sup> Provide supporting statement indicating nature of this adjustments and period

<sup>4</sup> Not included in sub-total

<sup>6</sup> Closed April 30, 2002

<sup>6</sup> For RSVA accounts only, report the net additions to the account during the ye

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

<sup>0</sup> 1563 is a contra-account and is not included in the total but is shown on a me

<sup>9</sup> Interest projected on December 31, 2006 closing principal balance.

a) interest has been calculated on the net amount in account 1555, excluding the Stranded Meter balance.

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit E Tab 1 Schedule 1 Page 9 of 10

#### Table 4: Deferral and Variance Account Continuity Schedule

(8HEET 2b - Regulatory Accets - Continuity Schedule) NAME OF UTILITY PowerStream Inc. PowerStream Inc. NAME OF CONTACT Tom Barrett E-mail Address tom.barrett@powerstream.ca 905-532-4640 PHONE NUMBER

Account Decorption	Account Number	Balance 31 - 07	Deo Prinolpai	Balanoe 31 - 07	Deo Interect	Balance 31 - 07	Total	on Dec balano 2008 to 2009 <sup>9</sup>	ted Interect 31-07 e - Jan 1, o April 30,	1	Total Claim
RSVA - Wholesale Market Service Charge	1580	ş	(11,351,971)	ş	(80,971)	5	(11,432,942)	5	(646,703)	\$	(12,079,645)
RSVA - One-time Wholesale Market Service	1582	ş	347,151	ş	43,123	\$	390,274	s		\$	410,050
RSVA - Retail Transmission Network Charge	1584	s,	(806,981)	ş		\$	(725,791)		(45,970)	\$	(771,761)
RSVA - Retail Transmission Connection Charge	1586	ş	(7,654,478)	\$	(911,997)	-	(8,566,475)	-	1	\$	(9,002,535)
RSVA - Power (excluding Global Adjustment)	1588	ş	(12,626,447)	\$	(549,524)	\$	(13,175,971)	\$	(719,304)	\$	(13,895,275)
Sub-Totals		\$	(32,092,726)	\$	(1,418,179)	5	(33,510,905)	5	(1,828,261)	\$	(35,339,166)
Other Regulatory Assets - Sub-Account - OEB Cost Assessments	1508a	\$	869,638	\$	114,364	\$	984,002	5	172,868	\$	1,156,870
Other Regulatory Assets - Sub-Account - Pension Contributions	1508b	ş	2,164,832	\$	209,565	5	2,374,397			\$	2,374,397
Other Regulatory Assets - Sub-Account - Other 7	1508c	ş	•	ş	-	5	-	\$		\$	
Retail Cost Variance Account - Retail	1518	ş	100,872	\$	3,482	5	104,354	\$	5,748	\$	110,102
Retail Cost Variance Account - STR	1548	ş	-	\$	•	5	-			\$	-
Misc. Deferred Debits	1525	ş	-	\$	•	\$	-			\$	-
LV Variance Account	1550	ş	(351,929)	\$	(5,973)	5	(357,902)	\$	(20,050)	\$	(377,952)
Qualifying Transition Costs 5	1570	ş	-	\$		5	-			\$	-
Pre-Market Opening Energy Variances Total 5	1571	ş	-	\$	•	5	-			\$	-
Extra-Ordinary Event Costs	1572	ş	-	\$		5	-			\$	-
Deferred Rate Impact Amounts	1574	ş		\$	•	5	-			\$	-
Other regulatory liabilities	2405	ş	(63,482)	\$	(7,067)	5	(70,549)			\$	(70,549)
Other Deferred Credits	2425	ş	97,353	\$	(176,957)	5	(79,604)			\$	(77,675)
Sub-Totals		ş	2,817,284	5	137,414	5	2,954,698	5	160,495	\$	3,115,193
Recovery of Regulatory Asset Balances	1590	ş	712,435	\$	1,730,590	5	2,443,025	5	40,586	\$	2,483,611
Total		ş	(28,563,007)	\$	449,825	\$	(28,113,182)	\$	(1,627,180)	\$	(29,740,352)
Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08										\$	1,760,644
Recovery of Regulatory Asset Balances Jan 1-08 to Apr 30-08: Interest to	o Apr 30-09									\$	80,663
									rounding	\$	6
Total Claim										\$	(27,899,049)
The following is not included in the total claim but is included on a r	nemo hasi										1
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Capital	1555a	5	9,809,889	5		5	9.809.889	· · · ·			———
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Capital Smart Meter Capital and Recovery Offset Variance - Sub-Account - Recoveries (a)	1555b	5	(2.001.551)		121,838		(1.879.713)				
Smart Meter Cepital and Recovery Offset Variance - Sub-Account - Stranded Meter Costs	1555c	5	4.436.903	5		5	4.436.903	<u> </u>			
Smart Meter OM&A Variance	1556	5	502,535	5	878	5	503,413	<u> </u>		_	
Deferred Payments in Lieu of Taxes	1562	\$	(2,420,246)	5	71,631	5	(2.348,615)				———————————————————————————————————————
Deferred PILs Contra Account ®	1563	5	209.206	5	17.215	5	226.421	<u> </u>		_	
2006 PILs & Taxes Variance	1592	5	(633,969)	5	(31,187)	5	(665,156)				
Conservation and Demand Management Expenditures and Recoveries	1565	5	(647,003)	5		5	(647.003)			_	
CDM Contra	1566	\$	698,389	\$	•	5	698,389				
RSVA - Power (including Global Adjustment)	1588	ş	(2,807,338)	ş	(347,575)	\$	(3,154,913)	\$	(719,304)		
RSVA - Power - Sub-Account - Global Adjustment 4	1588g	ş	9,819,109	\$	201,949	5	10,021,058	5	-		
RSVA - Power (excluding Global Adjustment)		\$	(12,626,447)	\$	(549,524)	\$	(13,175,971)	5	(719,304)	_	

Notes

<sup>1</sup> As per general ledger, if does not agree to Dec-31-04 balance filed in 2006 EC

<sup>2</sup> Provide supporting statement indicating whether due to denial of costs in 200 <sup>9</sup> Provide supporting statement indicating nature of this adjustments and period

<sup>4</sup> Not included in sub-total

<sup>6</sup> Closed April 30, 2002

<sup>6</sup> For RSVA accounts only, report the net additions to the account during the ye Por RavA accounts only, report ofe net additions to the account ouring the year 2000 PDD reports account and is not included in the total but is shown on a me <sup>9</sup> Interest projected on December 31, 2006 closing principal balance.

### 91 RATE RIDER CALCULATION

92 PowerStream has followed the same methodology it used in its 2006 EDR Application as93 follows:

- The amount to be recovered or refunded is based on the most recent audited
   year-end balances (i.e., December 31, 2007), plus
- Interest on this amount is accrued to the effective date of the proposed rate
   riders (i.e., May 1, 2009), and
- The total is adjusted for amounts recovered from or refunded to customers up
   to April 30, 2008, when the previous rate riders expired, plus accrued interest
   on these amounts, as allowed, to April 30, 2009.

PowerStream is proposing a two-year refund period to minimize changes in rates from year to
year. See Schedule 2 for the model that provides the detailed calculations supporting the
proposed rate riders.

PowerStream's model for calculating rate riders is provided in this Schedule. 1 2

#### Deferral and Variance Account Rate Rider Model

Schedule 5.3

Sheet 1 - Rate Riders Calculation NAME OF UTILITY NAME OF CONTACT E-mail Address PHONE NUMBER		Mana @Pov	ager, Rate Applic verStream Inc. i-532-4640	cations		NCE NUMBER D NUMBER			)-2004-0520 ugust 15, 2008								
														Small			
	Decision								GS > 50 Non					Scattered	Sentinel	Street	
Regulatory Asset Accounts:	Ref.#		Amount	ALLOCATOR		Residential	GS < 50		TOU	GS > 50 TOL	Intermediate			Load	Lighting	Lighting	Total
LV - Account 1550	2.0.34	ş	(377,952)	kWh	S	(112,819)		44,043) \$	(216,475)			S	(1,769) \$	(463)			(377,952)
WMSC - Account 1580	2.0.35	\$	(12,079,645)	kWh	s	(3,605,794)		07,647) \$	(6,918,718)			s	(56,552) \$	(14,814)			(12,079,645)
One-Time WMSC - Account 1582	2.0.35	ş	410,051	kWh	s	122,401		47,783 \$	234,860			s	1,920 \$	503			410,051
Network - Account 1584	2.0.35	ş	(771,760)	kWh	s	(230,372)		89,934) \$	(442,032)			5	(3,613) \$	(946)			(771,760)
Connection - Account 1586	2.0.35	ş	(9,002,536)	kWh	s	(2,687,272)		49,070) \$	(5,156,278)			s	(42,146) \$	(11,040)			(9,002,536)
Power - Account 1588 Subtotal - RSVA	2.0.35	ş	(13,895,272)	kWh	S	(4,147,761)		19,223) \$	(7,958,634)			ş	(65,052) \$	(17,040) (43,801)			(13,895,272)
Subtotal - RSVA		\$	(35,717,114)		s	(10,661,617)	<b>ə</b> (4,10	02,133) Ş	(20,457,279)	\$-	\$ -	s	(167,212) \$	(43,801)	\$ (2,452)	\$ (222,620) \$	(35,717,114)
Other Regulatory Assets - Account 1508		\$	3,531,268	kWh	S	1.054.089	\$ 41	11.500 S	2,022,564	s .		S	16.532 \$	4.330	\$ 242	\$ 22.010 \$	3.531.268
Retail Cost Variance Account - Acct 1518		ŝ	110.102	# of Customers	š	96,703		10.635 S	1.727			š	0 \$	961		S 6 S	110,102
Retail Cost Variance Account (STR) Acct 1548		š	110,102	# of Customers	š	-		- S	-			š	- š			s - s	110,102
Rebate Cheques - Acct 1525	5.0.19	š		# cust. w/ Rebate Cheq			Ť	•		•		Ť	·		*	š	
Hydro One's Environmental Costs - Acct 1525	5.0.25	š	-	Dx Revenue	s		s	- S	-	s -		s	- S	-	s -	s - š	-
Pre Market Opening Energy - Acct 1571	3.0.27	ŝ	-	kWh for Non TOU Cust.	ŝ		ŝ	- ŝ		š -		ŝ	- S	-	s -	š - š	-
Extraordinary Event Losses - Acct 1572		\$	-													\$	-
Deferred Rate Impact Amounts - Acct 1574		s	-													S	-
Other Deferred Credits - Acct 2425		\$	(148,224)	kWh	s	(44,245)	S (1	17,273) \$	(84,897)	\$-		s	(694) \$	(182)	\$ (10)	\$ (924) \$	(148,224)
Transition Costs - Acct 1570	7.0.67	\$	-	# of Customers	s	-		- S		\$ -		s	- S	`- ´	s -	s - s	-
Subtotal - Non RSVA		\$	3,493,146		S	1,106,547		04,863 \$	1,939,394			S	15,838 \$	5,110			3,493,146
Total to be Recovered		\$	(32,223,968)		s	(9,555,069)	\$ (3,75	57,270) \$	(18,517,885)	\$-	\$.	s	(151,374) \$	(38,691)	\$ (2,151)	\$ (201,528) \$	(32,223,968)
									3S > 50 Non					Small Scattered	Sentinel	Street	
Recoveries (repayments)			Amount			Residential	GS < 50		TOU	GS > 50 TOU			ge Users	Load	Lighting	Lighting	Total
Actual Recoveries at December 31/07 Interest as of December 31, 2007		ş	(712,435)		s s	(87,495)		23,985) \$ 91,804) \$	(535,631) (648,757)	ş -	s -	s	86,706 \$	(40,158)			(712,435)
		s	(1,730,591) (40,586)		s	(1,199,657) (4,984)		91,804) \$ (7.063) \$	(048,757) (30,514)		s -	S S	(23,691) \$ 4,939 \$	(10,178) (2,288)			(2,055,866) (40,586)
Interest: January 2008 to April 2009			(2,483,612)		<u>s</u>	(1,292,136)		(7.063) \$ 22.852) \$	(1.214,902)		ş .	s	67.954 \$	(52.624)			(2,808,887)
		\$	(2,403,012)			(1,282,130)	\$ (5)	22,002) ş	(1,214,802)	ş .		\$	07,804 3	(52,024)	a 0,007	a 100 a	(2,000,007)
Recoveries January 2008 to April 2009		s	(1,760,644)		s	(501,439)	s (31	17.437) \$	(887,086)	s -		s	(24,037) \$	(3.627)	\$ 435	\$ (27,453) \$	(1,760,644)
Interest: January 2008 to April 2009		ŝ	(80,663)		ŝ	(23,629)	Ś (1	14,527) \$	(40,023)			ŝ	(1,076) \$	(172)		\$ (1,256) \$	(80,663)
		\$	(1,841,307)		s	(525,068)	\$ (33	31,964) \$	(927,109)	\$-		s	(25,113) \$	(3,799)	\$ 455	\$ (28,709) \$	(1,841,307)
Total Recoveries		\$	(4,324,919)		s	(1,817,204)	\$ (65	54,816) \$	(2,142,011)	ş.	ş -	s	42,841 \$	(56,423)	\$ 5,962	\$ (28,543) \$	(4,650,194)
Balance to be collected or refunded # of years:	2	\$	(27,899,049)		S	(7,737,865)	\$ (3,10	02,454) \$	(16,375,874)	\$-	\$-	S	(194,215) \$	17,732	\$ (8,114)	\$ (172,984) \$	(27,573,773)
Balance to be collected or refunded per year		\$	(13,949,524)		S	(3,868,932)	\$ (1,58	51,227) \$	(8,187,937)	\$-	\$-	\$	(97,107) \$	8,866	\$ (4,057)	\$ (86,492) \$	(13,786,887)

				GS > 50 Non				Scattered	Sentinel	Street
Class		Residential	GS < 50 KW	TOU	GS > 50 TOU		Large Users	Load	Lighting	Lighting
Billing Determinants		kWh	kWh	kW	kW		kW	kWh	kW	kW
Billing Determinants - quantity		2,039,498,572	796,189,248	10,197,336	-	-	86,879	8,378,782	1,243	118,262
Regulatory Asset Rate Riders	s	(0.0019)	\$ (0.0019) \$	\$ (0.8029)	\$-	\$ -	\$ (1.1177)	\$ 0.0011	\$ (3.2643)	\$ (0.7314)

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APPENDIX D

2. Dec. 31, 2007 Reg. Assets

Sheet 2 - December 31, 2007 Regulatory Assets

NAME OF UTILITY	PowerStream Inc.						LICI	ENCE NUMBER			ED-2064-0520
NAME OF CONTACT	Tom Barret, Manager, Rab	Applications					DO	CID NUMBER			
E-mail Address	Is in the relief of the state in	u.,					Dut				August 15, 2008
PHONE NUMBER	905-532-4640										
		Account Number		Principal mounts as of		vienest to	Int	erest Jarri-80 to		Total Claim	
Account Description				Dec-31 2007		Dec31-07		Apr36-09			
RSVA - Low voltage		1550	5	(351,929)	\$	(5,973)	5	(20,050)	\$	(377,952)	
RSVA - Wholesale Market	Service Charge	1580	5	(11,351,970)	\$	(00,971)	5	(\$45,703)	5	(12)079(645)	
RSVA - One-time Wholesa	e Market Service	1582	5	347,152	\$	43,123	5	19,776	5	410,051	
RSVA - Retail Transmissio	n Network Charge	1584	5	(806,901)	\$	01,190	5	(45.970)	5	(771,760)	
RSVA - Retail Transmissio	a Connection Charge	1585	5	(7,854,478)	\$	(911,997)	\$	(435,090)	\$	(9,002,536)	
RSVA - Power (excluding)	Slobal Adjustment)	1500	5	(12,626,445)	\$	(\$48,523)	5	(719,304)	\$	(13,865,272)	
	Sub-Totals		5	(32,444,652)	\$ (	(1,424,190)	\$	0.040.0110	\$	(35,717,114)	
Other Regulatory Assets		1500	5	3,054,470	\$	323,930	5	172,090	5	3,531,260	
Retail Cost Variance Acco	ant - Retail	1510	5	100.072	5	3,482	5	5.740	5	110,102	
Retail Cost Variance Acco	ant - STR	1540	5	-	\$		\$		\$		
Miss. Defened Debits - inc	I. Rebate Chequet	1535	5		\$		5		\$		
Qualitying Transition Costs		1570	5		\$		\$		\$		
<b>Pre-Market Opening Energy</b>	y Variances Total	1571	5		\$		5		5		
Extra-Ordinary Event Loss	*6	1572	5	-	\$		5		\$		
Defened Rate Impact Amo	ants.	1574	5		\$		5		5		
Other Deferred Credits		2425	5	55,671	\$	(104,004)	5	1,929	\$	(140,224)	
	Sub-Totale		5	3,169,213	\$	143,300	s	100,545	\$	3,463,545	
	Tabl			(29,275,436)				(1.697.796)		(32,223,990)	

K:Rates Group/2009 FT//2009 Date and working papers/RAUPS\_2009 RegAsselModel via

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APPENDIX D

Sheet 2 - December 31, 2007 Regulatory Assets

NAME OF UTILITY	PowerStream Inc.	LICENCE NUMBER	ED-2064-0520	
NAME OF CONTACT	Tors Barreit, Manager, Rate Applications	DOCID NUMBER		
E-mail Address	To be Barred Officers Stream Inc.	Dute	August 15, 2008	
PHONE NUMBER	905-532-4640			

2007 Data By Class	ĸw	kWhe	Cust. Hum.'s		Dx Revenue	
RESIDENTIAL CLASS	0	2000,488,572	304,330		\$5,306,474	
GENERAL SERVICE <\$0 KW CLASS		796,109,248	22,412	٠	16,821,155	
GENERAL SERVICE -50 KW NON TIME OF USE	10,107,880	3,013,345,480	3,640	٠	30,488,297	
GENERAL SERVICE >50 KW TIME OF USE		0				
NTERMEDIATE CLASS		6	+			
LARGE USER CLASS	88,879	21,000,545	,		305,728	
SMALL SCATTERED LOADS	0	8,378,782	2,680		440,002	
SENTINEL LIGHTS	1,348	409,111	145		8,890	
STREET LIGHTING	118,302	42,585,750	13		881,219	
Totals	10,400,720	6,032,453,515	232,640	\$	110,216,201	

Allocators	ĸw	kWhe	Cust. Ham.'s	Dx Revenue	<b>Rebate Cheques</b>	kWhs for Hon TOU Customens	
RESIDENTIAL CLASS	0.0%	29.9%	07.0%	50.2%		0.00%	426,260
GENERAL SERVICE <50 KW CLASS	0.0%	11.7%	9.7%	15.5%		0.00%	166,405
GENERAL SERVICE >50 KW NON TIME OF USE	90.0%	57.3%	1.0%	33.1%		100.00%	017,069
GENERAL SERVICE >50 KW TIME OF USE	0.0%	0.0%	0.0%	0.0%			0
INTERMEDIATE CLASS	0.0%	0.0%	0.0%	0.0%			0
LARGE USER CLASS	0.0%	0.5%	0.0%	0.2%			6,685
SWALL SCATTERED LOADS	0.0%	0.1%	0.9%	0.4%		0.00%	1,751
SENTINEL LIGHTS	0.0%	0.0%	0.1%	0.0%			80
STREET LIGHTING	1.7%	0.6%	0.0%	0.0%			0,901
Totals	100%	100%	100%	100%	0%	100%	1,428,000

K:Rates Group1009 FTV209 Data and working papers/RAUP9\_2009 RegAsseMadel.xis

2. Dec. 31, 2007 Reg. Assets

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APPENDEX D

#### SHEET 3 - Interest on Reg. Assets Balance as of Dec. 31, 2007

NAME PowerStream in a NAME Tom Darret, Hanger, Rate Applications E-mail Tom Darret@PowerSteam Inc. PROME HUMBER \$95-530-	LICENCE NUMBER DOCID HUNDER DISK 4540	k ED-3304-05 August 15, 2001
		Internet a 2009 to Apr 2009
1550 RSVA - Low voltage	5 (361,999) \$	(20,050)
1580 RSVA - Wholesale Market Service Charge	(11,391,970)	(\$40,700)
1582 RSVA - One-Eme Wholesale Market Service	347,192	19,778
1684 RSVA - Retail Transmission Natwork Charge	(806,961)	(46,970)
1988 RSVA - Retail Transmission Connection Charge	(7,664,478)	(430,002)
1588 RSVA - Power (excluding Global Adjustment)	(12,020,445)	(719,504)
1559 Cither Regulatory Assets	3,004,470	172,008
1519 Retail Cost Variance Account - Retail	100,972	5,748
1548 Retail Cost Variance Account - STR		
1635 Misc. Deferred Debits - Incl. Rebete Chargoes		
1670 Guellying Transition Costs		
1571 Pre-Market Opening Energy Variances Total		
1672 Extra-Onlinery Event Losses		
1574 Defened Rate impact Amounts		
2425 Other Deferred Credits	35,971	1,939
	(28,275,438) \$	(1,857,785)

Interest for Jan 2008 - April 2009	Days	Rate	1550	1590	1582	1594	1598	1582	1598	1518	1548	1535	1570	1571	1572	1574	2425	Total
Balance for interest calculation		1	(361,929)	(11,351,970)	347,162	(800,991)	(7,854,478)	(12,620,645)	5,054,470	100,872							33,971	(29,275,426)
Jan 2008		5.14%	(1,536)	(49,557)	1,515	(3.523)	(33,415)	(55,120)	13,247	440							149	(127,901)
Feb 2009	29	5.14%	(1,457)	(80,560)	1,418	(3,290)	(31,200)	(\$1,564)	12,392	412							138	(119,557)
Mar 2008		5.14%	(1,539)	(49,557)	1,515	(3,523)	(33,415)	(\$5,130)	13,247	4440					-		148	(127,901)
Apr 2009	50	4.00%	(1,199)	(36,069)	1,164	(2,706)	(25,009)	(42,542)	10,176	350					-		114	(#9,172)
May 2009	151	4.00%	(1.220)	(39,357)	1,200	(2.790)	(26.524)	(45,750)	10,515	350							117	(101,445)
Jun 2006	50	4.00%	(1,199)	(36.068)	1,164	(2,706)	(25,009)	(42, 342)	10,176	336					-		114	(88,172)
Jul 2009	51	4.00%	(1,220)	(39,357)	1,209	(2,796)	(26,634)	(43,753)	10,515	350					-		117	(101,445)
Aug 2008		4.00%	(1,220)	(39,357)	1,200	(2,796)	(26,534)	(45,750)	10,515	350							117	(101,845)
Sup 2008	50	4.00%	(1,199)	(36,069)	1,164	(2,706)	(25,009)	(42,542)	90,176	250					-		114	(#9,172)
Oct 2008	51	4.00%	(1.220)	(39,357)	1,200	(2.790)	(26.524)	(43,750)	10,515	350							117	(101,445)
Nov 2008	50	4.00%	(1,199)	(36.068)	1,164	(2,706)	(25.009)	(42,542)	10,176	330							114	(89,172)
Dec 2008	51	4.00%	(1,220)	(39,557)	1,203	(2,796)	(26,534)	(43,753)	10,515	350					-		117	(101,445)
Jan 2009	51	4.00%	(1,220)	(36),357)	1,200	(2,796)	(26,634)	(45,750)	10,515	350							117	(101,645)
Feb 2009	29	4.00%	(1,101)	(36,632)	1,087	(2.526)	(23,957)	(39,519)	9,497	316					-		106	(#1,627)
Mar 2009	51	4.00%	(1.220)	(39,357)	1,200	(2.790)	(26.534)	(43,752)	10,515	350					-		117	(101,445)
Apr 2009		4.00%	(1,199)	(36.068)	1,164	(2,706)	(25.009)	(42, 342)	10,176	336							114	(88,172)
Tetel			(20,050)	(\$46,703)	19,778	(45.970)	(436,040)	019,500	172,999	5,748							1,929	
Avarage rate	466	4.39%																

PR\_2000 RepAsselficida.vs

3. Interest Reg Assess

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APPENDIX D

#### SHEET 4 - Interest on Actual Recoveries at December 31, 2007

NAME OF UTILIT NAME OF CONT	TY PowerSitear NCT Ton Barrell,		ta A			CID HUMBER			60	0-2004-0520	1										
E-reall Address PHONE HUNBER		0FowerSines 05-530-4640	n ir	NE.	Dut	ie .		,		pet 15, 2000	9										
				Total	R	lecidential	G	9 < 50 KW	a	G ≻ 50 Non TOU	9	s > se tou	iti se un daria	Lar	ge Users	5	Small icattered Load		ientinel Jghting		Street JghSing
Actual Recoveri	es at Dec 31/67:		\$	(712,435)	5	(07,495)	\$	(123,995)	\$	635,601				\$	86,705	\$		\$	5,300	ş	(17,200)
Manth																					
	Interest	Days			-				-					-							
Jan-00 Feb-00	5.14%	31		(2,110)		(202) (257)		(541)		(2,536) (2,107)		-		5	379	3	(175) (164)		24	3	(75) (70)
Mar-00														2		-					
Apr-00	5.14%	31		(2,110)		(202)		(541)		(2,530) (1,796)				2	379		(175)		24	\$	(75) (50)
								(416)				-		2			(136)				(80)
May-66	4.00%	31		(2,469)		(303)		(430)		(1,056)		-		2	300	2	(139)		19	-	
Jun-00	4.09%	30		(2,309)		(293)		(416)		(1,796)					291	2	(136)		10	\$	610
Jul-BB	4.00%	31		(2,469)		(203)		(430)		(1,056)		-		2	300	2	(139)		19	\$	(80)
Aug-08	4.00%	31		(2,469)		(203)		(430)		(1,056)		-		5	300	5	(139)		19	\$	(80)
Sep-80	4.00%	30		(2,389)		(293)		(416)		(1,796)				5	291	5	(136)			\$	610
Oct-00	4.00%	31		(2,469)		(202)		(430)		(1,056)				5	330		(139)		19	\$	(90)
Nov-68	4.00%	30		(2,389)		(293)		(416)		(1,796)				\$	291	5	(136)			\$	610
Dec-88	4.00%	31		(2,469)		(200)		(430)		(1,056)				5	300	5	(136)			\$	(22)
Jan-09	4.00%	31		(2,469)		(203)		(430)		(1,056)				5	300	5	(139)		19	\$	(22)
Feb-89	4.00%	20		(2,230)		(274)		(200)		(1,676)				5	271	5	(126)		17	\$	640
Mar-09	4.00%	31		(2,469)		(200)		(430)		(1,056)		-		5	300	5	(139)		19	\$	(22)
Apr-09	4.00%	30	\$	(2,389)		(293)		(415)		(1,796)				5	291	5	(136)		10	\$	640
	Total Interest		5	(40,405)	5	(4,904)	5	(7,085)	5	(30,514)	5	-		\$	4,839	5	(2,200)	5	307	\$	610.0

PS\_2009 RegAssetModeLxis

4. Recover Dec 31-07 Interest

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#### Sheet 6 - Recoveries for the period January 1, 2008 - April 30, 2009

NAME OF UTILITY	Power@ream inc.	LICENCE NUMBER	00-2004-0520
NAME OF CONTACT	Tom Barrett, Manager, Rate Applications	DOCID NUMBER	
E-mail Address	Tom Barretog PowerStream Inc.	Date	August 15, 2008
PHONE NUMBER	905-532-4540		

#### Residential Class January 1, 2008 - April 30, 2008

	kw (As Applicable)	1Wh	Volumetric Rate Adder (per kWh)		Amount ecovered	0	Cunvulative Balance	inte	rest Applied	Interest Rate	Days
January 2008				\$	(231,773)	\$	(251,773)			5.14%	31
February 2008				\$	(41,340)	\$	(200,112)	5	(947)	5.14%	29
March 2008				\$	(110,059)	\$	(390,172)	5	(1,225)	5.14%	31
April 2008				\$	(100,267)	\$	(501,436)	5	(1,335)	4.00%	30
May 2068				\$	-	\$	(\$01,436)	5	(1,730)	4.00%	31
<b>June 2008</b>				\$	-	\$	(501,436)	5	(1,682)	4.00%	30
July 2008				\$		\$	(501,436)		(1,794)	4.00%	31
August 2008				\$	-	\$	(501,436)	5	(1,704)	4.00%	31
September 2068				\$	-	\$	(501,436)	5	(1,649)	4.00%	30
October 2068				\$	-	\$	(\$01,436)	5	(1,704)	4.00%	31
November 2008				\$		\$	(501,436)	5	(1,549)	4.00%	30
December 2008				\$	-	\$	(501,436)	5	(1,704)	4.00%	31
January 2009				\$	-	\$	(501,436)	5	(1,704)	4.00%	31
February 2009				\$	-	\$	(501,436)	5	(1,539)	4.00%	20
March 2009				\$	-	\$	(501,436)	5	(1,704)	4.00%	31
April 2009				\$		\$	(501,436)	5	(1,549)	4.00%	30
				5	(501.439)			5	(23.629)		

#### G8 < 60 kW January 1, 2008 - April 80, 2008

	kw (An Appikable)	Wh.	Volumetric Rate Adder (per kWh)		Amount Recovered		Cumulative Balance	interest Applied		Interest Rate	Days
January 2008				5	(70.857)	5	(70.057)			5.54%	31
February 2008				\$	(85,954)	\$	(156,011)	5	(209)	5.14%	29
March 2008				\$	(05,732)	\$	(242,543)	5	(\$85)	5.54%	31
April 2008				\$	(74,894)	\$	(317,437)	5	(015)	4.00%	30
May 2008				\$		\$	(317,437)	5	(1,100)	4.00%	31
June 2008				\$		\$	(317,437)	5	(1,085)	4.00%	30
July 2008				\$		\$	(317,437)	5	(1,070)	4.00%	31
August 2008				\$		\$	(317,437)	5	(1,070)	4.00%	31
September 2008				\$		\$	(317,437)	5	(1,044)	4.00%	30
October 2068				\$		\$	(317,437)	5	(1,070)	4.00%	31
November 2008				\$		\$	(317,437)	5	(1,044)	4.00%	30
December 2008				\$		\$	(317,437)	5	(1,070)	4.00%	31
January 2009				\$		\$	(317,437)	5	(1,070)	4.00%	31
February 2009				\$		\$	(317,437)	5	(974)	4.00%	20
March 2009				\$		\$	(317,437)	5	(1,070)	4.00%	31
April 2009				\$		\$	(317,437)	5	(1,044)	4.00%	30
				\$	(017,437)			5	(14,527)		

APPENDIK D

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APPENDIK D

Sheet 6 - Recoveries for the period January 1, 2008 - April 30, 2009

NAME OF UTILITY	PowerStream Inc.	LICENCE NUMBER	00-2004-0520
NAME OF CONTACT	Tom Barrett, Manager, Rate Applications	DOCID NUMBER	
E-mail Address	Tom Barretig PowerStream Inc.	Dute	August 15, 2006
PHONE NUMBER	905-532-4540		

#### G8 > 60 Non-TOU January 1, 2008 - April 30, 2009

	kw (As Applicable)	kWh.	Volumetric Rale Adder (per kW)		Amount ecovered		Convulative Balance	interest	Applied	Interest Rate	Окуп
January 2008	5,000			\$	(104,954)	\$	(104,964)			5.14%	31
February 2008	5,000			\$	(313,530)	\$	0124,9003	5	(429)	5.54%	29
March 2008	5,000			\$	(212,409)	\$	(837,311)	5	(1,055)	5.14%	31
April 2008	5,000			\$	(249,775)	\$	(007,006)	5	(2,137)	4.00%	30
May 2008	5,000			\$	-	\$	(007,006)	5	(3,074)	4.00%	31
June 2008	5,000			\$	-	\$	(007,006)	5	(2,975)	4.00%	30
July 2008	5,000			\$	-	\$	(007,006)	5	(3,054)	4.00%	34
August 2008	5,000			\$	-	\$	(007,006)	5	(3,014)	4.00%	31
September 2008	5,000			5		\$	(007,006)	5	(2,916)	4.00%	30
October 2068	5,000			\$	-	\$	(007,006)	5	(3,014)	4.00%	34
November 2008	5,000			\$		5	(007,006)	5	(2,916)	4.00%	30
December 2008	5,000			\$	-	\$	(007,006)	5	(3,014)	4.00%	34
January 2009	5,000			5		\$	(807,006)	5	(3,014)	4.00%	31
February 2009	5,000			5	-	\$	(007,006)	5	(2.722)	4.00%	28
March 2009	5,000			5	-	\$	(007,006)	5	(3,014)	4.00%	31
April 2009	5,000			5		\$	(807,006)	5	(2,916)	4.00%	30
				\$	(007.005)			5	(40.023)		

#### GS > 60 TOU January 1, 2008 - April 30, 2008

	kw (As Appikable)	1005	Volumektic Rale Adder (per kW)	Amo Recou			mulative alance	Inter	est Applied	Interest Rate	Days
January 2008				\$		\$				5.14%	34
February 2008						\$		5	-	5.14%	29
March 2008						\$		5	-	5.54%	31
April 2008						\$		5	-	4.00%	30
May 2008				\$	-	\$		5	-	4.00%	31
June 2008				\$	-	\$		5	-	4.00%	30
July 2008				\$	-	\$		5	-	4.00%	31
August 2008				\$	-	\$		5	-	4.00%	31
September 2008				\$	-	\$		5	-	4.00%	30
October 2068				\$	-	\$		5	-	4.00%	31
November 2008				\$	-	5		5	-	4.00%	30
December 2008				s	-	\$		5	-	4.00%	31
January 2009				5		5		5	-	4.00%	31
February 2009				\$	-	\$		5	-	4.00%	28
March 2009				5	-	\$		5	-	4.00%	31
April 2009				5	-	\$		5		4.00%	30
				\$				5			

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#### Sheet 6 - Recoveries for the period January 1, 2008 - April 30, 2009

NAME OF UTILITY	Power@ream inc.	LICENCE NUMBER	00-2004-0520
NAME OF CONTACT	Tom Barrett, Manager, Rate Applications	DOCID NUMBER	
E-mail Address	Tom Barretig PowerStream Inc.	Date	August 15, 2006
PHONE MUNDER	905-533-4540		

#### Large User Class January 1, 2008 - April 30, 2008

	kw (As Appicable)	iwn.	Volumetric Rate Adder (per KW)		Amount ecovered	,	Cumulative Balance	Inte	rest Applied	Interest Rate	Days
January 2008				\$		\$	-			5.14%	31
February 2008				\$	(11,782)	\$	01,702	5		5.14%	29
March 2008				\$	(5,206)	\$	(17,908)	5	(51)	5.14%	31
April 2008				\$	(5,049)	\$	(24,007)	5	(50)	4.00%	30
May 2008				\$		\$	(24,037)	5	(83)	4.00%	31
June 2008				\$		\$	(24,037)	5	(01)	4.00%	30
July 2008				\$	-	\$	(24,037)	5	(82)	4.00%	31
August 2008				\$	-	\$	(24,007)	5	(82)	4.00%	31
September 2008				\$	-	\$	(24,007)	5	(79)	4.00%	30
October 2068				5	-	\$	(24,037)	5	(82)	4.00%	31
November 2008				5	-	\$	(24,007)	5	(79)	4.00%	30
December 2008				5	-	\$	(24,037)	5	(82)	4.00%	31
January 2009				5	-	\$	(24,007)	5	(82)	4.00%	31
February 2009				5	-	\$	(24,037)	5	(740	4.00%	28
March 2009				5	-	\$	(24,037)	5	(82)	4.00%	31
April 2009				5		\$	(24,037)	5	(79)	4.00%	30
				\$	(24.037)			5	(1.076)		

#### Small Soattered Load January 1, 2008 - April 30, 2008

	kw (As Appikable)	1Wh	Volumetric Rate Adder (per kWh)		ecunt overed	0	Cumulative Balance	Inte	rest Applied	Interest Rate	Days
January 2068				\$	(1,837)	\$	(1,637)			5.54%	31
February 2008				\$	(204)	\$	(2,234)	5	ത	5.14%	29
March 2008				\$	(781)	\$	(2,992)	5	6100	5.14%	31
April 2008				\$	(\$35)	\$	(3,627)	5	(10)	4.00%	30
May 2008				\$		\$	(3,627)	5	(73)	4.00%	31
June 2068				\$	-	\$	(3,627)	5	(72)	4.09%	30
July 2008				\$		\$	(3,627)		(72)	4.00%	31
August 2008				\$		\$	(3,627)	5	(22)	4.00%	31
September 2008				\$		\$	(3,627)		(12)	4.00%	30
October 2068				\$		\$	(3,627)	5	(22)	4.00%	31
November 2008				5		\$	(3,627)	5	(12)	4.00%	30
December 2008				5		\$	(3,627)	5	(72)	4.00%	31
January 2009				5		\$	(3,627)	5	(12)	4.00%	31
February 2009				5		\$	(3,627)	5	(11)	4.00%	20
March 2009				5		\$	(3,627)	5	(72)	4.00%	31
April 2009				5		\$	(3,627)	5	(12)	4.00%	30
				5	(3.627)			5	(172)		

APPENDIK D

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#### Sheet 6 - Recoveries for the period January 1, 2008 - April 30, 2009

NAME OF UTILITY	Power@ream inc.	LICENCE NUMBER	00-2004-0520
NAME OF CONTACT	Tom Barrett, Manager, Rate Applications	DOCID NUMBER	
E-mail Address	Tom Barretog PowerStream Inc.	Date	August 15, 2006
PHONE NUMBER	905-532-4540		

#### Sentinel Lighting Class January 1, 2008 - April 30, 2008

	kw (As Appicable)	iwn.	Volumetric Rate Adder (per KW)	Amo Recos		unvulative Balance	interest A	ppäed	Interest Rate	Days
January 2008				\$	152	\$ 152			5.14%	31
February 2008				5	106	250	5	1	5.14%	29
March 2068				\$	82	\$ 360	5	1	5.14%	31
April 2008				\$	- 85	\$ 435	5	1	4.00%	30
May 2068				\$	-	\$ 435		2	4.00%	31
June 2008				\$	-	\$ 435	5	1	4.00%	30
July 2008				\$	-	\$ 435	5	1	4.00%	31
August 2008				\$	-	\$ 438	5	1	4.00%	31
September 2008				\$	-	\$ 435	5	1	4.00%	30
October 2068				\$	-	\$ 438	5	1	4.00%	31
November 2008				\$		\$ 435		1	4.00%	30
December 2008				5	-	\$ 435	5	1	4.00%	31
January 2009				\$	-	\$ 435	5	1	4.00%	31
February 2009				5	-	\$ 435	5	1	4.00%	20
March 2009				\$	-	\$ 435	5	1	4.00%	31
April 2009				5		\$ 435	5	1	4.00%	30
				5	435		5	20		

#### Street Lighting Class January 1, 2008 - April 30, 2009

	kw (As Applicable)	1785	Volumetric Rate Adder (per kW)		trecurt covered	¢	Cumulative Balance	inte	rest Applied	Interest Rate	Days
January 2008				\$		\$				5.54%	31
February 2008				\$	(17,626)	\$	(17,626)	5	-	5.54%	29
March 2008				\$	(5,349)	\$	(22,971)	5	(77)	5.14%	31
April 2008				\$	01,402)	\$	(27,453)		(77)	4.00%	30
May 2008				\$		\$	(27,453)	5	(65)	4.00%	31
June 2008				\$		\$	(27,453)	5	(62)	4.00%	30
July 2008				\$		\$	(27,453)	5	(60)	4.00%	31
August 2008				\$		\$	(27,453)	5	630	4.00%	31
September 2008				5		\$	(27,453)	5	(90)	4.00%	30
October 2068				\$		\$	(27,453)	5	630	4.00%	31
November 2008				5		\$	(27,453)	5	(90)	4.00%	30
December 2008				5		\$	(27,453)	5	630	4.00%	31
January 2009				5		\$	(27,453)	5	(81)	4.00%	31
February 2009				5		\$	(27,453)	5	(H)	4.00%	28
March 2009				5		\$	(27,453)	5	(810	4.00%	31
April 2009				5		\$	(27,453)	5	(90)	4.00%	30
				\$	(27,453)			5	(1,258)		

APPENDIK D

## COST OF CAPITAL AND RATE OF RETURN

## 2 OVERVIEW

PowerStream's deemed capital structure and cost of capital, for rate-making purposes,
is determined in accordance with the *Report of the Board on Cost of Capital and 2<sup>nd</sup> Generation Incentive Regulation for Ontario's Electricity Distributors* (December 20,
2006). This Report continues the equity risk premium/formulaic approach to determining
the rate of return on equity, or "ROE," that the Board implemented for gas utilities in
1997 during the EBRO 495 proceeding.

9 PowerStream's deemed capital structure is 56% long-term debt, 4% short-term debt, 10 and 40% equity for 2009. The cost of long-term debt is 6.16%, the cost of short-term 11 debt is 3.67%, and the cost of equity the ROE is 8.4% for 2009. The resultant rate of 12 return on rate base is 6.81% for 2009. These values are all subject to subsequent 13 adjustment, as described in the Report, and are presented in Table 1.

14

## Table 1: Weighted Average Cost of Capital

	Deemed Capital Structure	Rate	Weighted Average Cost of Capital
Long-term debt	56%	5.89%	3.30%
Short-term debt	4%	3.67%	0.15%
Equity	40%	8.40%	3.36%
Total	100%		6.81%

## 15 CAPITAL STRUCTURE

- 16 PowerStream's capital structure since 2006, both deemed and actual, is presented in
- 17 Table 2.
- 18

## Table 2: PowerStream Debt/Equity Structure

	2006 Board Approved	2006 Actual	2007 Actual	2008 Estimate	2009 Forecast
Deemed debt/equity	60/40	60/40	60/40	60/40	56/4/40
Actual debt/equity	59.7/40.3	59.1/40.9	57.3/42.7	59.1/40.9	59.8/40.2

19 The actual debt to equity ratios vary from the deemed debt to equity ratios mainly due to

20 borrowing patterns, for example, due to the lack of short-term debt in 2009.

## 21 FINANCING PLAN

22 PowerStream has established a Financing Plan, which has been approved by its Board

23 of Directors on April 25, 2005, and updates this plan annually.

24 There are three primary goals of the Financing Plan:

- to ensure that PowerStream has adequate funding available for
   Operating (i.e., OM&A) and Capital requirements;
- to ensure that PowerStream operates within the Board's ceiling of 60%
  for deemed debt;
- To ensure that PowerStream operates within the Board's formulaic
   approach for Working Capital (i.e., 15% of the total of OM&A expenses
   and the Cost of Power).

34 35	financial forecasts combined with historical financial data to determine what (if any) level of borrowing is appropriate for PowerStream. PowerStream's long-term debt comprises the following:								
36	36 PowerStream's long-term debt comprises the following:								
37	•	Senior unsecured debentures totalling \$100 million issued to Electricity							
38		Distributors Finance Corporation ("EDFIN") at an interest rate of 6.45%							
39		per annum, maturing August 15, 2012; and							
40	•	Subordinate debt to shareholders (promissory notes) totalling \$146.1							
41		million – \$78.2 million held by the Corporation of the City of Vaughan and							
42		\$67.9 million held by the Corporation of the Town of Markham- at an							
43		interest rate of 5.58% per annum <sup>1</sup> and a maturity date of May 31, 2024.							
44	•	An unsecured \$50 million bank loan at an interest rate of 5.08% per							
45		annum maturing February 26, 2013.							

In order to ensure that these goals are achieved, Corporate Finance staff use annual

For 2009, a new \$25 million debt at an estimated interest rate of 5.08%
per annum

PowerStream has access to an unsecured \$125 million revolving demand facility for
a term of five years. This facility is renewable annually. As of August 1, 2007, \$11.8
million of this facility was used to provide the IESO with a letter of credit for
prudential support.

52

- 53
- 54

<sup>&</sup>lt;sup>1</sup> The two promissory notes are repayable 90 days following demand by the City or the Town. PowerStream classifies these promissory notes as long-term debt because neither the City or the Town intends to demand repayment within the next year. The interest on these promissory notes was deferred for eight quarters commencing October 1, 2006 for five years.

## 55 **DIVIDEND POLICY**

- 56 PowerStream established a dividend policy which was approved by its Board of 57 Directors on December 14, 2005, and updated on September 17, 2008.
- 58 There are three criteria for the determination of dividends:
- maintain all financial covenants on any debt issued by the corporation;
- maintain "A" credit rating; and
- maintain cash requirements to meet working capital requirements and
  short term (5 year) plan of capital expenditures.
- 63 PowerStream will shall pay a minimum of 50% of net income with consideration given to64 the following:
- cash position at the beginning of the year;
- less working capital requirements for the current year; and
- less net capital expenditures required for the current year.
- 68

# 69 COST OF DEBT

- 70 PowerStream's cost of debt since 2006, both deemed and actual, is presented in Table
- 71 3.
- 72

# Table 3: PowerStream Cost of Debt

	2006 Board Approved	2006 Actual	2007 Actual	2008 Estimate	2009 Forecast				
Long-term debt			-		-				
Deemed cost of debt	5.90%	5.90%	5.90%	6.10%	6.16%				
Actual cost of debt	6.16%	6.16%	6.14%	5.96%	5.89%				
Short-term debt									
Deemed cost of debt	5.00%	5.00%	4.59%	4.47%	3.67%				
Actual cost of debt	Not applicable								

The variances between the actual cost and the deemed cost of long-term debt areattributable to the following:

- the higher-than-deemed interest rate in 2006 and 2007 on the debentures issued
  to EDFIN; and
- the lower-than-deemed interest rate in 2008 and 2009 on the term bank loan.
- For 2009, both the deemed cost of debt and the actual cost of debt are calculated basedon a weighting of 56% long-term debt and 4% short-term debt.
- 80 The 2009 forecast cost of debt has decreased from the 2006 Board-Approved level of
- 81 6.16% to 5.89%. This decrease is the result of new debt at lower rates, primarily the
- 82 fixed rate bank loan of \$50M and new 2009 debt, which is predicted to also have a lower
- 83 interest rate.

## 84 COST OF EQUITY

PowerStream's deemed cost of equity, or ROE, is presented in Table 4. The 2006 to
2008 values are those calculated by the Board. The 2009 value has been calculated by
PowerStream using values for April 2008; it will be updated when the prescribed values
are available.

89

## Table 4: PowerStream Cost of Equity

	2006 Board Approved	2006 Actual	2007 Actual	2008 Estimate	2009 Forecast
Deemed cost of equity	9.0%	9.0%	9.0%	8.57%	8.4%

90 In the calculation of deemed short term and long term interest rates and an allowed

91 Return on Equity PowerStream used the methodology prescribed by the Ontario Energy

92 Board in the "Report of the Board on Cost of Capital and 2nd Generation Incentive

93 Regulation for Ontario's Electricity Distributors", published on December 20, 2006 and

94 the prescribed data inputs for April 2008, which was available at the time of preparation.

95 These values are placeholders and will be updated in 2009 when data for the applicable

96 timeframe specified in the Board document is available.

97 Further details are provided in Exhibit F, Tab 1, Schedule 2.

- 1 This Schedule provides the continuity schedules for capital structure, cost of long-term
- 2 debt, and cost of capital. It also provides the calculation of the cost of the capital.

#### 3 **CAPITAL STRUCTURE – CONTINUITY SCHEDULE**

	Board Approved	Historic	Actual	Bridge Year	Test Year	
	<b>2006</b> (\$000)	<b>2006</b> (\$000)	<b>2007</b> (\$000)	<b>2008</b> (\$000)	<b>2009</b> (\$000)	
Long Term Debt	246,102	262,953	269,560	312,502	337,502	
Short Term Debt	0	0	0	0	0	
Net Regulatory Liabilities		14,554	11,011	10,000	10,000	
Total Debt	246,102	277,507	280,571	322,502	347,502	
Preferred Shares	-					
Common Equity	166,381	192,189	209,152	223,100	233,300	
Total Equity	166,381	192,189	209,152	223,100	233,300	
Total Debt and Equity	412,483	469,696	489,723	545,602	580,802	

Note Total Debt and Equity is based on actual amounts from financial statements for 2006 and 2007 Historic Actual and projected amounts for Board Approved, 2008 bridge Year and 2009 Test Year

	Board Approved	Historic Actual		Bridge Year	Test Year
	2006	2006	2007	2008	2009
Long Term Debt	59.7%	56.0%	55.0%	57.3%	58.1%
Short Term Debt	0.0%	0.0%	0.0%	0.0%	0.0%
Net Regulatory Liabilities	0.0%	3.1%	2.2%	1.8%	1.7%
Total Debt	59.7%	59.1%	57.3%	59.1%	59.8%
Preferred Shares	0.0%	0.0%	0.0%	0.0%	0.0%
Common Equity	40.3%	40.9%	42.7%	40.9%	40.2%
Total Equity	40.3%	40.9%	42.7%	40.9%	40.2%
Total Rate Base	100%	100%	100%	100%	100%

# 7 COST OF DEBT – CONTINUITY SCHEDULES

8

### LONG -TERM DEBT

## WEIGHTED DEBT COST - 2006 Board Approved

No.	Description	Debt Holder	Is the Debt Holder Affiliated with the LDC? (Y/N)	Date of Issuance of Debt (Date)	Principal (\$)	Term (Years)	Actual Rate (%)	Debt Rate Used for Weighted Debt Rate Cost
1								
2	Promissory Note	City of Vaughan	Y	1-Jun-2004	\$ 78,236,285	20	5.58%	5.58%
3	Promissory Note	Town of Markham	Y	1-Jun-2004	\$ 67,866,202	20	5.58%	5.58%
4	EDFIN Debenture	EDFIN	N	15-Aug-2002	\$ 100,000,000	10	7.01%	7.01%
	Total				\$ 246,102,487			
	Weighted Average Debt	Cost					6.16%	6.16%

#### LONG -TERM DEBT

WEIGHTED DEBT COST - 2006 Actual

No.	Description	Debt Holder	Is the Debt Holder Affiliated with the LDC? (Y/N)	Date of Issuance of Debt (Date)	Principal (\$)	Term (Years)	Actual Rate (%)	Debt Rate Used for Weighted Debt Rate Cost
1								
2	Promissory Note	City of Vaughan	Y	1-Jun-2004	\$ 78,236,000	20	5.58%	5.58%
3	Promissory Note	Town of Markham	Y	1-Jun-2004	\$ 67,866,202	20	5.58%	5.58%
4	EDFIN Debenture	EDFIN	Ν	15-Aug-2002	\$ 100,000,000	10	7.01%	7.01%
5	Deferred interest	Markham	Y	15-Nov-2006	\$ 975,473	7	5.58%	5.58%
6	Deferred interest	Vaughan	Y	26-Jun-2006	\$ 1,124,527	7	5.58%	5.58%
	Total				\$ 248,202,202			
	Weighted Average Debt	Cost - 2006					6.16%	6.16%

# Cost of debt (cont.) LONG -TERM DEBT WEIGHTED DEBT COST - 2007 Actual 11

No.	Description	Debt Holder	Is the Debt Holder Affiliated with the LDC? (Y/N)	Date of Issuance of Debt (Date)	Principal (\$)	Term (Years)	Actual Rate (%)	Debt Rate Used for Weighted Debt Rate Cost
1								
2	Promissory Note	City of Vaughan	Y	1-Jun-2004	\$ 78,236,285	20	5.58%	5.58%
3	Promissory Note	Town of Markham	Y	1-Jun-2004	\$ 67,866,202	20	5.58%	5.58%
4	EDFIN Debenture	EDFIN	N	15-Aug-2002	\$ 100,000,000	10	7.01%	7.01%
5	Deferred interest	Markham	Y	15-Nov-2006	\$ 975,473	7	5.58%	5.58%
6	Deferred interest	Vaughan	Y	26-Jun-2006	\$ 1,124,527	7	5.58%	5.58%
7	Deferred interest (new debt)	Markham	Y	1-Jan-2007	\$ 3,808,990	6	5.58%	5.58%
8	Deferred interest (new debt)	Vaughan	Y	1-Jan-2007	\$ 4,391,010	6	5.58%	5.58%
	Total				\$ 256,402,487			
	Weighted Average Debt	Cost - 2007					6.14%	6.14%

#### LONG -TERM DEBT WEIGHTED DEBT COST - Bridge Year 2008

No.	Description	Debt Holder	Is the Debt Holder Affiliated with the LDC? (Y/N)	Date of Issuance of Debt (Date)	Principal (\$)	Term (Years)	Actual Rate (%)	Debt Rate Used for Weighted Debt Rate Cost
1								
2	Promissory Note	City of Vaughan	Y	1-Jun-2004	\$ 78,236,285	20	5.58%	5.58%
3	Promissory Note	Town of Markham	Y	1-Jun-2004	\$ 67,866,202	20	5.58%	5.58%
4	EDFIN Debenture	EDFIN	N	15-Aug-2002	\$ 100,000,000	10	7.01%	7.01%
5	Deferred interest	Markham	Y	15-Nov-2006	\$ 975,473	7	5.58%	5.58%
6	Deferred interest	Vaughan	Y	26-Jun-2006	\$ 1,124,527	7	5.58%	5.58%
7	Deferred interest	Markham	Y	1-Jan-2007	\$ 3,808,990	6	5.58%	5.58%
8	Deferred interest	Vaughan	Y	1-Jan-2007	\$ 4,391,010	6	5.58%	5.58%
9	Deferred interest (new debt)	Markham	Y	1-Jan-2008	\$ 2,833,517	5	5.58%	5.58%
10	Deferred interest (new debt)	Vaughan	Y	1-Jan-2008	\$ 3,266,483	5	5.58%	5.58%
11	New debt	TD	N	1-Jan-2008	\$ 50,000,000	5	5.08%	5.08%
		Total			\$ 312,502,487			
	Weighted Average Debt Cost - 2008						5.96%	5.96%

LONG -TERM DEBT

WEIGHTED DEBT COST - Test Year 2009

No.	Description	Debt Holder	Is the Debt Holder Affiliated with the LDC? (Y/N)	Date of Issuance of Debt (Date)	Principal (\$)	Term (Years)	Actual Rate (%)	Debt Rate Used for Weighted Debt Rate Cost
1	Promissory Note	City of Vaughan	Y	1-Jun-2004	\$ 78,236,285	20	5.58%	5.58%
2	Promissory Note	Town of Markham	Y	1-Jun-2004	\$ 67,866,202	20	5.58%	5.58%
3	EDFIN Debenture	EDFIN	N	15-Aug-2002	\$ 100,000,000	10	7.01%	7.01%
4	Deferred interest	Markham	Y	1-Oct-2006	\$ 975,473	7	5.58%	5.58%
5	Deferred interest	Vaughan	Y	1-Oct-2006	\$ 1,124,527	7	5.58%	5.58%
6	Deferred interest	Markham	Y	1-Jan-2007	\$ 3,808,990	6	5.58%	5.58%
7	Deferred interest	Vaughan	Y	1-Jan-2007	\$ 4,391,010	6	5.58%	5.58%
8	Deferred interest	Markham	Y	1-Jan-2008	\$ 2,833,517	5	5.58%	5.58%
9	Deferred interest	Vaughan	Y	1-Jan-2008	\$ 3,266,483	5	5.58%	5.58%
10	New debt	TD	N	1-Jan-2008	\$ 50,000,000	5	5.08%	5.08%
11	New debt	TBD	N	1-Jan-2009	\$ 25,000,000	5	5.08%	5.08%
					\$ 337,502,487			
	Weighted Average Debt	Cost - 2009					5.52%	5.89%

12

Notes: 1. For new affiliated debt, the long-term debt rate is the lower of the contracted rate and the deemed long-term debt rate 2. For the new debt held by a third party, the long-term rate is the negotiated contracted rate. 3. As per Board Report on Cost of Capital of December 20, 2006, the deemed short-term debt rate is used for the weighted Cost of Capital calculations.

#### **COST OF CAPITAL – CONTINUITY SCHEDULES** 13

Deemed Debt Rate and D/E Structures

	Board Approved	Histori	c Actual	Bridge Year	Test Year
	2006 Approved	2006 Actual	2007 Actual	2008	2009
Rate Base	\$440,635,822	\$445,146,537	\$462,751,532	\$498,972,048	\$553,793,552
Debt Rate - Long Term	5.90%	5.90%	5.90%	6.10%	6.16%
Debt Rate - Short Term	5.00%	5.00%	4.59%	4.47%	3.67%
Deemed Debt	60.00%	60.00%	60.00%	60.00%	60.00%
Long-Term	60.00%	60.00%	60.00%	56.00%	56.00%
Short-Term				4.00%	4.00%
Deemed Equity	40.00%	40.00%	40.00%	40.00%	40.00%

## Debt Rate (DR)

	Board Approved	Historic Actual		Bridge Year	Test Year
	2006 Approved	2006 Actual 2007 Actual		2008	2009
Long-term debt rate (as calculated)	6.16%	6.16%	6.14%	5.96%	5.89%
Short-term debt rate (deemed)	5.00%	5.00%	4.59%	4.47%	3.67%

## Return on Equity

Target ROE	9.00%	9.00%	9.00%	8.57%	8.40%
Allowed ROE for Revenue Requirement Calculation	9.00%	9.00%	9.00%	8.57%	8.40%

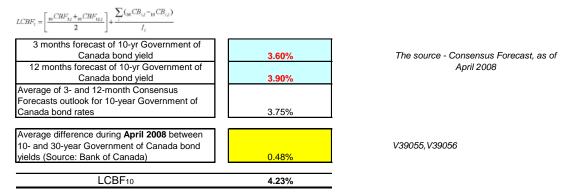
	2006 Approved	2006 Actual	2007 Actual	2008	2009
Weighted Average Cost of Capital	7.30%	7.29%	7.28%	6.94%	6.81%

Note: The Weighted Average Cost of Capital is calculated, based on the deemed capital structure

Filed: October 10, 2008 PowerStream Inc. EB–2008-0244 Exhibit F Tab 1 Schedule 2 Page 6 of 6

## 16 COST OF CAPITAL CALCULATION

## A Long Canada Bond Forecast (LCBFt) - used for calculation of ROE and deemed long-term debt



#### B ROE - formula as prescribed by Board

 $ROE_{t} = 9.35\% + 0.75 \times (LCBF_{t} - 5.50\%)$ 

Initial ROE	9.35%
	0.75
LCBFt	4.23%
	5.50%
	-0.95%
ROE	8.40%

#### C Deemed Short-term debt rate

Average 3 months Bankers Acceptance rate (series V39071) - as of April 2008	3.42%
Fixed Spread	0.25%
Deemed Short-term debt rate	3.67%

"The Board has determined that the deemed short-term debt rate will be calculated as the average of the 3months bankers' acceptance rate plus a fixed spread of 25 basis points"

## D The deemed Long-term debt

$$LTDR_{t} = LCBF_{t} + \frac{\sum_{w} (CorpBonds_{w,t} - {}_{30}CB_{w,t})}{n}$$

LCBFt (as per above)	4.23%
average spread between "A/BBB" rated	
corporate bond yields and long Government of	
Canada Bond yields	1.93%
deemed Long-term debt rate	6.16%

For new affiliated debt, the Board has determined that the allowed rate will be the lower of the contracted rate and the deemed long-term debt rate

DEX Long term bond index (all corporate) # 26009

## CALCULATION OF REVENUE DEFICIENCY OR SURPLUS

## 2 OVERVIEW

PowerStream requires an increase in its distribution rates to continue providing safe and reliable service to its customers in an efficient manner. PowerStream earns the bulk of its revenue through distribution charges. PowerStream also earns revenues through the provision of non-distribution services; however, these "Other Revenues" offset the revenue that PowerStream would otherwise need to collect through distribution rates.

8 The calculation of the revenue deficiency does not include the recovery of Regulatory 9 Assets (Exhibit E, Tab 1) and Low Voltage Charges (Exhibit I, Tab 4). In accordance 10 with the Board's Filing Requirements, costs and revenues related to the Cost of Power 11 are segregated from the calculation of the revenue sufficiency/deficiency.

12 The calculation of the revenue deficiency / sufficiency for 2009 is based on the following13 information:

- The 2008 approved rates, excluding the smart meter adder (Exhibit I, Tab 6,
  Schedule 1)
- The 2009 load forecast and customer count forecast (Exhibit C1,Tab 1,
  Schedules 1 to 3)
- The 2009 Base Revenue Requirement (Exhibit G, Tab 1 Schedule 4).

In the 2009 test year, the Base Revenue Requirement is calculated to be \$121.0M. The
distribution revenue at current rates would be only \$112.8M, however, and so
PowerStream proposes to recover the revenue deficiency of \$8.2M through an increase
in distribution rates.

- PowerStream's rate base, allowed net income and allowed total return are summarized inTable 1.
- 26 **Table 1: PowerStream Rate Base, Allowed Net Income and Total Return (\$000's)**

	2006 Board Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
Rate Base	440,635	445,147	462,751	498,997	542,396
Net Income Before Interest	32,152	32,468	33,700	34,646	36,919
Targeted Net Income	15,863	16,025	16,659	17,106	18,225
Rate of Return on Rate Base	7.3%	7.29%	7.28%	6.94%	6.81%

## 29 **REVENUE REQUIREMENT**

30 PowerStream's Service Revenue Requirement is comprised of distribution expenses,31 return on rate base and PILS.

32 The Distribution expenses are described in Exhibit D1, and the PILS calculation is 33 explained in Exhibit D2. The calculation of the rate of return on rate base, which is 34 derived from a deemed capital structure and the cost of capital, is described in Exhibit F.

To arrive at the Base Revenue Requirement, the revenues received through nondistribution services and activities are used to offset the Service Revenue Requirement.
These "Revenue Offsets" are explained in Exhibit C2.

38 PowerStream's Revenue Requirement is summarized in Table 2, below.

39

28

40 41

# Table 2: Base Revenue Requirement (\$Millions)

	2006 OEB Approved	2006 Actual	2007 Actual	2008 Bridge Year	2009 Test Year
OM&A Expenses	38.3	38.8	42.7	39.7	45.1
Depreciation	26.6	28.2	29.8	33.1	36.6
Target Net Income	15.9	16.0	16.7	17.1	18.2
Interest	16.3	16.4	17.1	17.5	18.7
Taxes	11.3	9.9	10.9	7.7	9.0
Service Revenue Requirement	108.4	109.3	117.2	115.1	127.6
Revenue Offsets	6.1	7.0	7.4	7.4	6.6
Base Revenue Requirement	102.3	102.3	109.8	107.7	121.0

- 42 The details of the Base Revenue Requirement calculation are shown in Exhibit G, Tab 1,
- 43 Schedule 2, Table 1.

## 45 **REVENUE DEFICIENCY/SUFFICIENCY**

Any Revenue Deficiency or Sufficiency for a test year is the difference between the
revenue that PowerStream would earn in the test year using current rates and the Base
Revenue Requirement for the test year.

In 2009, the revenue at current rates is based on the distribution rates effective as of
May 1, 2008 and the customer count and load forecast for 2009. The methodology for
and the assumptions underpinning the load forecast are explained in Exhibit C1.

In 2009, PowerStream's will have the revenue deficiency shown in Table 3. Details are
provided in Exhibit G, Tab 1, Schedule 2, Tables 2 to 4.

54

44

## Table 3: PowerStream Revenue Deficiency (\$Millions)

Revenue Based on 2009	2009 Service Revenue	Revenue Deficiency
Customer Count/Load Forecast	Requirement	
and Current Rates		
119.4	127.6	8.2

55

56 The "drivers" of the revenue deficiency are enumerated in Table 4.

- 57
- 58

## Table 4: Summary of the Components of Revenue Deficiency

Driver	Impact on Revenue Deficiency (\$000)	Evidentiary Reference
Return on Rate Base	(4,767)	Exhibit B
OM&A Expenses	(6,815)	Exhibit D1, Tab 1, Schedules 1-4
Amortization Expense	(9,977)	Exhibit D1, Tab 1, Schedules 5
PILs	2,310	Exhibit D2
Revenue Offsets	471	Exhibit C2
Load Growth	10,518	Exhibit C1
Total 2009 Revenue Deficiency	(8,260)	

## 59 The revenue deficiency arises from the following factors:

- The increase in the return on Rate Base is the result of continued investment in
   the distribution infrastructure and resulting increase in Net Fixed Assets in 2008
   and 2009. The forecasted value of rate base in 2009 is \$542M; this represents a
   \$102M increase compared to the Board-Approved Rate Base for 2006. This
   amount is offset in part by the projected decrease in the rate of return on rate
   base from the Board-Approved 7.3% to 6.81% for 2009.
- The increase in OM&A expense that is largely due to the increases in the labour
  costs.
- The increase in amortization expense as a result of additions to the rate base in
  2007 through 2009.
- 70 The revenue deficiency would be higher than it is, however, but for the following71 factors:
- The decrease in PILs, primarily due to the lower tax rates, decreases the
  revenue deficiency by \$2.3M.
- The forecast load growth adds \$10.5M to revenue, thus decreasing the
   deficiency.
- The forecast increase in Revenue Offsets adds \$0.5M to revenue, also reducing
  the deficiency.

1,452,062

# 1 2

3

# Table 1: Base Revenue Requirement Calculation

		Board Approved	Historic	Actual	Bridge Year	Test Year
		2006	2006	2007	2008	2009
						\$
Rate Base		440,635,822	445,146,537	462,751,532	498,997,248	542,396,333
x Cost of Capital		7.30%	7.29%	7.28%	6.94%	6.81%
Return on Ratebase		32,151,589	32,467,590	33,700,483	34,645,650	36,919,023
Operations, Maintenance and Administ	tration	38,282,888	38,794,503	42,665,227	39,649,381	45,098,300
Depreciation and Amortization		26,562,678	28,166,523	29,885,078	33,045,707	36,539,557
Distribution Expenses		64,845,566	66,961,026	72,550,304	72,695,088	81,637,857
Revenue Requirement Before Incom	e Taxes	96,997,154	99,428,617	106,250,787	107,340,738	118,556,880
Income Taxes		11,350,483	9,932,216	10,996,391	7,723,135	9,039,969
SERVICE REVENUE REQUIREMENT		108,347,637	109,360,833	117,247,178	115,063,873	127,596,850
ESS:						
evenue Offsets:						
Board Approved Charges						
Specific Service Charges (From Specific Se	ervice Charges sheet)	2,428,383	2,612,980	2,593,600	2,619,334	2,621,919
Late Payment Charges (from Summary Fin.	. Info sheet)	1,030,530	1,665,845	1,700,463	1,756,000	1,834,000
Other Distribution Revenue (from Other Di	istrib Revenue sheet)	1,012,033	981,696	915,435	935,250	954,255
Other Income & Deductions (from TB sheet	et)	1,625,403	1,761,431	2,186,779	2,087,119	1,157,873
TOTAL REVENUE OFFSETS		6,096,348	7,021,952	7,396,277	7,397,703	6,568,047
Base Revenue Requirement		102,251,289	102.338.881	109,850,901	107.666.170	121,028,803

1,493,021

The following is allocated separately to customer classes :

Low Voltage Wheeling Costs

# Table 2: Target Net Income Calculation

5 6 7

	Board Approved	Historic		Bridge Year	Test Year
	2006	2006	2007	2008	2009
Revenue Requirement	96,997,154	99,428,617	106,250,787	107,340,738	118,556,880
Distribution Expenses other than PILS and interest	64,845,566	66,961,026	72,550,304	72,695,088	81,637,857
Net income before Interest	32,151,589	32,467,590	33,700,483	34,645,650	36,919,023
Calculated Interest (as below)	16,288,699	16,442,315	17,041,427	17,540,024	18,694,506
Target Net Income before consideration of PILS	15,862,890	16,025,275	16,659,055	17,105,626	18,224,517
Interest calculation					

Rate base	440,635,822	445.146.537	462,751,532	498,997,248	542,396,333
x Long-term debt component	60.00%	60.00%	60.00%	56.00%	56.00%
x Long-term Debt Rate reflected in Revenue Requirement	6.16%	6.16%	6.14%	5.96%	5.89%
	16,288,699	16,442,315	17,041,427	16,647,817	17,898,268
x Short-term debt component	0.00%	0.00%	0.00%	4.00%	4.00%
x Short-term Debt Rate reflected in Revenue Requirement	5.00%	5.00%	4.59%	4.47%	3.67%
	-	-	-	892,207	796,238
Total calculated interest	16,288,699	16,442,315	17,041,427	17,540,024	18,694,506

## Utility Net Income at current rates

Table 3: Net Income at Existing Rates

Note: \*Test Year revenues are calculated at existing rates (i.e. rates effective as of May 1st, 2008)

	Board Approved	Historic A	Actual	Bridge Year	Test Year*
	2006	2006	2007	2008	2009
Distribution Revenue	102,251,288	105,225,356	107,812,023	110,898,889	112,768,879
Other Revenue	6,096,348	7,021,952	7,396,277	7,397,703	6,568,047
Total Operating revenue	108,347,636	112,247,307	115,208,301	118,296,591	119,336,926
Operations, Maintenance and Administration	38,282,888	38,794,503	42,665,227	39,649,381	45,098,300
Depreciation and Amortization	26,562,678	28,166,523	29,885,078	33,045,707	36,539,557
Distribution Expenses (excluding interest)	64,845,566	66,961,026	72,550,304	72,695,088	81,637,857
Utility Income before Interest and Income Taxes	43,502,070	45,286,281	42,657,996	45,601,503	37,699,068
Income Tax Expense	11,350,483	12,795,508	14,344,482	8,569,080	6,314,194
Net Utility Income excl. Interest	32,151,587	32,490,773	28,313,514	37,032,424	31,384,874

# Table 4: Revenue Deficiency / Sufficiency Calculation

	<u>г                                    </u>				
	Board Approved Historic Actual		Actual	Bridge Year	Test Year
	2006	2006	2007	2008	2009
Rate Base	440,635,822	445,146,537	462,751,532	498,997,248	542,396,333
Net Utility Income	32,151,587	32,490,773	28,313,514	37,032,424	31,384,874
Indicated rate of return	7.3%	7.3%	6.1%	7.4%	5.8%
Requested return on Rate Base / Utility Cost of Capital	7.30%	7.29%	7.28%	6.94%	6.81%
Sufficiency / (deficiency) in rate of return	0.00%	0.01%	-1.16%	0.48%	-1.02%
Revenue at Current rates & Other revenue	108,347,636	112,247,307	115,208,301	118,296,591	119,336,926
Service Revenue requirement	108,347,637	109,360,833	117,247,178	115,063,873	127,596,850
Net Revenue sufficiency / (deficiency)					(5,534,149)
Gross Revenue sufficiency / (deficiency)					(8,259,924)
Distribution revenue at current rates					112,768,879
Distribution Revenue requirement					121,028,803

## **COST ALLOCATION**

PowerStream submitted a cost allocation informational filing with the Board on January
12, 2007. This filing comprised a "Manager's Summary" and related material that was
prepared in accordance with the following:

- Board Directions on Cost Allocations Methodology for Electricity Distributors
   dated September 29, 2006 (EB-2005-0317, Cost Allocation Review); and
- Cost Allocation Informational Filing Guidelines for Electricity Distributors dated
  November 15, 2006.

9 PowerStream filed an application with the Board on March 7, 2007 to harmonize its rates
10 across the four municipalities that constitute its service area. The harmonization
11 process included the following steps:

- an allocation of the 2006 revenue requirement to the rate classes, using the
   Board-developed cost allocation model, and a comparison of the allocated costs
   to the revenues from the 2006 rates to determine the difference between the
   rates and the allocated costs; and
- a re-alignment of the 2006 rates by closing the differences by 25% between the
  allocated costs and the rates for each rate class.

The Board approved the harmonized rates in its Decision and Order dated July 26, 2007
(EB-2007-0074). The harmonized rates became effective on November 1, 2007.

PowerStream has prepared a cost allocation study for 2009 ("2009 CAS") in accordance with the Board's cost allocation directions and guidelines, including the cost allocation model, that are cited above. The 2009 CAS is underpinned by revenues at rates calculated based on the proposed revenue requirement and existing rate class revenue allocation, forecast customer numbers, forecast kWh consumption, forecast demand and updated load profiles from Hydro One. PowerStream has used the 2009 CAS to adjust rates calculated at the current revenue
allocation so that the proposed rates for May 1, 2009 result in revenue-to-cost ratios that
fall within the ranges established by the following Report of the Board: *Application of Cost Allocation for Electricity Distributors* dated November 28, 2007 (EB-2007-0667).
Revenue adjustments were required to bring the Large Use, Sentinel Lighting and Street
Lighting classes within the required range for each class.

PowerStream has used the Monthly Service Charge ("MSC") ceiling calculated in the 2009 CAS in determining the proposed MSC for each rate class as follows. Where the current 2008 MSC is at or above the 2009 ceiling, the proposed MSC has been capped at the 2008 MSC. Otherwise the proposed MSC has been determined as the lower of the 2009 MSC (calculated at the current fixed-variable revenue split) and the 2009 ceiling.

## **RESULTS OF COST ALLOCATION STUDY UPDATE**

2 The Board's policy on revenue-to-cost ratios is set out in the following Report of the 3 Board: Application of Cost Allocation for Electricity Distributors dated November 27, 4 2007 (EB-2007-0667). This report established "ranges of tolerance around revenue-to-5 cost ratios of one" (p. 4) for each customer class. The report stated that the Monthly 6 Service Charge ("MSC") – the fixed rate component of the distribution rates – would be 7 examined in the Board's consultation process on rate design for recovery of electricity 8 costs (EB-2007-0031). Accordingly, in the meantime, the Board does not expect any 9 distributor to make any changes that would raise its MSC above the ceiling nor, for any 10 distributor with an MSC currently above the ceiling, any changes to reduce its MSC to or 11 below the ceiling (pp. 12-13).

PowerStream has prepared a Cost Allocation Study for 2009 ("2009 CAS"). The 2009
CAS is described in Exhibit H, Tab 1, Schedule 1.

Table 1 on the next page provides the revenue-to-cost ratios for 2006 from the cost allocation informational filing and for 2009 in two separate columns. The first column is based on the calculated rates, before any cost allocation adjustment. As can be seen, these do not reflect the Board-approved revenue-to-cost ratio range for some customer classes. The second column is based on the proposed rates; that is, the rates that do reflect those ranges for all customer classes.

Customer Class	Board- Approved Range	2006 Filing	2009 Calculated Ratios	2009 Proposed Ratios
Residential	85% -115%	93.4%	93.2%	93.3%
GS<50	80% -120%	113.5%	113.8%	113.8%
GS>50	80% -180%	108.1%	107.1%	107.1%
Large Use	85% -115%	75.9%	422.4%	115.0%
USL	80% -120%	169.6%	119.5%	119.5%
Sentinel Lighting	70% -120%	16.4%	47.9%	70.1%
Street Lighting	70% -120%	54.4%	63.8%	70.0%

## Table 1: PowerStream Revenue-to-Cost Ratios

Revenue allocation adjustments were required to the Large Use (a decrease), Sentinel Lighting (an increase) and the Street Lighting (an increase) classes to bring their revenue-to-cost ratios within the Board-approved ranges. The net adjustment to these classes left a small revenue deficiency of \$45,627 to be recovered from other classes. PowerStream proposes to recover the entire revenue deficiency from the residential class because doing so would move its revenue-to-cost ratio closer to 1.00 (i.e., fully allocated costs). There would not be a similar outcome for any other customer class.

The resultant impact on a typical residential customer's bill is *de minimus*. This is particularly so when viewed with the other changes that affect the distribution-related portion of the bill: rebasing, smart meter rate adders, regulatory asset recovery rate riders, and LRAM and SSM rate riders. More detail is provided in Exhibit I, Tab 6, Schedule 3.

There has been a dramatic change in the revenue cost ratio for the Large Use class from the 2006 CAS to the 2009 CAS. This is due to a reduction in the number of customers in this class from five to one in the interval. PowerStream now has a single large use customer who uses dedicated feeder lines from a transformer station. Accordingly only the cost of the dedicated assets and the >50kV assets are allocated to this class.

- 39 The proposed Large Use rates reflect the unique circumstances of this one
- 40 customer. In the eventuality of additional customers entering the Large Use
- 41 class, these rates would not reflect the cost of service for these customers.
- 42 PowerStream proposes that any new or existing customers with average monthly
- 43 demand of 5,000 kW or greater be treated as GS>50 kW customers until such
- 44 time as rates for the Large Use class are revised based on a cost allocation
- 45 study reflecting the change in the composition of large use customers.
- Table 2 compares the 2008, the 2009 calculated (before application of the ceiling) and
  the 2009 proposed monthly fixed service charge ("MSC") to values in the 2009 CAS.
- 48

Table 2: PowerStream Monthly Fixed Service Charges (\$)

Customer Class	2009 CAS		2008 Charge	2009 Calculated Charge	2009 Proposed Charge
	Floor	Ceiling			
Residential	2.85	15.92	12.02	12.49	12.49
GS<50	6.56	20.45	28.70	29.82	28.70
GS>50	22.48	84.01	301.73	313.51	301.73
Large User	114.50	148.02	8,978.09	9238.49	3,978.09
USL	2.78	12.43	14.35	14.91	14.35
Sentinel Lighting	0.67	12.17	2.01	2.09	2.09
Street Lighting	0.56	7.84	.84	0.87	0.87

Note: Sentinel and Street Lighting rates are per connection. Above rates are before Smart Meter rate adder.

50 The 2009 Calculated Charges were determined using the current fixed/variable revenue 51 split for each customer class. Where the current 2008 MSC is at or above the ceiling 52 calculated in the 2009 CAS, no change is proposed (e.g., GS<50 Class). If the 2008

53 MSC is below the ceiling, then the proposed MSC is the lower of the 2009 calculated 54 MSC and the ceiling (e.g., Residential Class).

55 Once the MSC for each class is determined, the fixed distribution revenue from the MSC 56 is calculated and subtracted from the total class revenue allocation. The remainder is the 57 variable distribution revenue for the class. This variable distribution revenue value is 58 then used to determine the variable charge.

PowerStream has maintained the current transformer ownership allowance of \$0.60 per
kW, pending the results of further cost allocation refinements by the OEB.

61 PowerStream has not entered the transformer ownership allowance amount into the cost 62 allocation model (2009 CAS) to prevent the model from allocating this cost to rate 63 classes that do not receive this allowance. In rate design the amount of transformer 64 ownership allowance has been allocated only to the classes that receive it.

PowerStream has used ten year weather normalization in preparing the load forecast
which in turn has been used to create the load profiles used in the Cost Allocation Study.
See Exhibit C1 Tab 1 Schedule 2 for more information on the Load Forecast and its use
of weather normalization.

PowerStream's Load Profiles used in the cost allocation update were based on
preliminary load forecasts as of February 2008 before the adjustments for CDM and
more up to date information.

The final forecast decreased 160,269,033 kWhs or 2.2% from the preliminary forecast used for the load profiles. The main reason for the decrease was updating to more current parameters such as the forecasted Real GDP Index. Another significant factor was incorporating the results of CDM into the load forecast.

The effect of these changes on the relative consumption by customer class was plus orminus 0.2% or less in all cases.



# 2009 COST ALLOCATION INFORMATION FILING

POWERSTREAM INC 2005-0411, EB-2005-0337 EB-Friday, October 10, 2008 Sheet I2 Class Selection

## Instructions:

**Step 1:** Pleae input your existing classes

Step 2: If this is your first run, select "First Run" in the drop-down menu below

Step 3: After all classes have been entered, Click the "Update" button in row E41

	If desired, provide a summary of this run
Click for Drop-Down	(40 characters max.)
Menu	

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

Update

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



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

Enter Net Fixed Assets from approved EDR, Sheet 3-1, cell F12 \$459,051,00 8A Rate Base'!\$I\$10

E.

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1000         Medgement         101         Medgement	Account	Description		BREAK OUT (%)	BREAK OUT (\$)	After BO		Depreciation - 2105 Capital	Depreciation - 2105 Fixed	Depreciation -	Accumulated Depreciation and Contributed	Expense - Property, Plant,	Limited Term	Intangibles and Other Electric	Acquisition
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Image         Image <t< td=""><td>1806-1</td><td>Land Rights Station &gt;50 kV</td><td></td><td></td><td>\$314,076</td><td></td><td></td><td></td><td>(\$63,297)</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	1806-1	Land Rights Station >50 kV			\$314,076				(\$63,297)						
Bathy set Future 2014         State 301         State 30         State 3				46.00%		267,546	\$0		(\$53,919)		213,626				
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Initial Normal Planes along SQV         SPIN SQU         SPIN SQU        SPIN SQU        SPIN SQU        S	1810-2	Leasehold Improvements <50 kV		100.00%	\$0		\$0								
Instrume         Numee         Strume	1815	Normally Primary above 50 kV	\$97,029,987		\$0	97,029,987	(\$16,607,951)	\$4,892,789	(\$27,898,540)		57,416,286	\$1,811,794			
1201         Normal Primary biology 00 V         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <th< td=""><td>1820</td><td>Normally Primary below 50 kV</td><td>\$10,963,166</td><td></td><td>(\$10,963,166)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>	1820	Normally Primary below 50 kV	\$10,963,166		(\$10,963,166)										
LEDC:         Normal Printy Water SQI WATER	1820-1	Normally Primary below 50 kV (Bulk)		0.00%	\$0	-			\$0		-				
1803         Normal Primery below 50 V         2000         \$2.192.53         2.192.53         0.000         50         1.285.50         1.285.50         100.000         60         0         0         0         0           1825         Scale Bailty Explorent - 50         0         0         0         50         50         50         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0	1820-2	Normally Primary below 50 kV Primary)		80.00%	\$8,770,533	8,770,533	(\$13,856)	\$1,508	(\$3,623,934)		5,134,251	\$227,431			
Ites/ 18254         Storing Baltery Equipment > 50 (100, 100, 100, 100, 100, 100, 100, 100,		Normally Primary below 50 kV (Wholesale Meters)		20.00%		2,192,633	(\$3,464)	\$377	(\$905,984)		1,283,563	\$57,039			
International bar			\$0			-									
1830         Public Torents and Finances         Stationarmission Buk Delivery         0.00%         60         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.00%         0.0	1825-1			0.00%	\$0	-	\$0	\$0			-				
Boles, Towers and Fixtures - protection and Polyces, Towers and Fixtures - secondary         BBB.006         S44.530.81         94.530.881 (10.87.4286         91.94.530.81 (10.87.4286         91.94.530.81 (10.87.4286         91.94.530.81 (10.87.4286         91.94.530.81 (10.87.4286         91.94.530.81 (10.87.4286         91.94.				100.00%			\$0	\$0							
18304         Subtransmission Buk Delivery         0.00%         30         0         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50         50			\$96,460,083								-				
16304         Primary         Constraints         Secondary         Se	_	Subtransmission Bulk Delivery		0.00%	\$0		\$0	\$0	\$0						
1830         Secondary         C         2.000         \$1,329,402         (\$1,22,402         (\$22,190)         \$58,753         (\$920,361)         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         (\$1,10,73)         \$59,400         \$51,400         \$51,400         \$51,400         \$51,400         \$51,400         \$51,400         \$51,400         \$51,400         \$51,400         \$51,400         \$51,411,413         \$51,411,413         \$51,411,413         \$51,411,413         \$51,411,413         \$51,411,413         \$51,411,413         \$51,400,210         \$51,411,413         \$51,400,210         \$51,411,413         \$51,400,210         \$51,400,210         \$51,400,210         \$51,400,210         \$51,400,210         \$51,400,210	1830-4	Primary		98.00%	\$94,530,881	94,530,881	(\$10,874,386)	\$1,948,388	(\$30,394,878)		55,210,005	\$2,914,517			
Image: Note of the second se	1830-5			2.00%	\$1,929,202	1,929,202	(\$221,926)	\$39,763	(\$620,304)		1,126,735	\$59,480			
188-93         Subtransmission Bulk Delivery         (many financy fi	1835	Overhead Conductors and Devices	\$124,302,147		(\$124,302,147)	•									
1835-4         Primary         Image         91,000         911,011,933         113,114,933         (117,755,07)         84,33,001         (556,01,278)         44,221,104         53,45,001         64,222,100         53,45,001         Comparing and analysis         Comparind analysis         Comparind analysis <thc< td=""><td>1835-3</td><td>Subtransmission Bulk Delivery</td><td></td><td></td><td>\$0</td><td></td><td>\$0</td><td>\$0</td><td>\$0</td><td></td><td>-</td><td></td><td></td><td></td><td></td></thc<>	1835-3	Subtransmission Bulk Delivery			\$0		\$0	\$0	\$0		-				
1830-5         Secondary         GSD78 (SS 2186.02)         Sign (SS 21	1835-4	Primary		91.00%	\$113,114,953	113,114,953	(\$17,755,097)	\$4,334,001	(\$56,401,676)		43,292,180	\$3,435,901			
1840-3         Underground Conduit - Bulk Delivery         100.00%         S52 (186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 186.020         52, 18		Secondary		9.00%		11,187,193	(\$1,755,999)	\$428,637	(\$5,578,188)		4,281,644	\$339,814			
1840-4         Underground Conduit - Primary         100.00%         \$52,186,020         \$52,186,020         \$51,878,579         \$53,878,579         \$53,878,579         \$53,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,579         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589         \$51,878,589 </td <td>1840</td> <td>Underground Conduit</td> <td>\$52,186,020</td> <td></td> <td>(\$52,186,020)</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1840	Underground Conduit	\$52,186,020		(\$52,186,020)	-									
1840-5         Underground Conduit- Secondary         0.00%         50         -         50         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <t< td=""><td>1840-3</td><td>Underground Conduit - Bulk Deliver</td><td>,</td><td></td><td>\$0</td><td>-</td><td></td><td></td><td></td><td></td><td>-</td><td></td><td></td><td></td><td></td></t<>	1840-3	Underground Conduit - Bulk Deliver	,		\$0	-					-				
1840-5         Underground Conduit- Secondary         0.00%         50         -         50         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         50         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <t< td=""><td>1840-4</td><td>Underground Conduit - Primarv</td><td></td><td>100.00%</td><td>\$52,186,020</td><td>52,186,020</td><td>(\$12,077,561)</td><td>\$1,875,879</td><td>(\$24,111,138)</td><td></td><td>17,873.201</td><td>\$1,408,288</td><td></td><td></td><td></td></t<>	1840-4	Underground Conduit - Primarv		100.00%	\$52,186,020	52,186,020	(\$12,077,561)	\$1,875,879	(\$24,111,138)		17,873.201	\$1,408,288			
1940         Devices         Sch1,362,30         (sch1,362,30)		Underground Conduit - Secondary				-					-				
1949-3         Devices - Buk Delivery         Column         Solution         Solution <td>1845</td> <td>Devices</td> <td>\$261,382,305</td> <td></td> <td>(\$261,382,305)</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	1845	Devices	\$261,382,305		(\$261,382,305)	-									
Interview         Devices - Primary         Outcom         Scot (SSL389,44)         SSL4401         (St3175399)         Oscilar (SSL3974)         SSL4401	1845-3	Devices - Bulk Delivery		0.00%	\$0	-	\$0	\$0	\$0		-				
Instant         Devices - Secondary         Count         Count         Secondary         Count         Co	1845-4	Devices - Primary		100.00%	\$261,382,305	261,382,305	(\$51,359,448)	\$8,844,001	(\$129,175,399)		89,691,459	\$7,292,072			
1855         Services         Se6241,694         So         96,241,694         (g2,42,70,72)         33,786,60         (g4,41,991)         30,977,821         \$33,345              1860         Meters         \$59,756,517         \$50         59,756,517         (g2,42,70,72)         \$3,78,240,20         \$27,170,928         \$2,195,169 <td>1845-5</td> <td></td> <td></td> <td>0.00%</td> <td>\$0</td> <td>-</td> <td>\$0</td> <td>\$0</td> <td>\$0</td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td>	1845-5			0.00%	\$0	-	\$0	\$0	\$0		-				
1860         Meters         \$59,756,517         \$0         59,756,517         (g8,276,27)         \$1,312,380         (g2,708,316)         27,170,326         \$21,185,160	1850	Line Transformers	\$209,746,030		\$0	209,746,030	(\$48,773,425)	\$10,352,597	(\$104,349,733)		66,975,469	\$5,532,138			
Inters         \$59,756,517         \$50         \$59,756,517         \$68,878,872         \$1,312,308         \$(\$27,019,315)         \$27,170,928         \$2,116,169         \$(\$1,015,640,178         \$(\$1,015,640,178         \$(\$1,015,640,178         \$(\$190,892,357)         \$37,829,028         \$(\$455,298,861)         \$0         \$407,277,388         \$28,225,188         \$0         \$0         \$60	1855	Services	\$96,241,694		\$0	96,241,694	(\$24,570.572)	\$3,798.690	(\$44,491.991)		30,977,821	\$3,313.645			
Total         \$1,015,640,178         \$1,015,640,178         \$1,015,640,178         \$1,015,640,178         \$37,829,028         \$407,277,988         \$28,225,188         \$0         \$0	1860	Meters	\$59,756,517		\$0	59,756,517					27,170,928				
SUB TOTAL from I3 \$1,015,640,178										\$0			\$0	\$0	\$0
		SUB TOTAL from I3	\$1,015,640,178									h			

											5705	5710	5715	5720
General Plant		Break out Functions			Contributed Capital - 1995	Accumulated Depreciation - 2105 Capital Contribution	Accumulated Depreciation - 2105 Fixed Assets Only	Accumulated Depreciation - 2120	Net		Amortization Expense - Property, Plant, and Equipment		Amortization of Intangibles and Other Electric Plant	Amortization of Electric Plant Acquisition Adjustments
1905	Land	\$4,840,524		4,840,524					\$	4,840,524			\$112	
1906	Land Rights	\$0							\$				\$0	
1908	Buildings and Fixtures	\$24,306,597		24,306,597			(\$540,531)		\$	23,766,066	\$924,323		\$552	
1910	Leasehold Improvements	\$1,649,160		1,649,160			(\$1,297,196)		\$	351,964	\$148,443		\$8	



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

Enter Net Fixed Assets from approved EDR, Sheet 3-1, cell F12 BA Rate Base 'SIS'1008 BA Rate Base 'SIS'10

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	SE AND DISTRIBUTION ASSETS			BALANCE SHEET ITEMS EXPENSE ITEMS								ĺ			
RATEBA	SE AND DISTRIBUTION ASSETS										5705	5710	5715	5720	
Account	Description	Break out Functions	BREAK OUT (%)	BREAK OUT (\$)	After BO	Contributed Capital - 1995	Accumulated Depreciation - 2105 Capital Contribution	Accumulated Depreciation - 2105 Fixed Assets Only	Accumulated Depreciation - 2120	Asset net of Accumulated Depreciation and Contributed Capital	Amortization Expense - Property, Plant, and Equipment	Amortization of Limited Term Electric Plant	Amortization of Intangibles and Other Electric Plant	Amortization of Electric Plant Acquisition Adjustments	
1915	Office Furniture and Equipment	\$5,547,250			5,547,250			(\$2,818,473)		\$ 2,728,777	\$444,568		\$63		1
1920	Computer Equipment - Hardware	\$9,662,124			9,662,124			(\$6,836,009)		\$ 2,826,115	\$1,317,791		\$66		1
1925	Computer Software	\$15,047,417			15,047,417			(\$10,128,260)		\$ 4,919,158	\$4,425,743		\$114		ſ
930	Transportation Equipment	\$13,016,642			13,016,642			(\$9,480,346)		\$ 3,536,296			\$82		1
1935	Stores Equipment	\$455,960			455,960			(\$400,559)		\$ 55,401			\$1		1
	Tools, Shop and Garage Equipment	\$4,252,801			4,252,801			(\$2,927,723)		\$ 1,325,078			\$31		ĺ
	Measurement and Testing Equipment	\$0						\$0		\$-			\$0		ĺ
	Power Operated Equipment	\$0						\$0		\$ -			\$0		1
	Communication Equipment	\$2,649,819			2,649,819			(\$1,135,773)		\$ 1,514,046	\$215,239		\$35		1
	Miscellaneous Equipment	\$28,352			28,352			(\$2,835)		\$ 25,517	\$2,835		\$1		1
	Load Management Controls - Customer Premises	\$0								s -			\$0		ĺ
1975	Load Management Controls - Utility Premises	\$0								\$-			\$0		ĺ
1980	System Supervisory Equipment	\$14,769,529			14,769,529			(\$8,985,537)		\$ 5,783,992	\$829,056		\$134		1
990	Other Tangible Property	\$0							S -	\$ -			\$0		1
	Property Under Capital Leases	\$0								\$			\$0		ĺ .
010	Electric Plant Purchased or Sold	\$0								\$-			\$0		í
	Total	\$96,226,174		\$0	\$96,226,174	\$0	\$0	(\$44,553,242)	\$0	\$51,672,932	\$8,308,000	\$0	\$1,200	\$0	
	SUB TOTAL from I3	\$96,226,174													ĺ
	13 Directly Allocated	\$100,089													1
	Grand Total	\$1,111,966,441		\$0	\$1,111,866,352	(\$190,892,357)	\$37,829,028	(\$499,852,103)	\$0	\$458,950,920	\$36,533,188	\$0	\$1,200	\$0	
To be F	Prorated														
	Contributed Capital - 1995		Distn assets cost	\$1,015,640,178	(\$568,960,822)	\$190,892,357	Balanced								1
2105	Accumulated Depreciation - 2105	(\$462,023,075)	contr cap	(\$190,892,357)	\$106,937,747			462,023,075	Balanced						1
2120	Accumulated Depreciation - 2120	\$0		\$824,747,821	(\$462,023,075)				\$0	Balanced					
	Total	(\$652,915,432)													1
	Net Assets	\$459,051,009	Net Fixed Assets Match EDR												
Amortizati	ion Expenses														
5705	Amortization Expense - Property, Plant, and Equipment	\$36,533,188	ſ								(\$36,533,188)	Balanced			
	Amortization of Limited Term Electric Plant	\$0										\$0	Balanced		
5715	Amortization of Intangibles and Other Electric Plant	\$1,200										+	(\$1,200)	Balanced	İ
	Amortization of Electric Plant Acquisition Adjustments	\$0												\$0	Ba
	Total Amortization Expense	\$36,534,388												-	



## 2009 COST ALLOCATION INFORMATION FILING POWERSTREAM INC

### EB-2005-0409/EB-2005-0410/EB-2005-0411, EB-2005-0337 EB-2007-0001

Friday, October 10, 2008

Sheet O1 Revenue to Cost Summary Worksheet -

Class Revenue, Cost Analysis, and Return on Rate Base

			1	2	3	6	7	8	9
Rate Base Assets		Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Sentinel	Unmetered Scattered Load
crev	Distribution Revenue (sale)	\$121,028,803	\$61,454,178	\$18,295,929	\$39,437,611	\$222,847	\$1,122,579	\$12,740	\$482,918
mi	Miscellaneous Revenue (mi) Total Revenue	\$6,568,046 \$127,596,849	\$3,593,014 \$65,047,193	\$1,596,411 <b>\$19,892,340</b>	\$1,273,235 \$40,710,846	\$885 \$223,732	\$17,138 <b>\$1,139,717</b>	\$521 \$13,261	\$86,843 \$569,760
		¢121,000,010	<i><b>400,0</b>,100</i>	\$10,00 <u>1</u> ,010	¢ 10,1 10,0 10	¥220,102	¢1,100,111	0.0,201	<i><b>4000</b>,100</i>
	Expenses		<b>A</b> 0 400 500	<b>A</b> 4 404 007	<b>*</b> 0.070.050	<b>A</b> ( 000	<b>0</b> 170 750	<b>*</b> 0.000	000 505
di cu	Distribution Costs (di) Customer Related Costs (cu)	\$11,996,591 \$10,473,500	\$6,403,593 \$6,296,950	\$1,404,337 \$2,222,094	\$3,973,653 \$1,746,985	\$4,669 \$503	\$178,756 \$90,815	\$3,020 \$1,282	\$28,565 \$114,870
ad	General and Administration (ad)	\$22,628,209	\$12,725,588	\$3,599,883	\$5,878,994	\$5,632	\$275,434	\$4,370	\$138,308
dep	Depreciation and Amortization (dep)	\$36,534,388	\$20,353,700	\$4,415,221	\$11,088,258	\$8,838	\$570,846	\$9,135	\$88,389
INPUT	PILs (INPUT)	\$9,039,078	\$4,719,808	\$1,148,734	\$3,010,955	\$4,648	\$131,972	\$1,947	\$21,015
INT	Interest	\$18,692,664	\$9,760,484	\$2,375,563	\$6,226,604	\$9,612	\$272,916	\$4,026	\$43,458
	Total Expenses	\$109,364,430	\$60,260,123	\$15,165,831	\$31,925,449	\$33,902	\$1,520,739	\$23,780	\$434,606
	Direct Allocation	\$9,698	\$0	\$0	\$0	\$9,698	\$0	\$0	\$0
NI	Allocated Net Income (NI)	\$18,222,721	\$9,515,101	\$2,315,840	\$6,070,064	\$9,370	\$266,055	\$3,925	\$42,366
	Revenue Requirement (includes NI)	\$127,596,849	\$69,775,223	\$17,481,672	\$37,995,513	\$52,971	\$1,786,794	\$27,704	\$476,971
		Revenue Re	quirement Input eq	uals Output					
	Rate Base Calculation								
	Net Assets								
dp	Distribution Plant - Gross	\$1,015,640,178	\$548,679,168	\$125,668,342	\$322,403,959	\$344,836	\$15,831,445	\$241,974	\$2,470,454
gp .	General Plant - Gross	\$96,226,174	\$51,317,744	\$11,987,962	\$31,185,597	\$42,147	\$1,443,025	\$22,159	\$227,540
	Accumulated Depreciation Capital Contribution	(\$462,023,075) (\$190,892,357)	(\$253,433,296) (\$106,343,673)	(\$56,698,120) (\$22,761,660)	(\$142,984,168) (\$58,192,895)	(\$102,350) (\$52,573)	(\$7,529,304) (\$3,023,945)	(\$114,489) (\$50.029)	(\$1,161,348) (\$467,582)
co	Total Net Plant	\$458,950,920	\$240,219,943	\$58,196,524	\$152,412,493	\$232,060	\$6,721,221	\$99,615	\$1,069,063
		+100,000,020	¥2 10,2 10,0 10	\$00,100,0 <u>2</u> 1	¢.02,112,100	\$202,000	<i>voj: 1,j=1,</i>	\$00,010	\$1,000,000
	Directly Allocated Net Fixed Assets	\$100,090	\$0	\$0	\$0	\$100,090	\$0	\$0	\$0
COP	Cost of Power (COP)	\$510,537,195.0	\$150,761,634	\$60,039,174	\$293,507,833	\$2,450,579	\$3,114,277	\$51,054	\$612,645
	OM&A Expenses	\$45,098,300.1	\$25,426,130	\$7,226,314	\$11,599,632	\$10,804	\$545,005	\$8,672	\$281,743
	Directly Allocated Expenses	\$0.0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal	\$555,635,495	\$176,187,764	\$67,265,488	\$305,107,465	\$2,461,383	\$3,659,282	\$59,726	\$894,388
	Working Capital	\$83,345,324.3	\$26,428,165	\$10,089,823	\$45,766,120	\$369,207	\$548,892	\$8,959	\$134,158
	Total Rate Base	\$542,396,334	\$266,648,107.4	\$68,286,347.5	\$198,178,613	\$701,358	\$7,270,114	\$108,574	\$1,203,221
		Rate E	Base Input equals C	Dutput					
	Equity Component of Rate Base	\$216,958,534	\$106,659,243	\$27,314,539	\$79,271,445	\$280,543	\$2,908,045	\$43,429	\$481,289
	Net Income on Allocated Assets	\$18,222,721	\$4,787,070	\$4,726,509	\$8,785,397	\$180,132	(\$381,022)	(\$10,519)	\$135,155
	Net Income on Direct Allocation Assets	\$1,796	\$0	\$0	\$0	\$1,796	\$0	\$0	\$0
	Net Income	\$18,224,517	\$4,787,070	\$4,726,509	\$8,785,397	\$181,928	(\$381,022)	(\$10,519)	\$135,155
	RATIOS ANALYSIS								
	REVENUE TO EXPENSES %	100.00%	93.22%	113.79%	107.15%	422.37%	63.79%	47.87%	119.45%
	EXISTING REVENUE MINUS ALLOCATED COSTS	\$0	(\$4,728,031)	\$2,410,668	\$2,715,333	\$170,761	(\$647,077)	(\$14,444)	\$92,789

## RATE DESIGN

# 2 OVERVIEW

1

This Exhibit explains how PowerStream designed its proposed rates in order to collect its proposed revenue requirement for 2009; that is, the Base Revenue Requirement plus the Transformer Ownership Allowance. The existing Tariff of Rates and Charges (May 1, 2008) is provided in Exhibit I, Tab 6, Schedule 1. The proposed Tariff of Rates and Charges (May 1, 2009) is provided in Exhibit I, Tab 6, Schedule 2. The bill impacts for typical customers are provided in Exhibit I, Tab 6, Schedule 3.

9 PowerStream developed its own rates model by modifying the Board's 2006 EDR model
10 to accommodate a future test year. The following steps were taken in the rate design
11 process:

- The Base Revenue Requirement ("BRR") for 2009 was allocated to the customer
   classes using, for this purpose, a similar allocation methodology as the OEB
   2006 EDR allocation model.
- Low voltage charges and the transformer ownership allowance were allocated to
   the customer classes separately using, for this purpose, the methodology in the
   2006 EDR model. More detail is provided, respectively in, Exhibit I, Tab 4,
   Schedule 1 and Exhibit C1.
- The 2009 costs and 2009 BRR allocated to customer classes, were used as an
   input for the 2009 Cost Allocation Study ("2009 CAS"), as described in Exhibit H,
   Tab 1, Schedule 1)
- 4. PowerStream then adjusted the allocation of BRR to the customer classes so
  that the proposed rates for 2009 result in revenue-to-cost ratios that would fall
  within the ranges established in the following Report of the Board: *Application of Cost Allocation for Electricity Distributors dated* November 28, 2007 (EB-20070667).

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	As per Information filing	2009 Test Year a rate		Proposed per Application			
	2006	\$	%	\$	%		
Residential	\$51,150,319	\$61,454,178	50.78%	\$61,499,805	50.81%		
GS Less Than 50 kW	17,065,172	18,295,929	15.12%	18,295,929	15.12%		
GS 50 to 4,999 kW	32,077,565	39,437,611	32.59%	39,437,611	32.59%		
GS 50 to 4,999 kW Legacy		-	0.00%	-	0.00%		
Large Use	1,274,698	222,847	0.18%	60,031	0.05%		
Unmetered Scattered Load	553,921	482,918	0.40%	482,918	0.40%		
Sentinel Lighting	6,212	12,740	0.01%	18,890	0.02%		
Street Lighting	709,984	1,122,579	0.93%	1,233,618	1.02%		
Total	\$102,837,871	\$121,028,803	100.00%	\$121,028,803	100.00%		

## Table 1: Revenue Allocation

the 2009 revenue-to-cost ratios is provided in Exhibit H, Tab 1, Schedule 2.

The revenue allocation by customer class is presented in Table 1. More detail on

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5. The floor and ceiling values for the monthly fixed service charges, as calculated
in the 2009 CAS, net of the Smart Meter rate adder, were used to determine the
monthly fixed charge for each customer class. An additional fixed rate mitigation
adjustment was required for the Large Use class because it has only one
customer; see Exhibit H, Tab 1, Schedule 2.

36 6. The variable distribution rates were determined based on the distribution revenue
37 allocated to each customer class, net of monthly fixed charges and the Smart
38 Meter rate adder, and forecasted (kW) load and consumption (kWh) for 2009.

39 7. The proposed distribution rates for 2009 are presented in Table 2 below.

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## Table 2: Proposed Distribution Rates

			DISTR	IBUTION CH	ARGES			FINAL	RATES
	v	ariable	Fixed	LV	Transformer Allowance	SM	١	/ariable	Fixed
		Α	В	С	D	Е	F	=A+C+D	G=B+E
Residential	\$	0.0138	12.49	\$0.0002		\$0.85	\$	0.0140	\$13.34
GS Less Than 50 kW	\$	0.0122	28.70	\$0.0002		\$0.85	\$	0.0124	\$29.55
GS 50 to 4,999 kW	\$	2.4367	301.73	\$0.0778	\$0.2423	\$0.85	\$	2.7568	\$302.58
Large Use	\$	0.1344	3,978.09	\$0.0919	\$0.2423	\$0.85	\$	0.4686	\$3,978.94
Unmetered Scattered Load	\$	0.0139	14.35	\$0.0002			\$	0.0141	\$14.35
Sentinel Lighting	\$	8.8442	2.09	\$0.0659			\$	8.9101	\$2.09
Street Lighting	\$	4.7730	0.87	\$0.0605			\$	4.8335	\$0.87

48 Note: "LV" means the Low Voltage Charges and "SM" means the Smart Meter Rate

49 Adder.

The derivation of the Smart Meter Rate Adder is described in Exhibit I, Tab 3, Schedule
The derivation of the Low Voltage Charges is described in Exhibit I, Tab 4, Schedule
1.

53 Exhibit I, Tab 2, Schedule 1 explains PowerStream's proposed rate rider to recover 54 LRAM and SSM amounts that are attributable to its CDM programs from 2005 to 2007. 55 Both the LRAM claim of \$429,897 and the SSM claim of \$398,214 relate only to the so-56 called "3<sup>rd</sup> tranche funded" programs. PowerStream proposes that the requested rate 57 riders would be applicable only to the customer classes that benefited from these CDM 58 programs. 1

## **RATE DESIGN PROPOSAL**

- 2 The following is a summary of PowerStream's rate design proposals:
- PowerStream proposes a Base Revenue Requirement of \$121,028,803 (Exhibit
   G, Tab 1, Schedule 1), transformer ownership allowances of \$2,538,896, and
   low voltage charges of \$1,452,062 (Exhibit I, Tab 4, Schedule 1)
- PowerStream proposes to collect this total revenue requirement from the customer classes in proportions that are similar to the current proportions but, nevertheless, adjusted for some customer classes based on the results of the 2009 Cost Allocation Study (revenue-to-cost ratios). The affected customer classes are: Residential, Large User, Sentinel Lighting, and Street Lighting. The Rate Design issues are discussed in detail in Exhibit I, Tab 1, Schedule 1.
- 12 PowerStream proposes to eliminate the Time-of-Use (Legacy) customer class. • 13 This class was created in connection with the initial 2001 rates unbundling. The 14 customers in this class were billed seasonal rates, prior to unbundling, based on 15 the summer/winter cost of power. This class-specific consumption pattern 16 enabled the allocation of energy revenue from the total revenue component in 17 the 2001 unbundling process thereby facilitating the creation of the Time-of-Use 18 class. Only two customers remain in this class today, there are no real time-of-19 use rates charged to them, and there are no other distribution asset identifiers 20 that make these customers different from any other General Service customer. It 21 is proposed to add the two customers to the GS>50kW class. On average, these 22 customers will see the total bill reduction of 2.5%.
- PowerStream proposes to clear the balances that have accumulated to
   December 31, 2007 in certain deferral and variance accounts since January 1,
   2005 with certain exceptions. This proposal would result in a refund of \$27.9M
   to customers over two years May 1, 2009 to April 30, 2011 through rate rider
   credits that vary in amount by customer class. The exceptions are Account
   1588 RSVA Power, Sub-account Global Adjustment and Account 1592 PILS

- and Tax Variances for 2006 and Subsequent Years. These matters are
  discussed in detail in Exhibit E, Tab 1, Schedules 1 and 2.
- PowerStream is proposing to recover LRAM/SSM amounts of \$828,110 by means of a rate adder for the rate classes that benefited from these CDM programs. The rate adder would be in place for one year starting May 1, 2009.
   This total is attributable to the CDM programs funded by the so-called "3<sup>rd</sup> tranche rate increase" and completed from 2005 to 2007. The calculation of LRAM/SSM rate riders is shown in Exhibit I, Tab 2, Schedule 1.
- PowerStream is proposing a rate adder with a \$0.19 credit per month for all metered customers in 2009 rate year, to clear actual Smart Meter costs to December 31, 2007. PowerStream is also proposing an updated monthly future cost offset rate adder of \$1.04 for the 2009 rate year in respect of 2008 and 2009 capital expenditures and incremental operating costs related to Smart Meters. The details on Smart Meter rate rider calculation are presented in Exhibit I, Tab3, Schedule 2.

# 1 LOST REVENUE ADJUSTMENT MECHANISM (LRAM) 2 AND SHARED SAVINGS MECHANISM (SSM) CLAIM

## 3 OVERVIEW

4 PowerStream is seeking to recover the following amounts calculated up to December5 31, 2007:

- 6 Lost Revenue Adjustment Mechanism ("LRAM") \$429,896 and
- 7 Shared Savings Mechanism ("SSM") \$398,214.

8 These amounts reflect not only PowerStream's Conservation and Demand Management 9 ("CDM") plan for the years 2005 to 2007, but also the results of Aurora's CDM plan for 10 the year 2005 prior to November 1, 2005. The total amount of the two plans is \$7.3M. 11 Both CDM plans were approved by the Board. No adjustments have been made for 12 taxes in accordance with the Board's Decision and Order in the EB-2007-0096 13 proceeding (Toronto Hydro Electric System Limited).

PowerStream proposes to recover the total of \$828,110 through class-specific volumetric rate riders that would be in effect for the 2009 rate year. The class-specific volumetric rate riders were determined by totalling the class-specific LRAM and SSM amounts by program and dividing by the class-specific forecast kWhs or kWs for 2009. Table 1 summarizes the total LRAM and SSM amount for each customer class, the forecast 2009 volumetric billing quantity and the resulting rate rider. Tables are at the end of this section.

Delays in receiving various supplier parts and materials as well as consultation services led PowerStream to conclude that its CDM programs would be substantially, but not fully, complete by the target date of September 30, 2007. As a result, PowerStream applied for and received approval from the Board to extend the completion of some CDM activities until September 30, 2008. 1 PowerStream has spent over \$7.0M on its CDM programs as of June 30, 2008. The

2 remaining CDM programs will be fully deployed by September 30, 2008 to reach the

3 approved amount of \$7.3M.

## 4 AUTHORIZATION FOR LRAM / SSM RECOVERY

The Board issued its *Guidelines for Electricity Distributor Conservation and Demand Management - EB-2008-0037* ("Guidelines") on March 28, 2008. The purpose of the
Guidelines is to "provide comprehensive information on the Board's policies relating to
CDM activities undertaken by electricity distributors in Ontario" (p. 1).

9 Section 5 of the Guidelines expresses the understanding that distributors can expect to 10 have lower revenues due to unforecasted reductions in energy use as a result of CDM 11 activities. This section states that LRAM is an acceptable process to compensate 12 distributors for lost revenues and thereby to remove the disincentive created from CDM 13 energy savings.

Section 6 of the Guidelines expresses the Board's recognition that there needs to be an incentive-based mechanism to encourage more aggressive CDM activities. The SSM is accordingly available when customer-focused initiatives are funded through distribution rates and when the costs of such initiatives are expensed.

18

## 1 METHODOLOGY FOR CALCULATING LRAM AND SSM

The Guidelines provide the basis and methodology required to file an application for LRAM and SSM recovery. PowerStream used the Guidelines in calculating the quantities and dollar amounts that comprise this claim. In addition, PowerStream has followed the Board's Decision and Order in the EB-2007-0096 proceeding in which the Board approved Toronto Hydro-Electric System Limited's LRAM/SSM recovery application ("THESL Decision").

8 LRAM and SSM amounts are recoverable on a retroactive basis in accordance with the
9 Guidelines. PowerStream utilized the Total Resource Cost ("TRC") test and measures
10 to determine the costs and benefits from each of the CDM program initiatives.
11 PowerStream has used the inputs and assumptions for the various CDM measures
12 listed in the Board's Guidelines.

13 LRAM amounts were based on energy savings by customer class from various CDM 14 programs; Table 4 lists these programs. LRAM quantities were adjusted for free-15 ridership as required in the TRC mechanism with adjustment in accordance with the 16 THESL Decision. Table 5 shows the gross and net kWh and kW savings.

The SSM calculation was prepared in accordance with the Guidelines and the THESL
Decision. The net benefits of each program were identified using the TRC test.
PowerStream then applied the allowable 5% to each CDM initiative. The SSM total
includes any programs that had "negative benefits" and has not been adjusted for taxes.

All of the CDM activities for which LRAM and SSM are being claimed were funded by the "3<sup>rd</sup> tranche increase" in PowerStream's market adjusted revenue requirement during the 2005 rate year and, as such, PowerStream does not need an independent review of these calculations. It should be noted, however, that PowerStream utilized CDM consultants for the preparation of the annual reports to the Board from which most of the data flows and used other CDM consultants to assist in the preparation of the LRAM/SSM claim.

## 1 LRAM CALCULATION

The LRAM was calculated by multiplying the net energy savings, kW or kWh, for each program by PowerStream's Board-approved variable distribution charge appropriate for each rate class on a year by year basis. PowerStream's total LRAM claim for the three year period ending December 31, 2007 is \$429,897. This includes carrying charges of \$39,604. Table 3 provides a summary of the savings quantities and the LRAM dollar amounts by program and rate class for each of the three years.

8 PowerStream made adjustments to apportion the savings achieved in the year a 9 program was initiated. The start date of each program was determined. A program that 10 started on October 1, 2005 would have a 25% of the full year savings applied in order to 11 account for the three month period that the program was effective. The program would 12 be in effect for all of 2006 and 2007. Tables 7A, 7B and 7C show the LRAM amounts for 13 each of the CDM programs in each of the three years. In these tables the terms 14 "partially effective" and "fully effective" are used to account for the timing issues 15 discussed in this paragraph.

Regulatory asset recovery riders were excluded from the approved rates in calculating
the LRAM. PowerStream's approved rates did not contain any adjustment for the effects
of CDM programs.

The LRAM amounts to be recovered have been adjusted for free riders as defined in the Guidelines. LRAM is based on net kWh or kW after deducting for free riders. The amount of free riders varies depending on the CDM program. PowerStream based its percentage reductions on the THESL Decision. Table 5 shows the free rider impact on the quantities for each program for the years 2005 to 2007.

For those rate classes where a transformer allowance was applicable, PowerStream deducted the transformer allowance from the LRAM amount calculated. The total reduction in PowerStream's LRAM claim related to the transformer allowance, for the three year period, amounted to \$9,459. Tables 9 and 10 show the details.

## 1 SSM CALCULATION

As stated in the Guidelines, SSM is based on 5% of the net benefits before tax as
calculated using the TRC test. PowerStream is making an SSM claim for \$398,214.
Table 2 provides a summary of the SSM amount for each program in the three years
2005 to 2007.

6 The SSM was only applied to customer-focused initiatives that reduce demand and/or 7 reduce the level of consumption. The SSM calculation is a function of the net present 8 value of the program benefits as defined by the TRC measures. Program net benefits 9 are determined by the present value of the stream of benefits over a program's life, 10 comprised mainly of avoided generation, transmission and distribution costs offset by the 11 present value of program costs. PowerStream used the following discount rates: 6.5% 12 for 2005, 7.3% for 2006 and 7.3% for 2007.

Tables 8A, 8B and 8C provide a summary of the TRC costs and TRC benefits for each
of the CDM programs covering the 2005 to 2007 years. Programs with a negative TRC
benefits have been included in calculating the SSM amount.

## 16 CARRYING CHARGES

17 In the THESL Decision the Board found that the distributor was entitled to carrying
18 charges on LRAM balances. PowerStream has calculated carrying charges on LRAM
19 amounts to April 30, 2009 in the amount of \$39,604.

PowerStream used the Board's prescribed interest rates from second quarter (Q2) 2006 up to Q3 2008. For 2005 the three month Banker's Acceptance historical data obtained from the Bank of Canada website plus a 0.25% spread was used. PowerStream assumes that the Board's prescribed rate for Q3 2008 remains unchanged for Q4 2008, Q1 2009 and Q2 2009. The rate for each year was obtained by taking an average of the four quarterly rates. 1 Interest has been calculated on the average balance for each year using the average

2 interest rate for the year. For 2009 interest was calculated for the four-month period to

3 April 30, 2009.

The average balance for the year is a simple average of the opening and closing balances. Opening and closing balances were determined as follows: programs originating in 2005 were assumed to start October 1, 2005 and the savings were spread evenly over the twenty-seven months to December 31, 2007; programs originating in 2006 were assumed to start July 1, 2006 and the saving spread evenly over the 18 months to December 31, 2007.

10 Table 6 shows the LRAM carrying charge calculations.

	2005 Pr	og	ram					2007 P	ro	gram			С	ombined	Billing	Billing Units	Rate
Rate Class	Amo	unt	S	20	006 Progra	m	Amounts	Amo	our	nts	LRAM	SSM		Total	Туре	(2009)	Rider
	LRAM		SSM		LRAM		SSM	LRAM		SSM	Total	Total					
Residential	\$ 60,695	\$	18,156	\$	222,167	\$	209,730	\$ 8,132	\$	(15,776)	\$ 290,994	\$ 212,110	\$	503,104	kwh	2,084,915,995	\$0.0002
GS<50 kw	\$ -	\$	-	\$	-	\$	-	\$ 1,144	\$	31,542	\$ 1,144	\$ 31,542	\$	32,686	kwh	830,295,025	\$0.0001
GS>50 kw	\$ 69,001	\$	21,507	\$	42,934	\$	98,953	\$ 25,824	\$	34,102	\$ 137,758	\$ 154,561	\$	292,320	kw	10,386,671	\$0.0282
Large Use	\$ -	\$	-	\$	-	\$	-	\$ -	\$	-	\$ -	\$ -	\$	-	kw	91,492	\$0.0000
TOTALS	\$ 129,695	\$	39,663	\$	265,101	\$	308,682	\$ 35,100	\$	49,869	\$ 429,896	\$ 398,214	\$	828,110		2,925,689,183	

## Table 1: LRAM/SSM Totals by Rate Class and Rate Riders

## <u>NOTES:</u>

1) GS>50 and Large Use class LRAM amounts have been reduced by the transformer allowance credit.

2) Progam savings were calculated from the start date to December 31/07.

3) Amounts have not been adjusted for taxes.

4) LRAM amounts include carrying charges.

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit I Tab 2 Schedule 1 Page 2 of 14

## Table 2: Shared Savings Mechanism (SSM) Summary for the Years 2005 to 2007

		RESIE	DEN	TIAL		GS	<50			GS	>50	)		LARGE	US	ER		TOTAL	SAV	INGS
Program	Year	TRC Net Benefits	l	SSM ncentive		RC Net Benefits	Ir	SSM Icentive		RC Net Senefits	Ir	SSM ncentive		C Net nefits		SSM entive		RC Net Benefits	Ir	SSM Icentive
Co branded Mass Markets Program sub total	2005 2006 2007	\$ 469,958 \$ 4,148,940 \$ (162,468 \$ 4,456,430	\$ ) \$	23,498 207,447 (8,123) 222,822	\$	-	\$	-	\$	-	\$	-	\$	-	\$	_	\$	469,958 4,148,940 (162,468) 4,456,430	\$ \$ \$	23,498 207,447 (8,123) 222,822
	2005 2006 2007	\$ (167,470	)\$	(8,373)	\$	54,188	\$	2,709									\$\$\$	(167,470) - 54,188	\$ \$ \$	(8,373) - 2,709
Program sub total		\$ (167,470	)\$	(8,373)	\$	54,188	\$	2,709	\$	-	\$	-	\$	-	\$	-	\$	(113,282)	\$	(5,664)
	2005 2006 2007	\$ (17,470 \$ 67,662		(873) 3,383	\$	576,655	\$	28,833									\$ \$ \$	(17,470) 67,662 576,655	\$ \$ \$	(873) 3,383 28,833
Program sub total		\$ 50,192	\$	2,510	\$	576,655	\$	28,833	\$	-	\$	-	\$	-	\$	-	\$	626,847	\$	31,342
Social Housing	2005 2006 2007	\$ 78,100 \$ (22,005 \$ 86,516	)\$	3,905 (1,100) 4,326													\$ \$ \$	78,100 (22,005) 86,516	\$\$\$	3,905 (1,100) 4,326
Program sub total		\$ 142,611	\$	7,131	\$	-	\$	-	\$	-	\$	-	\$	-	\$	-	\$	142,611	\$	7,131
	2005 2006	¢ (000 500	\ <b>^</b>	(44.070)					\$	19,412	\$	971					\$\$	19,412	\$\$	971 - (11.072)
Program sub total	2007	\$ (239,562 \$ (239,562		(11,978) (11,978)	\$	-	\$	-	\$	19,412	\$	971	\$	-	\$	-	\$ \$	(239,562) (220,150)	\$ \$	(11,978) (11,008)
Leveraging Energy Conservation	2005 2006 2007								\$ \$ \$	471,900 (164,954) 456,032	\$\$\$	23,595 (8,248) 22,802					\$\$\$	471,900 (164,954) 456,032	\$\$\$	23,595 (8,248) 22,802
Program sub total		\$-	\$	-	\$	-	\$	-	\$	762,978	\$	38,149	\$	-	\$	-	\$	762,978	\$	38,149
	2005 2006 2007	\$-	\$		\$		\$		\$	(17,670) 462,656 444,986	\$ \$ \$	(883) 23,133 22,249	\$	_	\$	_	\$ \$ \$	(17,670) - 462,656 444,986	\$ \$ \$ \$	(883) - 23,133 22,249
r rogram sub totar		φ -	Ψ		Ψ		ψ		ψ	444,300	Ψ	22,249	Ψ		ψ		Ψ	444,300	ψ	22,243
	2005 2006 2007	\$-	\$	-	\$		\$		\$ \$ \$	(17,470) 687,600 122,170 792,300	\$ \$	(873) 34,380 <u>6,109</u> 39,615	\$		\$ \$	-	\$ \$ \$ \$	(17,470) 687,600 122,170 792,300	\$ \$	(873) 34,380 <u>6,109</u> 39,615
Distributed Energy	2005	Ŷ	Ŷ		Ŷ		Ŷ		\$	(26,040)	\$	(1,302)	Ŷ		Ŷ		\$	(26,040)	\$	(1,302)
	2006 2007	\$-	\$	-	\$	-	\$		\$	,456,405 (358,815) ,071,550	\$	72,820 (17,941) 53,578	\$	-	\$	-	\$	1,456,405 <u>(358,815)</u> 1,071,550	\$	72,820 (17,941) 53,578
GRAND TOTALS		\$ 4,242,202	\$	212,110	\$	630,843	\$	31,542	\$ 3	3,091,227	\$	154,561	\$	-	\$	-	\$	7,964,271	\$	398,214
	2005 2006 2007	\$ 4,194,597	\$	18,156 209,730 (15,776)	\$ \$	- - 630,843	\$ \$ \$	31,542	\$ \$	430,132 1,979,051 682,043	\$ \$	21,507 98,953 34,102	\$	- - -	\$ \$ \$	- - -	\$ \$	793,250 6,173,649 997,372	\$ \$	39,663 308,682 49,869
		\$ 4,242,202	\$	212,110	\$	630,843	\$	31,542	\$ 3	3,091,227	\$	154,561	\$	-	\$	-	\$	7,964,271	\$	398,214

NOTE: 1) TRC (total resource cost) benefits are based on the approved measures and calculations as defined by the OEB's October 2,2006 Total Resource Cost Guide.

### Table 3: Lost Revenue Adjustment Mechanism (LRAM) Savings by Program and Class for 2005 to 2007

		RESID	ENT	IAL		<50		GS			LARG			T	OTAL SAVING	s	
PROGRAM	YEAR	KWH Savings	1	RAM	KWH Savings	1	RAM	KW savings		LRAM (3)	KW savings		RAM (3)	KWH Savings	KW Savings		LRAM
FROGRAM	TEAK	Gavings			Gavings	-		3411193		(3)	TWV Savings		(5)	Itwir Gavings	itw bavings		LIVAW
Co branded Mass Markets	2005 2006 2007	3,619,540 20,271,115 434,425	\$ \$ \$	42,312 202,594 4,986										3,619,540 20,271,115 434,425	000000000000000000000000000000000000000	\$	42,312 202,594 4,986
Program sub total		24,325,080	\$	249,893	-	\$	-	0.00	\$	-	-	\$	-	24,325,080	0		249,893
Design Advisory Audit Program	2005 2006													-	0	\$	-
Program sub total	2007	-	\$	-	104,506 104,506	\$	1,065 1,065	0.00	\$	-	-	\$	-	104,506 104,506	0		1,065 1,065
Residential Load Control (Energy AR and P)	2005 2006 2007	177,321	\$	1,812										- - 177,321	000000000000000000000000000000000000000	\$	- - 1,812
Program sub total		177,321	\$	1,812	-	\$	-	0.00	\$	-	-	\$	-	177,321	0		1,812
Social Housing	2005 2006	929,688	\$	11,916										929,688	0000	\$	11,916
Program sub total	2007	60,805 990,493	\$ \$	771 12,687	-	\$	-	0.00	\$	-	-	\$	•	60,805 990,493	0		771 12,687
Energy Audti Retrofit and Partnerships	2005 2006							668	\$	1,449				-	668 0	\$	1,449 -
Program sub total	2007	-	\$	-	-	\$	-	668	\$	1,449	-	\$	-	-	668	\$ \$	1,449
Leveraging Energy Conservation	2005 2006 2007							9,231 3,862	<mark>\$</mark> \$ \$	7,573				-	9,231 3,862	\$	20,015 7,573
Program sub total	2007	-	\$	-	-	\$	-	331 13,424	э \$	789 28,377	-	\$	-	-	331 13,424	\$	789 28,377
CI and I Load Control Initiative	2005 2006 2007							10,000	\$	20,983				-	0 0 10,000	\$	- - 20,983
Program sub total	2007	-	\$	-	-	\$	-	10,000	φ	20,983	-	\$	-	-	10,000		20,983
Design Advisory >50 kw	2005 2006 2007							8,581 1,078	\$\$	18,277 2,262				-	0 8,581 1,078	\$	- 18,277 2,262
Program sub total		-	\$	-	-	\$	-	9,659	\$	20,539	-	\$	-	-	9,659		20,539
Distributed Energy	2005 2006 2007							18,484 6,288	\$					-	18,484 6,288 0		40,187 13,301
Program sub total	2007	-	\$	-	-	\$	-	24,772	\$	53,488	-	\$	-	-	24,772		53,488
GRAND TOTALS		25,492,894	\$	264,391	104,506	\$	1,065	58,523	\$	124,836	-	\$	-	25,597,400	58,523	\$	390,292
SUMMARY BY YEAR	2005 2006 2007	4,549,228 20,271,115 672,551		\$54,229 \$202,594 \$7,569	- - 104,506	\$ \$	- - 1,065	28,383 18,731 11,409	\$	39,151	-	\$ \$	-	4,549,228 20,271,115 777,057	28,383 18,731 11,409	\$	115,880 241,745 32,668
		25,492,894		\$264,391	104,506	\$	1,065	58,523	\$	124,836	-	\$	-	25,597,400	58,523	\$	390,292
Summary by Year include Carrying charges (4)	2005 2006 2007	4,549,228 20,271,115 672,551		\$60,695 \$222,167 \$8,132	- - 104,506	\$ \$	- - 1,144	28,383 18,731 11,409	\$	42,934		\$	-	4,549,228 20,271,115 777,057	28,383 18,731 11,409	\$	129,696 265,100 35,100
	2007	25,492,894		290,994	104,506		1,144			137,758	-	э \$	-	25,597,400	58,523		429,896

#### NOTES:

1) The amounts shown above for each year represent savings that occcured from the start of the program to the end of 2007.

2) Program savings have prorated in the intial year based on the start date.

3) LRAM amounts for programs applicable to GS>50 kw and Large Use customers have been reduced by the estimated transformer allowance (Table 10).

4) Table 6 shows the calculations of carrying charges which amounted to \$39,604

## Table 4: CDM Programs Eligible for LRAM and SSM

Program Name	Duration	Participation Levels (1)	Free Rider ship Level (2)
<u>RESIDENTIAL AND SMALL COMMERCIAL (&lt;</u> <u>50kW)</u>			
Co- branded Mass Markets	2005 - 2007	13,803(2005); 136,974(2006); 9046(2007)	5% to 10%
Design Advisory Audit Program	2007	1093(2007)	0% to 10%
Energy Audit Retrofit and Partnership	2005 -2007	737(2005); 520(2007)	10% to 25%
Residential Load Control < 50kW (3)	2006 -2007	250(2006); 1,700(2007)	0%
Social Housing	2005, 2007	350(2005); 992(2007)	1%
<u>COMMERCIAL, INDUSTRIAL AND</u> INSTITUTIONAL (>50kW,			
Leveraging Energy Conservatio	2005 -2007	79(2005); 1,176(2006); 146(2007)	10% to 30%
Load Control > 50kW	2007	1(2007)	0%
Energy Audit Retrofit and Partnerships > 50kW	2005	737(2005)	10%
Design Advisory > 50 kWs	2006, 2007	13(2006); 11(2007)	10% to 30%
Distributed Energy	2005, 2006	1(2005); 1(2006)	30%

## NOTES:

- Participation level refers to the number of customers or units for the various CDM programs above. Within the main program categories there are a number of individual programs. Qualification of programs are based on the TRC guide and are filed with the OEB CDM annual report.
- 2. Free ridership levels are determined by individual program.
- 3. Residential load control < 50kW had SSM eligible savings but no LRAM savings since kWh savings could not be validated

Table 5: Gross and Net kWh/ kW Savings

Residential and Small Commercial <50kW	2005 kWh / kW Gross	2005 kWh / kW Net	2006 kWh / kW Gross	2006 kWh / kW Net	2007 kWh / kW Gross	2007 kWh / kW Net	Total kWh /kW Gross	Total kWh /kW Net
Co - Branded Mass Markets	3,619,540	3,257,586	20,271,115	18,267,347	434,425	389,566	24,325,080	21,914,499
Design Advisory Audit Program Energy Audit Retrofit and							0	0
Partnerships Leveraging Energy					177,321	141,540	177,321	141,540
Conservation Distributed Energy Design Advisory < 50 kW Residential load control <					104,506	94,236	0 0 104,506	0 0 94,236
50kW							0	0
Social Housing	929,688	,	00.074.445	10 007 0 17	60,805	,	,	
Total kWh	4,549,228	4,177,977	20,271,115	18,267,347	777,057	685,554	25,597,400	23,130,878
	2005 kWb / kW	2005 kWb / kW	2006 kWh / kW	2006 kWb / kW	2007 kWb / kW	2007 kWb / kW	Total kWh /kW/	Total kWh /kW
Demand Billed Classes	Gross	Net	Gross	Net	Gross	Net	Gross	Net
Co - Branded Mass Markets							0	0
Social Housing							0	0
Load control > 50kW					10,020	10,000	10,020	10,000
Energy Audit Retrofit and						- ,	-,	
6,						-,	,	
Partnerships	742	668				-,	742	668
6,	742 13,187	668 9,231	4,265	3,862	511	331	,	668 13,424
Partnerships Leveraging Energy Conservation			4,265	3,862	511		742	
Partnerships Leveraging Energy Conservation CI and I Load Control Initiative			, , , , , , , , , , , , , , , , , , ,			331	742 17,963 0	13,424 0
Partnerships Leveraging Energy Conservation		9,231	11,893	3,862 8,581 6,288	1,519	331	742 17,963 0	13,424 0
Partnerships Leveraging Energy Conservation CI and I Load Control Initiative Design Advisory > 50 kW	13,187	9,231 18,484	11,893	8,581	1,519	331 1,078	742 17,963 0 13,411	13,424 0 9,659 24,772

#### NOTES:

- 1. This table shows the accumulative gross and net kWh and kW savings for the various CDM programs in the period 2005 to 2007 inclusive. Gross savings includes any partial year reduction factor. The net savings are after the "free- riders" quantities have been deducted and partial year reduction factor has been applied. Free Ridership is defined as a program participant who would have installed a measure on their own initiative without the program
- Columns labeled 2005 reflect calculated savings based on start date in 2005 plus the full year savings for both 2006 and 2007. Columns labeled 2006 reflect calculated savings based on start date in 2006 plus the full year savings for 2007. Columns labeled 2007reflect calculated partial year savings based on start date in 2007.

### TABLE 6: FUTURE TEST YEAR 2009 LRAM CARRYING CHARGES

			LR	AM Addit	ion	speryea	r	
CDM								
Program								
Start Year		2005		2006		2007		Total
2005	\$	12,876	\$	51,502	\$	51,502	\$	115,880
2006	\$	-	\$	80,582	\$	161,163	\$	241,745
2007	\$	-	\$	-	\$	32,668	\$	32,668
	\$	12,876	\$	132,084	\$	245,333	\$	390,292
			LI	RAM Aver	age	e Balance		
CDM			LI	RAM Aver	age	e Balance		
CDM Program			LI	RAM Aver	age	e Balance		
_		2005	LI	RAM Aver	age	e Balance 2007		2008
Program		2005			age			2008
Program	\$	<b>2005</b> 6,438	LI \$		age \$		\$	<b>2008</b> 115,880
Program Start Year	\$\$			2006		2007		
Program Start Year 2005	*		\$	<b>2006</b> 77,253	\$	<b>2007</b> 96,566	\$	115,880

	L	RAM Year I	End Balanc	e
CDM				
Program Start Year	2005	2006	2007	2008
2005	\$ 12.876	\$ 64 378	\$115 880	\$115 880

 2005
 \$ 12,876
 \$ 64,378
 \$115,880
 \$115,880

 2006
 \$ \$ 80,582
 \$241,745
 \$241,745

 2007
 \$ \$ 32,668
 \$ 32,668

 \$ 12,876
 \$144,959
 \$390,292
 \$390,292

			Inte	res	st		
	2005	2006	2007		2008	2009	Total
Rate	3.29%	4.28%	4.73%		3.98%	3.35%	
	\$ 53	\$ 3,306	\$ 4,568	\$	4,612	\$ 1,276	13,815
	\$ -	\$ 3,449	\$ 7,623	\$	9,621	\$ 2,663	23,356
	\$ -	\$ -	\$ 773	\$	1,300	\$ 360	2,433
	\$ 53	\$ 6,755	\$ 12,963	\$	15,534	\$ 4,299	\$ 39,604

#### Allocation of Carrying Charges to Rate Class:

	Resi	dential	GS<50	)	GS	>50	LU		Tot	al
2005	\$	6,465	\$	-	\$	7,350	\$	-	\$	13,815
2006	\$	19,573	\$	-	\$	3,783	\$	-	\$	23,356
2007	\$	564	\$	79	\$	1,790	\$	-	\$	2,433
Total	\$	26,602	\$	79	\$	12,922	\$	-	\$	39,604

#### Interest Rates

Γ	Jan 05		2005				2008	
	Interest	Dec/05	Average	Dec/06	Average 2006	Average 2007	Average	
	Rate	interest rate	Rate	interest rate	Interest Rate	Interest Rate	Rate	2009 Rate
	2.80%	3.78%	3.29%	4.59%	4.28%	4.73%	3.98%	3.35%

#### NOTES:

1 Carrying charges have been calculated on a simple interest basis, with interest calculated on principal amounts only. For 2009, interest has been calculated from January 1, 2009 to April 30, 2009.

2 Q1 means January 1 to March 31, Q2 means April 1 to June 30, Q3 means July 1 to September 30, Q4 means October 1 to December 31.

3 Programs starting in 2005 are assumed to have started Oct 1/05 and savings accrued evenly over the period to Dec 31/07.

4 Programs starting in 2006 are assumed to have started Jul 1/06 and savings accrued evenly over the period to Dec 31/07.

5 Average balance is a simple average of the opening and closing amounts.

6 Interest rates have been taken from the OEB prescribed interest rates for Approved Accounts for Q2-2006 to Q3-2008.

7 For 2005 and Q1-2006, interest rates have been determined using the same method as the OEB approved rates. Interest rates have been taken from the OEB prescribed interest rates for Approved Accounts for Q2-2006 to Q3-2008. Q1-2006 was determined to be 3.78%, taken with the prescribed rates for Q2, Q3 and Q4 results in an average rate for 2006 of 4.28%.

8 Q4-2008 and Q1-2009 are assumed to be 3.35%, the same as Q3-2008.

9 Interest has been allocated to the classes based on their proportion of LRAM for the program year to the total LRAM for the program year.

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#### Table 7A: 2005 CDM Results - LRAM Calculation

Program	Program Start Date	2005 Partially Effective Factor	Rate Class	2005 Distribution Rate	2006 Distribution Rate	2007 Distribution Rate	Fully Effective kWh Savings	mthly Full Effective kW Savings	Partially Effective 2005 kW/kWh Savings	LRAM	3 yr kw/kwh accum
							Net	Net			
Co-Branded Mass Markets	Oct 1 2005	0.25	Residential	\$ 0.0137	\$ 0.0130	\$ 0.0128	1,447,816	n/a	361,954	\$ 42,312	3,257,586
Design Advisory Audit Program	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Residential Load Control	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Social Housing	1-Oct-05	0.125	Residential	\$ 0.0137	\$ 0.0130	\$ 0.0128	433,125	n/a	54,141	\$ 11,916	920,391
Energy Audit Retrofit and Partnerships Leveraging Energy Conservation & Load	1-Oct-05	0.125	General Service >50kW	\$ 2.4237	\$ 2.3451	\$ 2.2783	n/a	26.2	3.28	\$ 1,549	668
Management	Oct 1 2005	0.125	General Service >50kW	\$ 2.4237	\$ 2.3451	\$ 2.2783	n/a	362	45.25	\$ 21,400	9,231
Mayor's MW Challenge	1-Oct-05	0.125	General Service >50kW	\$ 2.4237	\$ 2.3451	\$ 2.2783	n/a	343	42.88	\$ 20,277	
Sustainable Schools	1-Oct-05	0.125	General Service >50kW	\$ 2.4237	\$ 2.3451	\$ 2.2783	n/a	19	2.38	\$ 1,123	
CI&I Load Control Initiative	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Design Advisory > 50 kV	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	
Distributed Energy	1-Oct-05	0.25	General Service >50kW	\$ 2.4237	\$ 2.3451	\$ 2.2783	n/a	684.6	171.15	\$ 42,960	18,484
TOTAL										\$ 120,138	

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## TABLE 7B: 2006 CDM Results - LRAM Calculation

Program	Program Start Date	Partially Effective Factor	Rate Class	2006 Distributio Rates	2007 Distribution Rates	Fully Effective kWh Savings	Mthly Full Effective kW Savings	Partially Effective 2006 kWh /kw Savings	LRAM	kwh /kw
						Net	Net			
Co-Branded Mass Markets			Residential	\$ 0.0130	\$ 0.0128	12,605,185	n/a	5,662,162	\$ 202,594	18,267,347
CFL Distribution	6-Jan-08	0.5	Residential	\$ 0.0130	\$ 0.0128	1,676,716	n/a	838,358		
Keep Cool - RAC Energy Star	1-Jun-06	1.00	Residential	\$ 0.0130	\$ 0.0128	5,386	n/a	5,386	\$ 139	
Keep Cool - RAC Retirement	1-Jun-06	1.00	Residential	\$ 0.0130	\$ 0.0128	67,068	n/a	67,068	\$ 1,730	
EKC Spring CFLs	1-May-06	0.67	Residential	\$ 0.0130	\$ 0.0128	4,296,210	n/a	2,864,140	\$ 92,225	
EKC Spring Timers	1-May-06	0.67	Residential	\$ 0.0130	\$ 0.0128	352,973	n/a	235,315	\$ 7,577	
EKC Spring P Stats	1-May-06	0.67	Residential	\$ 0.0130	\$ 0.0128	136,559	n/a	91,039	\$ 2,931	
EKC Spring Fans	1-May-06	0.67	Residential	\$ 0.0130	\$ 0.0128	103,889	n/a	69,259	\$ 2,230	
EKC Fall CFLs	1-Oct-06	0.25	Residential	\$ 0.0130	\$ 0.0128	4,486,105	n/a	1,121,526	\$ 72,002	
EKC Fall SLED (replacing 5W incandescent)	1-Oct-06	0.25	Residential	\$ 0.0130	\$ 0.0128	256,820	n/a	64,205	\$ 4,122	
EKC Fall SLED (replacing mini lights)	1-Oct-06	0.25	Residential	\$ 0.0130	\$ 0.0128	98,111	n/a	24,528	\$ 1,575	
EKC Falll P Stats (space heating)	1-Oct-06	0.25	Residential	\$ 0.0130	\$ 0.0128	564,136	n/a	141,034	\$ 9,054	
EKC FallI P Stats (space cooling)	1-Oct-06	0.25	Residential	\$ 0.0130	\$ 0.0128	159,220	n/a	39,805	\$ 2,555	
EKC P Stats - Baseboard	1-Oct-06	0.25	Residential	\$ 0.0130	\$ 0.0128	113,491	n/a	28,373	\$ 1,822	
EKC Timer	1-Oct-06	0.25	Residential	\$ 0.0130	\$ 0.0128	174,889	n/a	43,722	\$ 2,807	
EKC Motion Sensor	1-Oct-06	0.25	Residential	\$ 0.0130	\$ 0.0128	113,612	n/a	28,403	\$ 1,823	
SLED Exchange	6-Dec-08	1	Residential	\$ 0.0130	\$ 0.0128	n/a	n/a	n/a	n/a	
Design Advisory <50 kW	n/a	n/a	n/a	n/	a n/a	n/a	n/a	n/a	n/a	
Load Control <50 kW	1-Jul-06	0.25	Residential	\$ 0.0130	\$ 0.0128	0	n/a	0	\$ -	
Social Housing	n/a	n/a	n/a	n/	a n/a	n/a	n/a	n/a	n/a	
CI&I > 50kW	n/a	n/a	n/a	n/	a n/a	n/a	n/a	n/a	n/a	
Energy AR&P	n/a	n/a	n/a	n/	a n/a	n/a	n/a	n/a	n/a	
Leveraging Energy Conservation & Load Management	1-Nov-06	0.08	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	295.99	25.88	\$ 8,822	3,862
MECO - Fridge Bounty Fridges	1-Nov-06	0.08	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	171.28	14.27	\$ 5,085	
MECO - Fridge Bounty Freezers	1-Nov-06	0.08	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	60.83	5.07	\$ 1,806	
MECO - Fridge Bounty RACs	1-Nov-06	0.08	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	38.14	3.18	\$ 1,132	
MECO - MMCC Energy Audit	n/a	n/a	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	n/a	n/a	n/a	
MECO - Load Shedding	Month of Aug	0.08	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	17.00	1.42	\$ 505	
MECO - Conveyor Toaster Replacement	month of Aug	0.08	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	1.50	0.13	\$ 45	
MECO - Garage Lighting Retrofit	30-Jun-05	0.25	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	7.24	1.81	\$ 249	
Load Control >50 kW	n/a	n/a	n/a	n/s	a n/a	n/a	n/a	n/a		
Design Advisory >50 kW	1-Mar-06	0.42	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	504.76	210.32	\$ 19,719	8,581
PBIP Chiller Replacement	1-Mar-06	0.42	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	72.98	30.41	\$ 2,851	
PBIP Lighting Retrofits	1-Mar-06	0.42	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	431.78	179.91	\$ 16,868	
Distributed Energy	1-Nov-06	0.08	General Service >50 kW	\$ 2.3451	\$ 2.2783	n/a	483.7	40.31	\$ 14,358	6,288
TOTAL									\$ 245,493	18,286,078

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#### Table7C: 2007 CDM Results - LRAM Calculation

Program	Program Start Date	Partially Effective Factor	Rate Class	200	07 Distribution Rate	Fully Effective kWh Savings	Mthly Full Effective kW Savings	Partially Effective 2007 kWh/kW Savings	LRAM	l	kwh/kw annualized (1)
						Net	Net				
Co-Branded Mass Markets		0.46	Residential	\$	0.0128	849,962	-	389,566	\$	4,986	389,566
CFL Distribution	Feb-07	0.46	Residentia	\$	0.0128	849,962	-	389,566	\$	4,986	
Load Control <50kW	July 26 2007	0.21	Residential, Sm. Commercial <50kW	\$	0.0128	-	1,224.00	-	\$	-	
Programmable Thermostats	July 26 2007	0.21	Residential, Sm. Commercial <50kW	\$	0.0128	-	1,224.00	-	\$	-	
Social Housing			Residential	\$	0.0128	228,019	133.98	60,212	\$	771	60,212
	July 2007 (Summer										
A/C Retirment	Months Only)	1	Residentia		0.0128	4,277	4.39	,	\$	55	
Fridge Replacement	Jul-07	0.25	Residentia		0.0128	29,970	6.93	7,493	\$	96	
Low Flow Showerheads	Jul-07	0.25	Residentia	-	0.0128	171,818	12.28	42,955	\$	550	
Smart Thermostats	Jul-07	0.25	Residentia	\$	0.0128	21,953	110.39	5,488	\$	70	
Design Advisory <50 kW	Jul-07	0.25	Sm. Commercial <50kW	\$	0.0113	376,945	122.83	94,236	\$	1,065	94,236
No Catch to Conserve - Fluorescent Lighting	Jul-07	0.25	Sm. Commercial <50kW	\$	0.0113	353,153	75.49	88,288	\$	998	
No Catch to Conserve - Programmable Thermostats	Jul-07	0.25	Sm. Commercial <50kW	\$	0.0113	7,238	36.00	1,810	\$	20	
No Catch to Conserve - Water Heaters	Jul-07	0.25	Sm. Commercial <50kW	\$	0.0113	16,554	11.34	4,138	\$	47	
Energy AR&P	Mar-07	0.83	Residential	\$	0.0128	169,848	11.36	141,540	\$	1,812	141,540
TRCA - Cold Water Washing	Mar-07	0.83	Residentia	I \$	0.0128	112,140	3.98	93,450	\$	1,196	
TRCA - Full Dryer	Mar-07	0.83	Residentia	\$	0.0128	57,708	7.38	48,090	\$	616	
Leveraging Energy Conservation & Load Management	Dec-07	0.08	General Service >50 kW	\$	2.2783	1,408,552	372.35	28	\$	848	331
MECO - Building Automation	Dec-07	0.08	General Service >50 kW	\$	2.2783	-	41.35	3	\$	94	
MECO - Gas Fired Dehumidifier	Dec-07	0.08	General Service >50 kW	\$	2.2783	210,084	86.00	7	\$	196	
MECO - Lighting Retrofits	Dec-07	0.08	General Service >50 kW	\$	2.2783	40,320	9.00	1	\$	21	
MECO - Retirement Program	Dec-07	0.08	General Service >50 kW	\$	2.2783	1,033,944	235.00	20	\$	535	
Home Depot	Jun-07	0.08	General Service >50 kW	\$	2.2783	19,178	1.00	0	\$	2	
Load Control (DR) >50 kW	Nov-07	0.167	General Service >50 kW	\$	2.2783	-	5,000.00	833	\$ 2	22,783	10,000
Enershift	Nov-07	0.167	General Service >50 kW	\$	2.2783	-					
Design Advisory >50 kW	Nov-07		General Service >50 kW	\$	2.2783	1,937,313	361.12	89.83	\$	2,456	1,078
PBIP - Blue Power Distribtuion Energy Corp.	Feb-07	0.83	General Service >50 kW	\$	2.2783	150,278	32.12	26.77	\$	732	
PBIP - Central Canadian Glass	Aug-07	0.417	General Service >50 kW	\$	2.2783	138,107	32.90	13.71	\$	375	
PBIP - Gracious Living Corp.	Nov-07	0.167	General Service >50 kW	\$	2.2783	122,456	14.00	2.33	\$	64	
Limited	Nov-07	0.167	General Service >50 kW	\$	2.2783	14,907	4.90	0.82	\$	22	
PBIP - Norampac - Leaside Division	Nov-07	0.167	General Service >50 kW	\$	2.2783	886,117	101.50	16.92	\$	462	
PBIP - Powerstream Inc.	Nov-07	0.167	General Service >50 kW	\$	2.2783	268,540	103.60	17.27	\$	472	
PBIP - Prospec MFG Inc.	Nov-07	0.167	General Service >50 kW	\$	2.2783	60,486	16.80	2.80	\$	77	
PBIP - TYCOS Tool & Die	Nov-07	0.167	General Service >50 kW	\$	2.2783	296,421	55.30	9.22	\$	252	
Distributed Energy	n/a	1	General Service >50 kW	\$	2.2783	n/a	n/a	n/a		n/a	
TOTAL									\$	34,721	696,963

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Table 8A - 2005 SSM Calculation

				TRC Input	S		Program S	avings			Ho	rizon TRC Results (	NPV)	•
Program	Program Start Date	Rate Class	Participants/P rojects	Freeridershi p	Utility Program Costs (net of incentives)	kWh S	avings	Mthly kW	Savings	Customer Equipment Costs (net)	TRC Costs	TRC Benefits	TRC Net Benefits	SSM
						Gross	Net	Gross	Net					
Co-Branded Mass Markets	Oct 1 2005	Residential	13,603	5 to 10%	\$ 74,454	1,608,684	1,447,816	86.29	77.66	\$ 66,201	\$ 140,65	5 \$ 610,613	\$469,958	\$\$23,498
Design Advisory Audit Program	n/a	n/a	n/a	n/a	\$ 167,470	n/a	n/a	n/a	n/a	\$-	\$ 167,470	\$ -	(\$167,470)	) (\$8,373)
Residential Load Control	n/a	n/a	n/a	n/a	\$ 17,470	n/a	n/a	n/a	n/a	\$	\$ 17,47	0 \$	- (\$17,470)	) (\$873)
Social Housing	01-Oct-05	Residential	350	1%	\$ 17,470	437,500	433,125	70.00	69.30	\$ 17,500	\$ 34,97	0 \$ 113,070	\$78,100	\$3,905
Energy Audit Retrofit and Partnerships	01-Oct-05	General Service >50kW	737	10%	\$-	146,783	132,105	29.11	26.20	\$ 3,200.00	3,200.00	\$ 22,612	\$19,412	2 \$971
Leveraging Energy Conservation & Load Management	Oct 1 2005	General Service >50kW	79	30%	\$-	917,701	642,391	517.14	362.00	\$ 70,110.09	\$ 70,110	\$ 542,010	\$ 471,900.00	\$23,595
Mayor's MW Challenge	01-Oct-05	General Service >50kW	69	30%		797,701	558,391	490.00	343.00	\$ 35,055.05	\$ 35,055.05	\$ 480,155.05	\$ 445,100.00	\$22,255
Sustainable Schools	01-Oct-05	General Service >50kW	10	30%		120,000	84,000	27.14	19.00	\$ 35,055.05	\$ 35,055.05	\$ 61,855.05	\$ 26,800.00	\$1,340
CI&I Load Control Initiative	n/a	n/a	n/a	n/a	\$ 17,670	n/a	n/a	n/a	n/a	\$	\$ 17,67	0 \$	- (\$17,670)	(\$883)
Design Advisory > 50 kV	n/a	n/a	n/a	n/a	\$ 17,470	n/a	n/a	n/a	n/a	\$	\$ 17,47	0\$	- (\$17,470)	(\$873)
Distributed Energy	01-Oct-05	General Service >50kW	1	30%	\$ 175,000	195,600	136,920	978.00	684.60	\$-	\$ 175,000	\$ 148,960	(26,040)	) (\$1,302)
OTHER SUPPORT COSTS	n/a	n/a	n/a	n/a	\$-	n/a	n/a	n/a	n/a	\$	· \$	- \$	- \$0	\$0
TOTAL													\$793,250	\$39,663

#### Table 8B: 2006 CDM Reported Results

		I		TRC Inputs				Program Saving	gs				TRC Resu	lts (NPV)	
Program	Program Start Date	Rate Class	Participants/ Projects	Free Ridership	Utility Program Costs (net of incentives)	Total CDM Funding (spent in 2005)	kWh S	Savings	kW Si	avings	Customer Equipment Costs (net)	TRC Costs	TRC Benefits	TRC Net Benefits	SSM
		l I					Gross	Net	Gross	Net					
Co-Branded Mass Markets	1 1	Residential	136,974	5 to 10%	\$292,919		13,985,011	12,605,185	319.31	124.26	\$ 339,718	\$ 632,637	\$ 4,781,577	\$ 4,148,940	\$ 207,447
CFL Distribution	6-Jan-08	Residential	17,845	10%			1,863,018	1,676,716	-	-					
Keep Cool - RAC Energy Star	1-Jun-06	Residential	68	10%			5,984	5,386	6.13	5.52					
Keep Cool - RAC Retirement	1-Jun-06	Residential	I 120	10%			74,520	67,068	108.20	97.38					
EKC Spring CFLs	1-May-06	Residential	45,877	10%			4,773,567	4,296,210							
EKC Spring Timers	1-May-06	Residential	L 2,149	10%			115,433	352,973							
	1-iviay-00	Residentia	2,149	10 %			115,455	332,973		-					
EKC Spring P Stats	1-May-06	Residential	I 696	10%			392,193	136,559	31.32	28.19					
EKC Spring Fans	1-May-06	Residential	I 821	10%			151,733	103,889	10.54	9.49					
EKC Fall CFLs	1-Oct-06	Residential		10%			4,984,561	4,486,105	-	-					
EKC Fall SLED (replacing 5W incandescent)	1-Oct-06	Residential	6,413	5%			270,338	256,820	_						
EKC Fall SLED (replacing mini lights)	1-Oct-06	Residential	6,413	5%			103,275	98,111	_	-					
EKC FallI P Stats (space heating)	1-Oct-06	Residential	l <u>0,413</u>	10%			626,818	564,136	-	-					
EKC Falll P Stats (space cooling)	1-Oct-06	Residential	1,112	10%			176,911	159,220	163.12	- 16.31					
EKC P Stats - Baseboard	1-Oct-06	Residential	86	10%			126,102	113,491	-	-					
EKC Timer	1-Oct-06	Residential	1,398	10%			194,322	174,889	-	-					
EKC Motion Sensor	1-Oct-06	Residential	604	10%			126,236	113,612	-						
SLED Exchange	6-Dec-08	Residential	5,200	5%			120,200	110,012							
Design Advisory <50 kW	n/a	n/a	5,200	576											
Load Control <50 kW	1-Jul-06	Residential	250	0%	\$159,726		-	-	194.00		\$ 12,500	\$ 172,226	\$ 239,888	\$ 67,662	\$ 3,383
Social Housing	n/a	n/a		n/a	\$22,005		-	-	-	-	\$ -	\$ 22,005		(\$22,005)	(\$1,100)
CI&I > 50kW	n/a	n/a			n/a		n/a	n/a	n/a	n/a	n/	a n/a	n/a	n/a	
Energy AR&P	n/a	n/a			n/a		n/a				n/			n/a	
Leveraging Energy Conservation &		General Service													
Load Management	1-Nov-06	>50 kW	1,176		\$522,005		1,208,534	1,087,681	326.82	295.99	\$ 101,961	\$ 623,966	\$ 459,012	(\$164,954)	(\$8,248)
MECO - Fridge Bounty Fridges	1-Nov-06	General Service >50 kW	699	10%			838,800	754,920	190.31	171.28					
MECO - Fridge Bounty Freezers	1-Nov-06	General Service >50 kW	331	10%			297,900	268,110	67.59	60.83					
MECO - Fridge Bounty RACs	1-Nov-06	General Service >50 kW		10%			29,187	26,268	42.38	38.14					
	1-1100-00	General Service		10%			23,107	20,200	42.30	30.14					
MECO - MMCC Energy Audit	n/a	Seneral Service >50 kW	/ 1	n/a			n/a	n/a	n/a	n/a	n/	a n/a	a n/a	n/a	
MECO - Load Shedding	Month of Aug	General Service >50 kW	2 / 1	0%			1,749	1,749	17.00	17.00					
MECO - Conveyor Toaster	1 7	General Service													
Replacement	month of Aug	>50 kW	/ 1	0%			3,266	3,266	1.50	1.50					
MECO - Garage Lighting Retrofit	30-Jun-05	General Service >50 kW	96	10%			37,632	33,869	8.04	7.24					
Load Control >50 kW	n/a	>30 kW			\$24,653		n/a		n/a	n/a	n/	a n/a	n/a	n/a	
Design Advisory >50 kW	1-Mar-06	General Service >50 kW			\$0		3,127,319	2,298,238	697.92		\$ 868,543		\$ 1,556,143		\$ 34,380
PBIP Chiller Replacement	1-Mar-06	General Service >50 kW		10%			545,575	491,018	81.09		\$ 4,950			\$ 536,400	+ 04,000
PBIP Lighting Retrofits	1-Mar-06	General Service >50 kW		30%			2,581,744	1,807,221	616.83		\$ 863.593		\$ 1.014.793	\$ 151,200	
Distributed Energy	1-Nov-06				\$348,458		3,266,880	2,286,816	691.00				\$ 2,604,863		\$ 72,820
3,	1		<u> </u>	1			.,,	,,	1		,	. , .,	. ,,	. ,,	. ,
TOTAL	I	۹ <u></u> ۱												\$ 6,173,649	

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#### Table 8C: 2007 CDM Reported Results -SSM Calculation

				TRC Inputs			Program S	avings				TRC Result	ts (NPV)		1
Program	Program Start Date	Rate Class	Participants/Pr ojects	Freeridership	Utility Program Costs (net of incentives)	kWh S	avings	kW Sa	ivings	Customer Equipment Costs (net)	TRC Costs	TRC Benefits	TRC Net Benefits	TRC Benefit Cost Ratio	SSM
						Gross	Net	Gross	Net						
Co-Branded Mass Markets	Feb-07	Residential	9,046		\$ 353,146.00	944,402	849,962	0	0	\$16,283	\$369,429	\$206,961	(\$162,468)	0.56	(\$8,123)
CFL Distribution	Feb-07	Residential	9,046	10%	\$ 353,146.00	944,402	849,962	-	-	\$16,283	\$369,429	\$206,961	(\$162,468)	0.56	
Load Control <50kW	July 26 2007	Residential, Sm. Commercial <50kW			\$ 511,398.00	-		1,360.00	1,224.00	\$102,000	\$613,398	\$1,190,053	\$576,655	1.94	\$28,833
Programmable Thermostats	July 26 2007	Residential, Sm. Commercial	1.700	0%	\$ 511,398.00			1.360.00	1.224.00	\$102.000	\$613.398	\$1.190.053	\$576.655	1.94	ľ
Social Housing	July 20 2007	Residentia	,	1%		230.322	228.019	135.33	133.98	\$102,000	\$158.288	\$1,190,053 \$244.804	\$86,516	1.94	\$4,326
Social Housing	(Cummer Menthe	Residential	992	1%	\$ 117,703.00	230,322	228,019	135.33	133.98	\$40,585	\$158,288	\$244,804	\$86,516	1.55	\$4,326
A/C Retirment	(Summer Months Only)	Residential	54	1%	\$ .	4.320	4.277	4.43	4						
Fridge Replacement	Jul-07	Residential	450	1%		30,273	29.970	7.00	4				l	<u> </u>	
Low Flow Showerheads	Jul-07	Residential	350	1%		173.554	171.818	12.40	12					1	
Smart Thermostats	Jul-07	Residential	138	1%	φ -	22.175	21,953	111.50	110						<b>├</b> ───┤
Design Advisory <50 kW	Jul-07		1,092	10%	\$ 75.030.00	418.024	376.945	132.47	122.83	\$66.427	\$141.457	\$195.645	\$54.188	1.38	\$2,709
No Catch to Conserve - Fluorescent Lighting	Jul-07 Jul-07	Sm. Commercial <50kW	1,092	10%	\$ 75,030.00	418,024 392,392	376,945 353,153	132.47 83.87	75.49	\$47,297	ş141,437	\$190,045	ə04,168	1.38	ə∠,/U9
No Catch to Conserve - Programmable Thermostats	Jul-07	Sm. Commercial <50kW	46	0%	Ŷ	7.238	7,238	36.00	36.00	\$2.730					┝───┤
No Catch to Conserve - Programmable Thermostats	Jul-07 Jul-07	Sm. Commercial <50kW	46	10%	\$ - \$	18,393	16,554	12.60	11.34	\$2,730					┝───┤
	1-Mar	Residential	40 520	10%	\$ 263.437.00	213.640	169.848	12.00	11.34	\$18,400	\$281.617	\$42.055	(\$239.562)	0.15	(\$11.978)
Energy AR&P TRCA - Cold Water Washing	1-Mar Mar-07	Residential	240	25%	\$ 263,437.00	213,640 149.520	169,848	13.50 5.30	11	\$18,180	\$281,617	\$42,055	(\$239,562)	0.15	(\$11,978)
TRCA - Cold Water Wasning TRCA - Full Drver	Mar-07 Mar-07	Residential Residential	240	25%	<b>\$</b> -	64,120	57,708	5.30	4						
					⇒ - \$ 314.468.00		. ,		372		AD 4 4 400	A4 400 500	\$450.000		<b>*</b> ***
Leveraging Energy Conservation & Load Management	Dec-07		146	<b>30%</b>	\$ 314,468.00	2,012,217	1,408,552	531.93		\$630,000	\$944,468	\$1,400,500	\$456,032	1.48	\$22,802
MECO - Building Automation	Dec-07	General Service >50 kW				150,037	105,026	59.07	41	\$83,000	\$83,000	\$102,900	\$19,900	1.24	
MECO - Gas Fired Dehumidifier	1-Dec-07	General Service >50 kW	1	30%		300,120	210,084	123	86	\$83,000	\$83,000	\$205,900	\$122,900	2.48	┢───┘
MECO - Lighting Retrofits	Dec-07	General Service >50 kW	-	30%		57,600	40,320	13	9	\$71,000	\$71,000	\$16,600	(\$54,400)	0.23	L
MECO - Retirement Program	Dec-07	General Service >50 kW	-	30%		1,477,063	1,033,944	336	235	\$43,000	\$43,000	\$397,300	\$354,300	9.24	
Home Depot	Jun-07	General Service >50 kW	144	30%		27,397	19,178	1	1	\$350,000	\$350,000	\$677,800	\$327,800	1.94	L
Load Control (DR) >50 kW	Nov-07	General Service >50 kW	/ 1		\$ 297,715.00	-	-	5,000.00	5,000.00	\$425,000	\$722,715	\$1,185,371	\$462,656	1.64	\$23,133
Enershift	Nov-07	General Service >50 kW	' 1	0%	\$ 297,715.00	-		5,000.00	5,000.00	\$425,000	\$722,715	\$1,185,371	\$462,656	1.64	
Design Advisory >50 kW	Nov-07	General Service >50 kW	10	10 to 30%	\$ 13.429.63	2.719.882	1.937.313	506	361	542.000	555.430	677.600	\$122.170	1.22	\$6.109
PBIP - Blue Power Distribtuion Energy Corp.	Feb-07	General Service >50 kW	1	10 10 00%	φ 10,423.00	166,976	150,278	35.69	32	\$31,000	\$31,000	\$62,600	\$31,600	2.02	\$0,105
PBIP - Central Canadian Glass	Aug-07	General Service >50 kW	1	30%		197,296	138,107	47.00	33	\$61,000	\$61,000	\$76,400	\$15,400	1.25	
PBIP - Gracious Living Corp.	Nov-07	General Service >50 kW	1	30%		174,937	122,456	20.00	14	\$12,000	\$12,000	\$40,200	\$28,200	3.35	
PBIP - Hanlan Automortive Parts Distribution Limited	Nov-07	General Service >50 kW	1	30%		21,296	14,907	7.00	5	\$7,000	\$7,000	\$4,600	(\$2,400)	0.66	
PBIP - Norampac - Leaside Division	Nov-07	General Service >50 kW	1	30%		1,265,881	886,117	145.00	102	\$226,000	\$226,000	\$289,700	\$63,700	1.28	
PBIP - Powerstream Inc.	Nov-07	General Service >50 kW	1	30%		383,628	268,540	148.00	104	\$88,000	\$88,000	\$87,000	(\$1,000)	0.99	
PBIP - Prospec MFG Inc.	Nov-07	General Service >50 kW	1	30%		86,409	60,486	24.00	17	\$31,000	\$31,000	\$19,600	(\$11,400)	0.63	
PBIP - TYCOS Tool & Die	Nov-07	General Service >50 kW	1	30%		423,459	296,421	79.00	55	\$86,000	\$86,000	\$97,500	\$11,500	1.13	
ERIP - Crown Metal Packaging (1)	n/a	General Service >50 kW	1	30%		-	-		-				\$0		
ERIP - Sears Canada (1)	n/a	General Service >50 kW	1	30%		-	-		-				\$0		
ERIP - The Toronto Star (1)	n/a	, ,	r 1	30%		-	-		-				\$0		
Distributed Energy	n/a	General Service >50 kW		n/a	\$ 358,815.00	7,541,866	5,279,306	1,746.00	1,222.20	\$0	\$358,815	\$0	(\$358,815)	-	(\$17,941)
OTHER SUPPORT COSTS					\$-		-				\$0	\$0	\$0		\$0
TOTAL					\$ 2,305,141.63	14,080,353	10,249,944	9,424.92	8,447.83	\$1,840,475	\$4,145,617	\$5,142,989	\$997,372	1.24	\$49,869

#### NOTES :

1) ERIP 3 pgms are included in OPA pgms and recovered from OPA.

## Table 9: Estimated Adjustment to LRAM due to Transformer Allowance (TA)

Purpose: To reduce the LRAM by the amount of transformer allowance (TA) credit that would have been deducted from distribution revenue.

	All	customers		Custon	ners participa	ting in CDM Progr	ams
				Gross LRAM kW			
		Total billed	% of kWs	Savings by class			
2005 YEAR	TA kW (1)	kW	Receiving TA	(2)	TA kW	TA (\$/kW)	Estimated TA
GS >50 kW	2,275,430	9,077,030	25.00%	28,383	7,096	\$0.60	\$4,258
Large Use	710,765	710,765	100.00%	0	0	\$0.60	\$0
TOTAL 2005	2,986,195	9,787,795	31.00%	28,383	7,096	\$0.60	\$4,258
2006 YEAR							
GS >50 kW	2,667,474	9,379,753	28.00%	18,731	5,245	\$0.60	\$3,147
Large Use	485,755	539,544	90.00%	0	0	\$0.60	\$0
TOTAL 2006	3,153,229	9,919,297	32.00%	18,731	5,245	\$0.60	\$3,147
2007 YEAR							
GS >50 kW	2,982,390	10,077,299	30.00%	11,409	3,423	\$0.60	\$2,054
Large Use	86,879	86,953	100.00%		0	\$0.60	\$0
TOTAL 2007	3,069,269	10,164,252	30.00%	11,409	3,423	\$0.60	\$2,054
GRAND TOTALS	9,208,693	29,871,344	31.00%	58,523	15,764	\$0.60	\$9,459

## NOTES:

1) The class average ratio of transformer allowance kWs /billed kWs for the year has been used to estimate transformer allowance.

2) See table 10 for details by program and customer class.

## Table 10: Transformer Allowance (TA) by Program and Customer Class

2005								
PROGRAMS	GS>50 kW Savings (1)	GS>50 TA (kW)	GS>50 TA	Large User - kW Savings	Large User TA (kW)	Large User TA	Total kW Savings	Total TA
Co-Branded Mass Markets Design Advisory Audit	0	0	\$0	0	0	\$0	0	\$0
Program	0	0	\$0	0	0	\$0	0	\$0
Residential Load Control		0	\$0	0	0	\$0	0	\$0
Social Housing	0	0	\$0	0	0	\$0	0	\$0
Energy Audit Retrofit and								
Partnerships Leveraging Energy	668	167	\$100	0	0	\$0	668	\$100
Conservation & Load	9,231	2,308	\$1,385	0	0	\$0	9,231	\$1,385
CI&I Load Control Initiative	0	0	\$0	0	0	\$0	0	\$0
Design Advisory > 50 kW	0	0	\$0	0	0	\$0	0	\$0
Distributed Energy	18,484	4,621	\$2,773	0	0	\$0	18,484	\$2,773
Total 2005	28,383	7,096	\$4,258	0	0	\$0	28,383	\$4,258

2006	GS>50 kW	GS>50	GS>50	Large User -	Large User	Large User	Total kW	
PROGRAMS	Savings (1)	TA (kW)	TA	kW Savings	TA (kW)	TA	Savings	Total TA
Co-Branded Mass Markets	0	0	\$0		0	\$0	0	\$0
Design Advisory Audit Program	0	0	\$0		0	\$0	0	\$0
Residential Load Control	0	0	\$0		0	\$0	0	\$0
Social Housing Energy Audit Retrofit and	0	0	\$0		0	\$0	0	\$0
Partnerships Leveraging Energy	0	0	\$0		0	\$0	0	\$0
Conservation & Load	3,862	1,081	\$649		0	\$0	3,862	\$649
CI&I Load Control Initiative	0	0	\$0		0	\$0	0	\$0
Design Advisory > 50 kW	8,581	2,403	\$1,442		0	\$0	8,581	\$1,442
Distributed Energy	6,288	1,761	\$1,057		0	\$0	6,288	\$1,057
Total 2006	18,731	5,245	\$3,148	0	0	\$0	18,731	\$3,148

2007								
PROGRAMS	GS>50 kW Savings (1)	GS>50 TA (kW)	GS>50 TA	Large User - kW Savings	Large User TA (kW)	Large User TA	Total kW Savings	Total TA
			<b>*</b> 0					<b>\$</b> 0
Co-Branded Mass Markets	0	0	\$0		0	\$0	0	\$0
Design Advisory Audit								
Program	0	0	\$0		0	\$0	0	\$0
Residential Load Control	0	0	\$0		0	\$0	0	\$0
Social Housing	0	0	\$0		0	\$0	0	\$0
Energy Audit Retrofit and								
Partnerships	0	0	\$0		0	\$0	0	\$0
Leveraging Energy								
Conservation & Load								
Management	331	99	\$59		0	\$0	331	\$59
CI&I Load Control Initiative	10,000	3,000	\$1,800		0	\$0	10,000	\$1,800
Design Advisory > 50 kW	1,078	323	\$194		0	\$0	1,078	\$194
Distributed Energy	0	0	\$0		0	\$0	0	\$0
5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,5,		-	+ -					
Total 2007	11,409	3,422	\$2,053	0	0	\$0	11,409	\$2,053
Transformer Allowance - 3	58,523	15,763	9,459	0	0	0	58,523	\$9,459
Year Totals	50,525	15,705	9,409	0	0	0	30,323	φ9,409

### Transformer Allowance kWs as % of total kWs Billed - see table 9

	2005	2006	2007
Transform allow. GS>50kW	25.00%	28.00%	30.00%
Transform allow. Large user	100.00%	90.00%	100.00%

## NOTES:

1) Net kW savings is the calculated gross kW savings with free-ridership kW deducted. See table 5 for details

2) Transformer allowance is calculated using current transformer allowance credit of \$0.60 per kW.

## SMART METERS

## 2 OVERVIEW

1

PowerStream has been an active participant in the Ontario Government's Smart Meter
Initiative. PowerStream is authorized to conduct discretionary metering activities,
including the installation of smart meters, under Ontario Regulation 427/06 (Smart
Meters: Discretionary Metering Activity and Procurement Principles). PowerStream set
a goal of installing 80,000 smart meters in 2007 and, in the result, exceeded this goal.

8 PowerStream is proposing the following for 2009:

9 a \$9.8M increase in rate base representing the net book value of Smart Meter
10 capital assets as of December 31, 2007;

a rate rider with a credit of \$0.19 per month for all metered customers resulting
 from the collection of amounts from the Smart Meter rate adder up to December
 31, 2007 that exceeded, in total, the actual Smart Meter costs as of December
 31, 2007; and

a new "Future Cost Offset" rate adder with a charge of \$1.04 per month for all
 metered customers to recover forecast capital expenditures and incremental
 operating costs related to Smart Meters in 2008 and 2009.

PowerStream's stranded meter costs – the remaining net book value of mechanical meters replaced with Smart Meters – were \$4.4M as of December 31, 2007. PowerStream has recorded these costs in the "Stranded Meter Costs" sub-account of Account 1555 – Smart Meter Capital and Offset Variance Account. PowerStream is not yet proposing to clear this sub-account. Power Stream has also continued to include these costs in rate base for rate-making purposes.

PowerStream does not treat the costs of smart suite metering in bulk-metered multipleunit buildings as Smart Meter costs. These costs are treated as regular fixed asset
additions and, as such, they are included in rate base; see Exhibit B, Tab 7, Schedule 1.

1

## COST RECOVERY

Capital expenditures on Smart Meters up to December 31, 2007 were \$10.1M: 82,300
installed Smart Meters at an average installed cost of \$122. PowerStream has included
\$9.8M (i.e., \$10.1M less accumulated depreciation) in rate base. This value is reflected
in the proposed distribution rates, before rate riders.

PowerStream is seeking a rate rider to clear actual Smart Meter costs as of December
31, 2007. These costs are a credit, on a net basis, because amounts collected in Smart
Meter rate adder during the 2007 rate year exceed the actual cost by \$577K. The
resultant rate rider is a monthly credit of \$0.19 for each metered customer; see Table 1
below.

PowerStream proposes to record its 2008 and 2009 capital expenditures in the Account
1555 – Smart Meter Capital and Recovery Offset Variance Account. PowerStream
intends to clear this account when its actual capital costs for both years are finalized.

PowerStream plans to install another 172,000 meters from 2008 to 2010. Forecast capital expenditures for 2008 and 2009 are respectively, \$7.0M and \$13.0M. These values have not been included in rate base; rather, they have been included in the calculation of the 2009 Smart Meter Future Cost Offset rate rider.

PowerStream is seeking a new Smart Meter Future Cost Offset rate rider for 2009 based
on forecast costs for 2008 and 2009. The resultant rate rider is a monthly charge of
\$1.04 for each metered customer.

## 21 Table 1

22

Clearing of Actual Smart Meter Costs to Dec 31/07

Summary of Actual Costs claimed in	. 4h:-			
application	ntnis	2006 Actual	2007 Actual	Total Actual
Capital Costs				
Smart meters		62,702	9.569.003	9.631.705
Computer Hardware				
Computer Software			490,200	490,200
Tools & Equipment				
Other Equipment				
Total Capital Costs		62,702	10,059,203	10,121,905
омаа				
2.1 Advanced metering communication device				
2.2 Advanced metering regional collector				
2.2 Advanced metering control computer				
2.4 Wide area network			80,519	80,519
2.5 Other AMI OM&A costs related to minimum fur	ctionality		110,000	110,000
Total OM&A Costs		-	190,519	190,519
Revenue Requirement Calculation		2006 Actual	2007 Actual	Total Actual
Net Fixed Assets				
Beginning of year			62,702	
End of year		62.702	9.809.889	
Average net fixed assets		31,351	4,967,647	
Working Capital Allowance			500 505	
Operation expense	150/	-	502,535 75.380	
Working capital allowance	15%	-	/0,380	
Smart Meter Rate Base		31,351	5,043,027	
4) Defense og Dete Dese	-			
<ol> <li>Return on Rate Base Deemed Debt times Weighted Debt ra</li> </ol>	AD9/ 8 189/	1,159	186.390	187.549
Deemed Dept times Weighted Dept ra Deemed Equity times ROE	40% 9.00%	1,139	180,390	187,549
Return on Rate Base		2.287	367,939	370.227
		1,201		
2) Operating Expenses:				
Incremental Operating expenses		-	190,519	190,519
Amortization expenses		-	312,016	312,016
Total Operating Expenses		-	502,535	502,535
Revenue Requirement before PILS (1+2)		2.287	870.474	872.762
	33%	1,127	428,741	429,868
Grossed up PILS				
Grossed up PILS Revenue Requirement for Smart Meters		3,414	1.299.215	1.302.629

Working capital allowance, debt equity ratio, weighted debt rate and allowed return on rate base from 2006 EDR

#### Rate Rider to Clear Actual Expenses to Dec 31/07:

	2006 Actual	2007 Actual	Total
Revenue Requirement (see above)	3,414	1,299,215	1,302,629
Carrying Costs - to Dec 31, 2007	(6,153)	127,991	121,838
	(2,739)	1,427,206	1,424,467
Less Smart Meter Adder Recovery: May 1/08 to Dec 31/07	(470,927)	(1,530,623)	(2,001,550)
Net to recover from (return to) customers	(473,666)	(103,417)	(577,083)

#### Rate Adder to Clear Actual Expenses to Dec 2007

Rate Adder	Metered Customers	Months	Ап	rount Recovered (returned)
\$ (D.19)	249,335	12	Ş	(568,484)

Based on December 31, 2009 metered customer numbers and returning net amount over one year.

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit I Tab 3 Schedule 3 Page 1 of 10

# SMART METER RATE CALCULATION MODEL

## **Sheet 1** Utility Information Sheet

Legend:	Input Cell	Pull-Down Menu Option	Output Cell
	From Another Sheet		To Another Sheet

Please note that this model uses MACROS. Before starting, please ensure that macros have been enabled.

Name of LDC:	PowerStream Inc.			
Licence Number:	ED-2004-0420	Smart I	Meter Grouping:	Listed
		_		
		EDR 2009 EB Number:	EB-2008-0244	
Date of Submission:	October 10, 2008	Revision:		
Version:				
<u>Contact Information</u>				
Name:	Tom Barrett			
Title:	Manager, Rates		I	
<b>Phone Number:</b>	905.532.4640			
E-Mail Address:	tom.barrett.powerstream.ca		Ī	

#### PowerStream Inc.

EB-2008-0244

Friday, October 10, 2008

## Sheet 2. Smart Meter Capital Cost and Operational Expense Data

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## Smart Meter Unit Installation Plan:

	2007 Actual					
2006	To April	2007 Actual	2008 Forecast	2009	2010	Total
-	-	82,293	57,000	51,083	36,000	226,376
-				13,807	10,841	
-				110	3,134	3,244
-	-	82,293	57,000	65,000	49,975	254,268
	-	82,293	139,293	204,293	254,268	
	-	2006 To April	2006         To April         2007 Actual           -         -         82,293           -         -         -           -         -         82,293	2006         To April         2007 Actual         2008 Forecast           -         -         82,293         57,000           -         -         -         -           -         -         82,293         57,000	2006         To April         2007 Actual         2008 Forecast         2009           -         -         82,293         57,000         51,083           -         -         13,807           -         -         110           -         -         82,293         57,000	2006         To April         2007 Actual         2008 Forecast         2009         2010           -         -         82,293         57,000         51,083         36,000           -         13,807         10,841           -         -         110         3,134           -         -         82,293         57,000         65,000         49,975

## **Capital Costs**

#### 1.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD)

1.1.1 Smart Meter	Asset Type Smart Meter	2006	2007	2007 Actual 20	008 Forecast 4,941,750 \$	2009 10,190,514 \$	2010 10,482,778 \$	Total 25,615,042
may include new meters and modules, etc.		2006	2007	2007 Actual 20	008 Forecast	2009	2010	
1.1.2 Installation Cost may include socket kits plus shipping, labour, benefits, vehicle, etc.	Smart Meter	2006	2007	2007 Actual 20	1,081,725 \$	1,859,339 <b>\$</b> 2009	1,640,233 \$ 2010	4,581,297
1.1.3a Workforce Automation Hardware may include fieldworker handhelds, barcode hardware, etc.	Comp. Hard.	2000	2001			2000	\$	-
1.1.3b Workforce Automation Software may include fieldworker handhelds, barcode hardware, etc.	Comp. Soft.	2006	2007	2007 Actual 20	008 Forecast	2009	2010 \$	-
Total Advanced Metering Communication Device (AMCD)		\$-	\$-	\$-\$	6,023,475 \$	12,049,853 \$	12,123,011 \$	30,196,339
1.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (includ	es LAN)							
1.2.1 Collectors	Smart Meter	2006	2007	2007 Actual 20	008 Forecast 268,400 \$	2009 268,400 \$	2010 144,200 \$	Total 681,000
1.2.2 Repeaters	Smart Meter	2006	2007	2007 Actual 20	008 Forecast	2009	2010	Total
may include radio licence, etc.	onder meter	2006	2007	2007 Actual 20	008 Forecast	2009	2010	Total
1.2.3 Installation may include meter seals and rings, collector computer hardware, etc.	Smart Meter						\$	-
Total Advanced Metering Regional Collector (AMRC) (includes LAN)		\$-	\$-	\$-\$	268,400 \$	268,400 \$	144,200 \$	681,000
1.3 ADVANCED METERING CONTROL COMPUTER (AMCC)								
1.3.1 Computer Hardware	Comp. Hard.	2006	2007	2007 Actual 20	008 Forecast	2009	2010 \$	Total -
1.3.2 Computer Software	Comp. Soft.	2006	2007	2007 Actual 20	008 Forecast 54,000	2009	2010	Total 54.000
	comp. con.	2006	2007	2007 Actual 20	008 Forecast	2009	پ 2010	Total
1.3.3 Computer Software Licence & Installation (includes hardware & software) may include AS/400 disc space, backup & recovery computer, UPS, etc	Comp. Soft.	2000	2001				\$	-
Total Advanced Metering Control Computer (AMCC)		\$-	\$-	\$-\$	54,000 \$	- \$	- \$	54,000

PowerStream Inc. EB-2008-0244 Friday, October 10, 2008 <b>Sheet 2. Smart Meter Capital Cost and Operational Expense</b>	Data						October 10, 20 PowerStream Ir EB-2008-02 Exhib Tat Schedule Page 3 of	nc. 44 it I o 3 e 3
1.4 WIDE AREA NETWORK (WAN) 1.4.1 Activation Fees	Comp. Soft.	2006	2007	2007 Actual	2008 Forecast	2009	2010 \$	Total -
Total Wide Area Network (WAN)		\$-	\$	\$-\$	- \$	- \$	- \$	-
1.5 OTHER AMI CAPITAL COSTS RELATED TO MINIMUM FUNCTIONA 1.5.1 Customer equipment (including repair of damaged equipment)	LITY Comp. Hard.	2006	2007	2007 Actual	2008 Forecast	2009	2010 \$	Total
1.5.2 AMI Interface to CIS	Comp. Soft.	2006	2007	2007 Actual \$	2008 Forecast 400,000 \$	2009 300,000 \$	2010 100,000 \$	Total 800,000
1.5.3 Professional Fees	Comp. Hard.	2006	2007	2007 Actual	2008 Forecast 50,000 \$	2009 50,000 \$	2010 50,000 \$	Total 150,000
1.5.4 Integration	Comp. Hard.	2006	2007	2007 Actual	2008 Forecast 48,600 \$	2009 48,600 \$	2010 48,600 \$	Total 145,800
1.5.5 Program Management	Comp. Hard.	2006	2007	2007 Actual	2008 Forecast 150,000 \$	2009 150,000 \$	2010 150,000 \$	Total 450,000
1.5.6 Other AMI Capital	Comp. Hard.	2006	2007		2008 Forecast	2009	2010	Total 108,000
Total Other AMI Capital Costs Related To Minimum Functionality		\$-	\$ - 9	3. LDC Assumpti		656,600 \$	348,600 \$	1,653,800
Total Capital Costs		\$-	\$ - 5	s - s	6,994,475 \$	12,974,853 \$	12,615,811 \$	32,585,139
O M & A 2.1 ADVANCED METERING COMMUNICATION DEVICE (AMCD) 2.1.1 Maintenance may include meter reverification costs, etc.		2006	2007	2007 Actual	2008 Forecast 250,000 \$	2009 250,000 \$	2010 250,000 \$	Total 750,000
Total Incremental AMI Operation Expenses		\$-	\$	\$ - \$	250,000 \$	250,000 \$	250,000 \$	750,000
2.2 ADVANCED METERING REGIONAL COLLECTOR (AMRC) (include: 2.2.1 Maintenance	s LAN)	2006	2007	2007 Actual	2008 Forecast 35,000 \$	2009 35,000 \$	2010 35,000 \$	Total 105,000
Total Advanced Metering Regional Collector (AMRC) (includes LAN)		\$-	\$	\$-\$	35,000 \$	35,000 \$	35,000 \$	105,000
2.3 ADVANCED METERING CONTROL COMPUTER (AMCC)		2000	2007	2007 Actual	2000 Famaaat	2000	2010	Tatal
2.3.1 Hardware Maintenance may include server support, etc		2006	2007	2007 Actual	2008 Forecast	2009	2010 \$	Total -
2.3.2 Software Maintenance may include maintenance support, etc.							\$	-
Total Advanced Metering Control Computer (AMCC)		\$-	\$-9	ş - ş	- \$	- \$	- \$	-
2.4 WIDE AREA NETWORK (WAN)		2006	2007	2007 Actual	2008 Forecast	2009	2010	Total
2.4.1 WIDE AREA NETWORK (WAN) may include serial to Ethernet hardware, etc.			\$ -	\$	127,900 -\$	177,800 -\$	197,000 -\$	246,900
Total Incremental Other Operation Expenses		\$-	\$	s - s	127,900 -\$	177,800 -\$	197,000 -\$	246,900

#### PowerStream Inc.

#### EB-2008-0244

Friday, October 10, 2008

## Sheet 2. Smart Meter Capital Cost and Operational Expense Data

2.5 OTHER AMI OM&A COSTS RELATED TO MINIMUM FUNCTIONALITY

	2006		2007		2007 Actual	2008 Fo	recast	2009	2010	Total
2.5.1 Business Process Redesign						\$	150,000			\$ 150,000
										<b>-</b>
	2006	¢	2007	T	2007 Actual			2009	2010	Total
2.5.2 Customer Communication may include project communication. etc.		\$	-			\$	100,000 \$	100,000	\$ 100,000	\$ 300,000
may include project continuincation, etc.	2006		2007		2007 Actual	2008 Fo	recast	2009	2010	Total
2.5.3 Program Management	2000		2001		2007 / 101000	200010	loodot	2000	2010	\$ -
										•
	2006		2007		2007 Actual	2008 Fo	recast	2009	2010	Total
2.5.4 Change Management		\$	-			\$	75,000 \$	75,000	\$ 75,000	\$ 225,000
may include training, etc.										
	2006	-	2007		2007 Actual	2008 Fo		2009	2010	Total
2.5.5 Administration Cost						\$	13,500 \$	13,500	\$ 13,500	\$ 40,500
	2006		2007		2007 Actual	2008 Fo	recent	2009	2010	Total
2.5.6 Other AMI Expenses	2006	¢	2007	T	2007 Actual		594.000 \$	645.750		\$ 2,535,450
		φ				φ	394,000 y	040,700	φ 1,233,700	\$ 2,335,430
	-									
Total 2.5 Other AMI OM&A Costs Related To Minimum Functionality	\$	- \$	-	\$	-	\$	932,500 \$	834,250	\$ 1,484,200	\$ 3,250,950
Total O M & A Costs	¢	- \$		e	-	e 4	,345,400 \$	941,450	\$ 1,572,200	\$ 3,859,050

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#### **PowerStream Inc.** EB-2008-0244 Friday, October 10, 2008 Sheet 3. LDC Assumptions and Data

Assumptions:

1. Planned meter installations occur evenly through the year.

Year assumed January to December
 Amortization is straight line and has half year rule applied in first year

2009 EDR Data Information			
Deemed Debt (from 2009 PS future test Year Application)	60%		
Deemed Equity (from 2009 PS future test Year Rate Application)	40%		
Weighted Debt Rate (from 2009 PS future test year rate application)	5.75%		
Proposed ROE (from 2009 PS future test year Rate application)	8.40%		
Weighted Average Cost of Capital	6.81%		
Working Capital Allowance %	15.00%		
2009 EDR Total Metered Customers			
Residential	218,157		
General Service Less Than 50 kW	23,700		
Other Metered Customers	3,903		
Sum of Residential, General Service, and Large User	245,760		
	-		
Smart Meter Rate Adders	Residential	GS	and LU
2006 EDR Smart Meter Rate Adder	\$ 0.27	\$	0.27
2007 EDR Smart Meter Rate Adder	\$ 0.73	\$	0.73
2008 EDR Smart Meter Rate Adder	\$ 1.21	\$	1.21
2009 EDR Smart Meter Rate Adder	<b>\$</b> -	\$	-
2010 EDR Smart Meter Rate Adder	<b>\$</b> -	\$	

2009 EDR Tax Rate

Corporate Income Tax Rate (from 2009 PS future test year rate application)

#### Capital Data

Capital Data:	2006 Actual	2	007 Actual	20	007 Estimate	20	08 Forecast	2009	2010	Total
Smart Meter	\$ -	\$	-	\$	-	\$	6,291,875	\$ 12,318,253	\$ 12,267,211	\$ 30,877,339
Computer Hardware	\$ -	\$	-	\$	-	\$	248,600	\$ 356,600	\$ 248,600	\$ 853,800
Computer Software	\$ -	\$	-	\$	-	\$	454,000	\$ 300,000	\$ 100,000	\$ 854,000
Tools & Equipment	\$ -	\$	-	\$	-	\$	-	\$ -	\$ -	\$ -
Other Equipment	\$ -	\$	-	\$	-	\$	-	\$ -	\$ -	\$ -
Total Capital Costs	\$ -	\$	-	\$	-	\$	6,994,475	\$ 12,974,853	\$ 12,615,811	\$ 32,585,139

33.00%

LDC Amortization Policy:	Amortization				CCA Class		CCA Rate					
Smart Meter Amortization Rate Enter Amortization Policy	15	Yea	ars		47		8 %					
Computer Hardware Amortization Rate Enter Amortization Policy	5	Yea	irs		45		<mark>45</mark> %					
Computer Software Amortization Rate Enter Amortization Policy	3	Yea	ars		45		45 %					
Tools & Equipment Amortization Rate Enter Amortization Policy	10	Yea	ars		8		20 %					
Other Equipment Amortization Rate Enter Amortization Policy	10	Yea	ars		8		20 %					
Operating Expense Data:	2006 Actual	2	007 Actual	2	2007 Estimate	2008	3 Forecast		2009		2010	Total
2.1 Advanced Metering Communication Device (AMCD)	\$ -	\$	-	\$	-	\$	250,000 \$	250	,000,	\$	250,000 \$	750,000
2.2 Advanced Metering Regional Collector (AMRC) (includes LAN)	\$ -	\$	-	\$	-	\$	35,000 \$	35	,000,	\$	35,000 \$	105,000
2.3 Advanced Metering Control Computer (AMCC)	\$ -	\$	-	\$	-	\$	- \$		-	\$	- \$	-
2.4 Wide Area Network (WAN)	\$ -	\$	-	\$	-	\$	127,900 -\$	177	,800	-\$	197,000 -\$	246,900
2.5 Other AMI OM&A Costs Related To Minimum Functionality	\$ -	\$	-	\$	-	\$	932,500 \$	834	,250	\$	1,484,200 \$	3,250,950
Total O M & A Costs	\$ -	\$	-	\$	-	\$ 1	,345,400 \$	941	,450	\$	1,572,200 \$	3,859,050
Per Meter Cost Split:	Per Meter		Installed		Investment	%	of Invest					
Smart meter including installation	\$ 121.44		254,268	\$	30,877,339		85%					
Computer Hardware Costs	\$ 3.36		254,268	\$	853,800		2%					
Computer Software Costs	\$ 3.36		254,268	\$	854,000		2%					
Tools & Equipment	\$ -		254,268	\$	-		0%					
Other Equipment	\$ -		254,268	\$	-		0%					
	15.10		054.000		0.050.050		440/					

Computer Software Costs Tools & Equipment \$ 3.36 254,268 \$ 854,000 254,268 \$ \$ --254,268 \$ Other Equipment \$ --Smart meter incremental operating expenses 15.18 254,268 \$ \$ 3,859,050 \$ 36,444,189 11% 100% Total Smart Meter Capital Costs per meter 143.33

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PowerStream Inc. EB-2008-0244 Friday, October 10, 2008 Sheet 4. Smart Meter Rate Calc

## Smart Meter Rate Calculation

Average Asset Values	2007 Estimate	2008	2009	2010
Net Fixed Assets Smart Meters Net Fixed Assets Computer Hardware Net Fixed Assets Computer Software Net Fixed Assets Tools & Equipment Net Fixed Assets Other Equipment Total Net Fixed Assets	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 3,041,073 \$ 111,870 \$ 189,167 \$ - \$ - \$ 3,342,110 \$ 3,342,110	\$ 11,826,239 \$ 359,350 \$ 427,667 \$ - \$ - \$ - \$ 12,613,256 \$ 12,613,256	\$ 22,879,146 \$ 546,310 \$ 393,000 \$ - \$ - \$ 23,818,456 \$ 23,818,456 \$ 23,818,456
Working Capital Operation Expense Working Capital 15 %	\$ - \$ - \$ -	\$ 1,345,400 \$ 201,810 \$ 201,810	\$ 941,450 \$ 141,218 \$ 141,218	\$ 1.572.200 \$ 235,830 \$ 235,830
Smart Meters included in Rate Base	\$ -	\$ 3,543,920	\$ 12,754,473	\$ 24,054,286
Return on Rate Base Deemed Debt (3. LDC Assumptions and Data) Deemed Equity (3. LDC Assumptions and Data)	60% \$ - 40% <u>\$ -</u> <u>\$ -</u>	60%         \$ 2,126,352           40%         \$ 1,417,568           \$ 3,543,920	60% \$ 7,652,684 40% \$ 5,101,789 \$ 12,754,473	60% \$ 14,432,572 40% \$ 9,621,715 \$ 24,054,286
Weighted Debt Rate (3. LDC Assumptions and Data) Proposed ROE (3. LDC Assumptions and Data) Return on Rate Base	5.75% \$ - 8.40% <u>\$ -</u> <u>\$ -</u> \$	5.75%         \$         122,265           8.40%         \$         119,076           \$         241,341         \$         241,341	5.75%         \$ 440,029           8.40%         \$ 428,550           \$ 868,580         \$ 868,580	5.75%         \$ 829,873           8.40%         \$ 808,224           \$ 1,638,097         \$ 1,638,097
Operating Expenses Incremental Operating Expenses(3. LDC Assumptions and Data)	\$ -	\$ 1,345,400	\$ 941,450	\$ 1,572,200
Amortization Expenses Amortization Expenses - Smart Meters Amortization Expenses - Computer Hardware Amortization Expenses - Computer Software Amortization Expenses - Tools & Equipment Amortization Expenses - Other Equipment <b>Total Amortization Expenses</b>	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 209,729 \$ 24,860 \$ 75,667 \$ - \$ - \$ 310,256	\$ 830,067 \$ 85,380 \$ 201,333 \$ - \$ - \$ 1,116,780	\$ 1,649,582 \$ 145,900 \$ 266,000 \$ - \$ - \$ 2,063,482
Revenue Requirement Before PILs	\$ -	\$ 1,896,997	\$ 2,926,810	\$ 5,273,779
Calculation of Taxable Income Incremental Operating Expenses Depreciation Expenses Interest Expense Taxable Income For PILs	\$ - \$ - \$ - \$ -	-\$ 1,345,400 -\$ 310,256 -\$ 122,265 \$ 119,076	-\$ 1,116,780	-\$ 2,063,482
Grossed up PILs (5. PILs)	\$ -	\$ 28,909	\$ 140,490	\$ 354,971
Revenue Requirement Before PILs Grossed up PILs (5. PILs) Revenue Requirement for Smart Meters	\$ - \$ - <b>\$ -</b>	\$ 1,896,997 \$ 28,909 <b>\$ 1,925,906</b>		\$ 5.273,779 \$ 354,971 <b>\$ 5,628,751</b>
2009 Smart Meter Rate Adder Revenue Requirement for Smart Meters 2009 EDR Total Metered Customers (3. LDC Assumptions and Data) Annualized amount required per metered customer Number of months in year 2009 Smart Meter Rate Adder	\$ <u>\$ 245,760</u> <u>\$</u> <u>12</u> <b>\$</b>	\$ 1.925,906 \$ 245,760 \$ 7.84 12 \$ 0.65	\$ 245,760 \$ 12.48 12	\$ 5,628,751 <u>\$ 245,760</u> <u>\$ 22,90</u> 12 <b>\$ 1,91</b>

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## PowerStream Inc. EB-2008-0244 Friday, October 10, 2008 Sheet 5. PILs

# **PILs Calculation**

		2007 Estimate		2008		2009		2010
INCOME TAX								
Net Income	\$	-	\$	119,076	\$	428,550	\$	808,224
Amortization	\$	-	\$	310,256	\$	1,116,780	\$	2,063,482
CCA - Class 47 (8%) Smart Meters	\$	-	-\$	251,675	-\$	975,946	-\$	1,881,289
CCA - Class 45 (45%) Computers	\$	-	-\$	158,085	-\$	392,767	-\$	442,192
CCA - Class 8 (20%) Other Equipment	<mark>\$</mark> \$	-	\$	-	\$	-	\$	-
Change in taxable income	\$	-	\$	19,572	\$	176,618	\$	548,226
Tax Rate (3. LDC Assumptions and Data)		33.50%		33.50%		33.00%		33.00%
Income Taxes Payable	\$	-	\$	6,556	\$	58,284	\$	180,914
ONTARIO CAPITAL TAX								
Smart Meters	\$	-	\$	6,082,146	\$	17,570,332	\$	28,187,961
Computer Hardware	\$	-	\$	223,740	\$	494,960	\$	597,660
Computer Software	\$	-	\$	378,333	\$	477,000	\$	309,000
Tools & Equipment	\$	-	\$	-	\$	-	\$	-
Other Equipment	\$	-	\$	-	\$	-	\$	-
Rate Base	\$	-	\$	6,684,219	\$	18,542,292	\$	29,094,621
Less: Exemption	\$	-	\$	-	\$	-	\$	-
Deemed Taxable Capital	\$ \$	-	\$	6,684,219	\$	18,542,292	\$	29,094,621
Ontario Capital Tax Rate		0.285%		0.285%		0.285%		0.285%
Net Amount (Taxable Capital x Rate)	\$	-	\$	19,050	\$	52,846	\$	82,920
Gross Up								
		Payable	PIL	s Payable		s Payable		s Payable
Change in Income Taxes Payable	\$	-	\$	6,556	\$	58,284	\$	180,914
Change in OCT	\$	-	\$	19,050	\$	52,846	\$	82,920
PIL's	\$	-	\$	25,606	\$	111,129	\$	263,834

	33.	.50%		33.50%		33.50%		33.50%
	Grosse	d Up PILs	Gross	sed Up PILs	Gros	ssed Up PILs	Gro	ssed Up PILs
Change in Income Taxes Payable	\$	-	\$	9,859	\$	87,645	\$	272,052
Change in OCT	\$	-	\$	19,050	\$	52,846	\$	82,920
PIL's	\$	-	\$	28,909	\$	140,490	\$	354,971

Gross Up

Gross Up

Gross Up

Gross Up

# Smart Meter Average Net Fixed Assets

Net Fixed Assets - Smart Meters	20	007 Estimate	2008	2009	2010
Opening Capital Investment	\$	-	\$ -	\$ 6,291,875.00	\$ 18,610,128.00
Capital Investment (3. LDC Assumptions and Data)	\$	-	\$ 6,291,875.00	\$ 12,318,253.00	\$ 12,267,211.00
Closing Capital Investment	\$	-	\$ 6,291,875.00	\$ 18,610,128.00	\$ 30,877,339.00
Opening Accumulated Amortization	\$	-	\$ -	\$ 209,729.17	\$ 1,039,795.93
Amortization Year 1 (15 Years Straight Line)	\$	-	\$ 209,729.17	\$ 830,066.77	\$ 1,649,582.23
Closing Accumulated Amortization	\$	-	\$ 209,729.17	\$ 1,039,795.93	\$ 2,689,378.17
Opening Net Fixed Assets	\$	-	\$ -	\$ 6,082,145.83	\$ 17,570,332.07
Closing Net Fixed Assets	\$ \$	-	\$ 6,082,145.83	\$ 17,570,332.07	\$ 28,187,960.83
Average Net Fixed Assets	\$	-	\$ 3,041,072.92	\$ 11,826,238.95	\$ 22,879,146.45
Net Fixed Assets - Computer Hardware	20	007 Estimate	2008	2009	2010
Opening Capital Investment	\$	-	\$ -	\$ 248,600.00	\$ 605,200.00
Capital Investment (3. LDC Assumptions and Data)	\$ \$	-	\$ 248,600.00	\$ 356,600.00	\$ 248,600.00
Closing Capital Investment	\$	-	\$ 248,600.00	\$ 605,200.00	\$ 853,800.00
Opening Accumulated Amortization	\$	-	\$ -	\$ 24,860.00	\$ 110,240.00
Amortization Year 1 (5 Years Straight Line)	\$ \$	-	\$ 24,860.00	\$ 85,380.00	\$ 145,900.00
Closing Accumulated Amortization	\$	-	\$ 24,860.00	\$ 110,240.00	\$ 256,140.00
Opening Net Fixed Assets	\$	-	\$ -	\$ 223,740.00	\$ 494,960.00
Closing Net Fixed Assets	\$	-	\$ 223,740.00	\$ 494,960.00	\$ 597,660.00
Average Net Fixed Assets	\$	-	\$ 111,870.00	\$ 359,350.00	\$ 546,310.00
Net Fixed Assets - Computer Software	20	007 Estimate	2008	2009	2010
Opening Capital Investment	\$	-	\$ -	\$ 454,000.00	\$ 754,000.00
Capital Investment (3. LDC Assumptions and Data)	\$ \$	-	\$ 454,000.00	\$ 300,000.00	\$ 100,000.00
Closing Capital Investment	\$	-	\$ 454,000.00	\$ 754,000.00	\$ 854,000.00
Opening Accumulated Amortization	\$	-	\$ -	\$ 75,666.67	\$ 277,000.00
Amortization Year 1 (3 Years Straight Line)	\$	-	\$ 75,666.67	\$ 201,333.33	\$ 268,000.00
Closing Accumulated Amortization	\$	-	\$ 75,666.67	\$ 277,000.00	\$ 545,000.00
Opening Net Fixed Assets	\$	-	\$ -	\$ 378,333.33	\$ 477,000.00
Closing Net Fixed Assets	\$ \$ \$	-	\$ 378,333.33	\$ 477,000.00	\$ 309,000.00
Average Net Fixed Assets	\$	-	\$ 189,166.67	\$ 427,666.67	\$ 393,000.00

**PowerStream Inc.** 

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## Sheet 6. SM Avg Net Fixed Assets &UCC

Net Fixed Assets - Tools & Equipment	200	7 Estimate	2008	2009	2010
Opening Capital Investment	\$	- \$	- \$	- \$	-
Capital Investment (3. LDC Assumptions and Data)	\$	- \$	- \$	- \$	-
Closing Capital Investment	\$	- \$	- \$	- \$	-
Opening Accumulated Amortization	\$	- \$	- \$	- \$	-
Amortization Year 1 (10 Years Straight Line)	\$	- \$	- \$	- \$	-
Closing Accumulated Amortization	\$	- \$	- \$	- \$	-
Opening Net Fixed Assets	\$	- \$	- \$	- \$	-
Closing Net Fixed Assets	\$	- \$	- \$	- \$	-
	<b>^</b>	- \$	2	- \$	-
Average Net Fixed Assets	\$	- <b>v</b>	- ψ	Ý	
Average Net Fixed Assets Net Fixed Assets - Other Equipment		7 Estimate	2008	2009	2010
-		<b>•</b>	2008	Ť	2010
Net Fixed Assets - Other Equipment Opening Capital Investment		7 Estimate		2009	2010 - -
Net Fixed Assets - Other Equipment Opening Capital Investment Capital Investment (3. LDC Assumptions and Data)		7 Estimate		2009	2010 - - -
Net Fixed Assets - Other Equipment		7 Estimate - \$ - \$	- \$ - \$	2009 - \$ - \$	2010 - - - -
Net Fixed Assets - Other Equipment Opening Capital Investment Capital Investment (3. LDC Assumptions and Data) Closing Capital Investment	200 \$ \$	7 Estimate - \$ - \$ - \$	- \$ - \$ - \$	2009 - \$ - \$ - \$	2010 - - - - - -
Net Fixed Assets - Other Equipment Opening Capital Investment Capital Investment ( <i>3. LDC Assumptions and Data</i> ) Closing Capital Investment Opening Accumulated Amortization	200 \$ \$ \$	7 Estimate - \$ - \$ - \$ - \$	- \$ - \$ - \$	2009 - \$ - \$ - \$ - \$	2010 - - - - - - -
Net Fixed Assets - Other Equipment Opening Capital Investment Capital Investment (3. LDC Assumptions and Data) Closing Capital Investment Opening Accumulated Amortization Amortization Year 1 (10 Years Straight Line)	200 \$ \$ \$ \$ \$	7 Estimate - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- \$ - \$ - \$ - \$ - \$	2009 - \$ - \$ - \$ - \$ - \$	2010 - - - - - - -
Net Fixed Assets - Other Equipment Opening Capital Investment Capital Investment (3. LDC Assumptions and Data) Closing Capital Investment Opening Accumulated Amortization Amortization Year 1 (10 Years Straight Line) Closing Accumulated Amortization	200 \$ \$ \$ \$ \$	7 Estimate - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	- \$ - \$ - \$ - \$ - \$ - \$	2009 - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$	2010 - - - - - - - -

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## For PILs Calculation

#### UCC - Smart Meters

CCA Class 47 (8%)	2007 Estimate			2008	2009	2010		
Opening UCC	\$	-	\$	-	\$	6,040,200.00	\$	17,382,506.88
Capital Additions	\$	-	\$	6,291,875.00	\$	12,318,253.00	\$	12,267,211.00
UCC Before Half Year Rule	\$	-	\$	6,291,875.00	\$	18,358,453.00	\$	29,649,717.88
Half Year Rule (1/2 Additions - Disposals)	\$	-	\$	3,145,937.50	\$	6,159,126.50	\$	6,133,605.50
Reduced UCC	\$	-	\$	3,145,937.50	\$	12,199,326.50	\$	23,516,112.38
CCA Rate Class 47		8.0%		8.0%		8.0%		8.0%
CCA	\$	-	\$	251,675.00	\$	975,946.12	\$	1,881,288.99
Closing UCC	\$	-	\$	6,040,200.00	\$	17,382,506.88	\$	27,768,428.89

#### UCC - Computer Equipment CCA Class 45 (45%)

Opening UCC Capital Additions Computer Hardware Capital Additions Computer Software UCC Before Half Year Rule Half Year Rule (1/2 Additions - Disposals) Reduced UCC CCA Rate Class 45 CCA Closing UCC

20	007 Estimate	2008	2009	2010
\$	-	\$ -	\$ 544,515.00	\$ 808,348.25
\$	-	\$ 248,600.00	\$ 356,600.00	\$ 248,600.00
\$	-	\$ 454,000.00	\$ 300,000.00	\$ 100,000.00
\$	-	\$ 702,600.00	\$ 1,201,115.00	\$ 1,156,948.25
\$	-	\$ 351,300.00	\$ 328,300.00	\$ 174,300.00
\$	-	\$ 351,300.00	\$ 872,815.00	\$ 982,648.25
	45%	45%	45%	45%
\$	-	\$ 158,085.00	\$ 392,766.75	\$ 442,191.71
\$	-	\$ 544,515.00	\$ 808,348.25	\$ 714,756.54

## UCC - General Equipment

CCA Class 8 (20%)

Opening UCC
Capital Additions Tools & Equipment
Capital Additions Other Equipment
UCC Before Half Year Rule
Half Year Rule (1/2 Additions - Disposals)
Reduced UCC
CCA Rate Class 8
CCA
Closing UCC

2007	7 Estimate	2008	2009	2010
\$	- \$	- \$	- \$	-
\$	- \$	- \$	- \$	-
\$	- \$	- \$	- \$	-
\$	- \$	- \$	- \$	-
\$	- \$	- \$	- \$	-
\$	- \$	- \$	- \$	-
	20%	20%	20%	20%
\$	- \$	- \$	- \$	-
\$	- \$	- \$	- \$	-

# LOW VOLTAGE CHARGES

2 In its 2006 EDR Application, PowerStream included Hydro One's LV charges in Account

3 5665 – Miscellaneous General Expenses (Administrative and General Expenses). The

4 Uniform System of Accounts now specifies the following accounts for LV charges:

- 1550 LV Variance Account (Other Assets and Deferred Charges)
- 6 4075 Billed LV (Sales of Electricity)
- 4750 Charges LV (Other Power Supply Expenses)

Accordingly, PowerStream uses Account 4750 to record amounts paid to Hydro One for
LV services and Account 4075 to record the amounts billed to its customers for low
voltage services. Account 1550 is used to record the variances between Accounts 4750
and 4075.

Since Hydro One's LV charges are no longer recorded in Account 5665 they are also
excluded from PowerStream's Base Revenue Requirement. PowerStream treats Hydro
One's LV charges as a "pass-through," as prescribed by *Accounting Procedures Handbook* ("APH"), Article 220.

## 17 **PROPOSED LV CHARGES**

PowerStream is supplied from Hydro One's sub-transmission/distribution facilities that are connected to its transmission system. PowerStream is considered by Hydro One as a Sub-Transmission (ST) customer, because PowerStream is an embedded LDC; that is PowerStream receives supply "via Hydro One Distribution assets". Hydro One commenced charging new transmission rates for embedded distributors effective May 1, 2008 (interim rate order EB-2007-0681).

PowerStream's proposed LV charges are based on the 2009 forecast of LV costs of\$1,452,062. The forecast was developed in two steps:

- the historical ratio between actual LV related kW volumes and the system kW
   billed by Hydro One, applied to estimated system kW, was used to derive 2009
   LV volumes; and
- the 2009 LV cost forecast was developed by applying Hydro One 2008 proposed
   monthly charges to estimated 2009 LV volumes.

The LV forecast for 2009 has been allocated to the customer classes based on the methodology used in the 2006 EDR model. The basis for the allocation is transmission connection amounts. These amounts are allocated based on PowerStream's forecast load (kW) and consumption (kWh) for 2009 and PowerStream transmission connection approved rates for 2008 (EB-2007-0850). For the consumption-billed customer classes, the forecast 2009 consumption (kWh) was adjusted by the loss factor. The calculation is presented in Table 1 below.

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LV Charges to be Allocated			nsmission nnection Rate	Loss Factor		Allocated L\ Charges			
1,452,062		\$ per	kWh / kW		kWh	kW	\$	%	\$
Residential	\$/kWh	\$	0.0023	1.0346	2,157,054,088	0	\$4,961,224	31.7%	\$459,72
GS<50 GS>50	\$/kWh \$/kW	\$ \$	0.0021 0.8391	1.0346	859,023,233 4,058,984,780	0 10,386,671	\$1,803,949 \$8,715,456	11.5% 55.6%	\$167,16 \$807,60
Time of use	\$/kW	\$ \$	0.8670		0	0	\$0	0.0%	9
Large Use USL	\$/kW \$/kWh	ъ \$	0.9917 0.0023	1.0346	33,889,593 8,765,543	91,492 0	\$90,732 \$20,161	0.6% 0.1%	\$8,40 \$1,86
Sentinel Lighting Street Lighting	\$/kW \$/kW	\$ \$	\$ 0.7115	1.0346 1.0346	730,462 44,558,178	1,733 118,896	\$1,233 \$77,568	0.0% 0.5%	\$11 \$7,18
Total				-	7,163,005,878	10,598,793	\$15,670,323	100.0%	\$1,452,06

- 47 The calculation of PowerStream's proposed LV rates for each customer class is
- 48 presented in Table 2, below.

## Table 2: LV Rates Calculation

Total		\$ 1,452,062	7,060,331,849	10,598,793		
Street Lighting	\$/kW	\$ 7,188	43,068,024	118,896		0.0605
Sentinel Lighting	\$/kW	\$ 114	706,033	1,733		0.0659
USL	\$/kWh	\$ 1,868	8,472,398	-	0.0002	
Large Use	\$/kW	\$ 8,408	33,889,593	91,492		0.091
Time of use	\$/kW	\$ -	-	-		
GS>50	\$/kW	\$ 807,602	4,058,984,780	10,386,671		0.077
GS<50	\$/kWh	\$ 167,160	830,295,025	-	0.0002	
Residential	\$/kWh	\$ 459,723	2,084,915,995	-	0.0002	
		 diocated, p				
		_V Charge Illocated, \$	kWh	kW	\$/kWh	\$/kW
			2009		LV Ra	les

# **RETAIL TRANSMISSION RATES**

The Provincial Transmission Service (PTS) is applicable to all Transmission Customers, that is "entities that withdraw electricity directly from the transmission system in the province of Ontario" (per the Board's Ontario Uniform Transmission Rate Order). PowerStream owns a few facilities (i.e., transformer stations) that are directly connected to the Ontario transmission system, therefore, the IESO charges PowerStream the Ontario Uniform Transmission rates.

Ontario Uniform Transmission rates that are currently charged to PowerStream were in
effect as of November 1, 2007, as a result of the Board's Decision EB-2007-0759 on
Ontario Uniform Transmission Rates. Effective January 1, 2009 new Uniform
Transmission rates will be in effect, as a result of the Board's Decision EB-2008-0113.

PowerStream is supplied from Hydro One's sub-transmission/distribution facilities that are connected to its transmission system. PowerStream is considered by Hydro One as a Sub-Transmission (ST) customer, because PowerStream is an embedded LDC; that is PowerStream receives supply "via Hydro One Distribution assets". Hydro One commenced charging new RTS rates for embedded distributors effective May 1, 2008 (interim rate order EB-2007-0681).

Approximately 85% of all PowerStream's transmission costs are billed by the IESO for
Provincial Transmission Service (PTS). The remaining 15% are billed by Hydro One. A
summary of the above rates is presented in Table 1.

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2009 EDR Application

	Uniform Transmission & Hydro One RTS Rates (per kW)													
		Hydro One		IESO										
	Prior to	As of May		Prior to	As of									
	May 1/08	1/08	change, %	Jan 1/09	Jan 1/09	change, %								
Network	\$2.52	\$2.01	-20.24%	\$2.31	\$2.57	11.26%								
Line Connection	\$0.74	\$0.50	-32.43%	\$0.59	\$0.70	18.64%								
Transformation	\$1.35	\$1.38	2.22%	\$1.61	\$1.62	0.62%								

Table 1: Uniform Transmission & Hydro One RTS Rates

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As a result of the changes in the Ontario Uniform Transmission rates and the Hydro One

29 RTS rates for Sub-Transmission customers, PowerStream proposes to adjust its own

30 RTS rates charged to the customers.

## 31 RTS ADJUSTMENT METHODOLOGY

In this Application, current approved RTS rates, in effect as of May 1, 2008, have been
adjusted, using the rate adjustment methodology used in PowerStream's 2008 IRM
Application (EB-2007-0850).

The Retail Transmission Service Rates are adjusted by comparing PowerStream costs at the new uniform transmission and Hydro One RTS rates to the revenues at current RTS rates. The derived ratios for Network Service rate of 108.22%, and for Line and Transformation Connection of 104.46% were used to adjust the current rates to recover the new cost, as shown in Table 2.

In comparing costs and revenue, actual quantities for the period of May 1, 2007 to April
30, 2008 were selected, to reflect the most current load data.

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		Current R	TS Rates	Proposed	RTS Rates	
		Network	Connection	Network	Connection	
		(per kWh)	(per kWh)	(per kWh)	(per kWh)	
Energy customer						
Residential		\$ 0.0049	\$ 0.0023	0.0053	0.0024	
General Service <50kW		\$ 0.0044	\$ 0.0021	0.0048	0.0022	
USL		\$ 0.0044	\$ 0.0023	0.0048	0.0024	
Demand customer		(per kW)	(per kW)	(per kW)	(per kW)	
General Service >50kW		\$ 1.8009	\$ 0.8391	1.9489	0.876	
Large User		\$ 2.1128	\$ 0.9917	2.2864	1.0359	
Sentinel Lighting		\$ 1.3762	\$ 0.7115	1.4893	0.7432	
Street Lighting		\$ 1.3624	\$ 0.6524	1.4744	0.681	
Adjustment factors from Table	1:	 Network	Connection	Total		
Costs at new transmission rates		 \$35,880,449	\$16,224,824	\$52,105,273		
Revenue at current RTS rates		 \$33,155,846		\$48,688,293		
Adjustment factor		1.0822	1.0446	1.0702		
Transmission variance: revise	d cost and current rates:					
		 \$2,724,603	\$692,377	\$3,416,980		

# Table 2: Determination of Proposed Retail Transmission Service Rates

The proposed RTS rates represent an increase of 4.5% in the Connection Servicecomponent and of 8.2% in the Network Service component.

51 The proposed RTS rates have been included in the proposed tariff sheet in Exhibit I, Tab

52 6, Schedule 2, and used to calculate the total bill impacts, shown in Exhibit I, Tab 6, 53 Schedule 3.

JJ Schedule 3.

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# 54 VARIANCE ACCOUNTS

- 55 Powerstream is requesting to clear balances in the transmission variance accounts 1584
- and 1586 up to December 31, 2007, as explained in Exhibit E.

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit I Tab 6 Schedule 1 Page 1 of 4

# PowerStream Inc. TARIFF OF RATES AND CHARGES Effective May 1, 2008

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

EB-2007-0850

## APPLICATION

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

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

- This schedule does not contain any rates and charges relating to the electricity commodity (e.g. the Regulated Price Plan).

## **EFFECTIVE DATES**

DISTRIBUTION RATES – May 1, 2008 for all consumption or deemed consumption services used on or after that date. SPECIFIC SERVICE CHARGES – May 1, 2008 for all charges incurred by customers on or after that date.

LOSS FACTOR ADJUSTMENT – May 1, 2008 unless the distributor is not capable of prorating changed loss factors jointly with distribution rates. In that case, the revised loss factors will be implemented upon the first subsequent billing for each billing cycle.

#### SERVICE CLASSIFICATIONS

#### Residential

This classification refers to an account taking electricity at 750 volts or less where the electricity is used exclusively in a separately metered living accommodation. Customers shall be residing in single-dwelling units that consist of a detached house or one unit of a semi-detached, duplex, triplex or quadruplex house, with a residential zoning. Separately metered dwellings within a town house complex or apartment building also qualify as residential customers.

Multi-unit residential establishments such as apartment buildings supplied through one service (bulk metered) shall be classified as general service.

#### General Service Less Than 50 kW

This classification refers to a non residential account taking electricity at 750 volts or less whose monthly average peak demand is less than, or is forecast to be less than, 50 kW.

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

This classification refers to a non residential account whose monthly average peak demand is equal to or greater than, or is forecast to be equal to or greater than, 50 kW but less than 5,000 kW.

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

This classification refers to a non residential account whose monthly average peak demand is equal to or greater than, or is forecast to be equal to or greater than, 50 kW but less than 5,000 kW. Usage is measured by a time of use meter, which is a device that measures and records electrical usage during pre-specified periods of the day cumulatively over a meter reading period. This legacy classification refers to two accounts located in Markham only.

# **PowerStream Inc.** TARIFF OF RATES AND CHARGES Effective May 1, 2008

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

EB-2007-0850

#### Large Use

This classification refers to an account whose monthly average peak demand is equal to or greater than, or is forecast to be equal to or greater than, 5,000 kW.

#### **Unmetered Scattered Load**

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

#### Sentinel Lighting

This classification refers to an unmetered lighting load supplied to a sentinel light.

#### Street Lighting

This classification applies to an account for roadway lighting with a Municipality, Regional Municipality, Ministry of Transportation and private roadway lighting operation, controlled by photo cells. The consumption for these customers will be based on the calculated connected load times the required lighting times established in the approved OEB street lighting load shape template.

#### MONTHLY RATES AND CHARGES

#### Residential

\$	13.23
\$/kWh	0.0131
\$/kWh	0.0049
\$/kWh	0.0023
\$/kWh	0.0052
\$/kWh	0.0010
\$	0.25
\$	29.91
\$/kWh	0.0114
\$/kWh	0.0044
\$/kWh	0.0021
\$/kWh	0.0052
\$/kWh	0.0010
\$	0.25
\$	302.94
\$/kW	2.3627
\$/kW	1.8009
\$/kW	0.8391
\$/kWh	0.0052
\$/kWh	0.0010
	\$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh

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# PowerStream Inc. TARIFF OF RATES AND CHARGES Effective May 1, 2008

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

Standard Supply Service – Administrative Charge (if applicable)	\$	0.25
General Service 50 – 4,999 kW – Legacy Service Charge Distribution Volumetric Rate Retail Transmission Rate – Network Service Rate Retail Transmission Rate – Line and Transformation Connection Service Rate Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kW \$/kW \$/kWh \$/kWh \$/kWh \$	3,314.46 1.6590 1.9081 0.8670 0.0052 0.0010 0.25
Large Use Service Charge Distribution Volumetric Rate Retail Transmission Rate – Network Service Rate – Interval Metered Retail Transmission Rate – Line and Transformation Connection Service Rate – Interval Metered Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kW \$/kW \$/kWh \$/kWh \$/kWh \$	8,979.30 1.3036 2.1128 0.9917 0.0052 0.0010 0.25
Unmetered Scattered Load Service Charge (per connection) Distribution Volumetric Rate Retail Transmission Rate – Network Service Rate Retail Transmission Rate – Line and Transformation Connection Service Rate Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$	14.35 0.0114 0.0044 0.0023 0.0052 0.0010 0.25
Sentinel Lighting Service Charge Distribution Volumetric Rate Retail Transmission Rate – Network Service Retail Transmission Rate – Line and Transformation Connection Service Rate Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kW \$/kW \$/kWh \$/kWh \$/kWh	2.01 6.0842 1.3762 0.7115 0.0052 0.0010 0.25
Street Lighting Service Charge (per connection) Distribution Volumetric Rate Retail Transmission Rate – Network Service Rate Retail Transmission Rate – Line and Transformation Connection Service Rate Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kW \$/kW \$/kW \$/kWh \$/kWh \$	0.84 3.4686 1.3624 0.6524 0.0052 0.0010 0.25

2009 EDR Application

# **PowerStream Inc. TARIFF OF RATES AND CHARGES** Effective May 1, 2008

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

EB-2007-0850

141 142	Specific Service Charges		
11111111111111111111111111111111111111	Customer Administration Arrears certificate Statement of account Duplicate invoices for previous billing Request for other billing information Easement letter Income tax letter Account history Returned cheque (plus bank charges) Legal letter charge Account set up charge/change of occupancy charge (plus credit agency costs if applicable) Special meter reads	\$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$ \$\$	15.00 15.00 15.00 15.00 15.00 15.00 15.00 15.00 30.00 30.00
1556 1557 15589 1550 1661 1663	Meter dispute charge plus Measurement Canada fees (if meter found correct) Non-Payment of Account Late Payment - per month Late Payment - per annum Collection of account charge – no disconnection Disconnect/Reconnect Charges - At Meter During Regular Hours Disconnect/Reconnect Charges - At Meter After Hours	\$ % \$ \$ \$	30.00 1.50 19.56 30.00 65.00 185.00
165 1666 1667 1689 169 170	Specific Charge for Access to the Power Poles – per pole/year Temporary service install & remove – overhead – no transformer Allowances Transformer Allowance for Ownership - per kW of billing demand/month Primary Metering Allowance for transformer losses – applied to measured demand and energy	\$ \$ \$/kW %	22.35 500.00 (0.60) (1.00)
171 172 173 174 175 176 177	LOSS FACTORS Total Loss Factor – Secondary Metered Customer < 5,000 kW Total Loss Factor – Secondary Metered Customer > 5,000 kW Total Loss Factor – Primary Metered Customer < 5,000 kW Total Loss Factor – Primary Metered Customer > 5,000 kW	1.0368 1.0145 1.0265 1.0045	

178 179

# PowerStream Inc. PROPOSED TARIFF OF RATES AND CHARGES Effective May 1, 2009

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

EB-2008-0244

## APPLICATION

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

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

- This schedule does not contain any rates and charges relating to the electricity commodity (e.g. the Regulated Price Plan).

## **EFFECTIVE DATES**

DISTRIBUTION RATES – May 1, 2009 for all consumption or deemed consumption services used on or after that date. SPECIFIC SERVICE CHARGES – May 1, 2009 for all charges incurred by customers on or after that date. LOSS FACTOR ADJUSTMENT – May 1, 2009 unless the distributor is not capable of prorating changed loss factors jointly

with distribution rates. In that case, the revised loss factors will be implemented upon the first subsequent billing for each billing cycle.

### SERVICE CLASSIFICATIONS

#### Residential

This classification refers to an account taking electricity at 750 volts or less where the electricity is used exclusively in a separately metered living accommodation. Customers shall be residing in single-dwelling units that consist of a detached house or one unit of a semi-detached, duplex, triplex or quadruplex house, with a residential zoning. Separately metered dwellings within a town house complex or apartment building also qualify as residential customers.

Multi-unit residential establishments such as apartment buildings supplied through one service (bulk metered) shall be classified as general service.

#### General Service Less Than 50 kW

This classification refers to a non residential account taking electricity at 750 volts or less whose monthly average peak demand is less than, or is forecast to be less than, 50 kW.

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

This classification refers to a non residential account whose monthly average peak demand is equal to or greater than, or is forecast to be equal to or greater than, 50 kW but less than 5,000 kW.

#### Large Use

This classification refers to an account whose monthly average peak demand is equal to or greater than, or is forecast to be equal to or greater than, 5,000 kW.

#### **Unmetered Scattered Load**

This classification refers to an account taking electricity at 750 volts or less whose average monthly peak demand is less than, or is forecast to be less than, 50 kW and the consumption is unmetered. Such connections include cable TV power packs, bus

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit I Tab 6 Schedule 2 Page 2 of 4

# PowerStream Inc. PROPOSED TARIFF OF RATES AND CHARGES Effective May 1, 2009

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

EB-2008-0244

shelters, telephone booths, traffic lights, railway crossings, etc. The customer will provide detailed manufacturer information/ documentation with regard to electrical demand/consumption of the proposed unmetered load.

#### Sentinel Lighting

This classification refers to an unmetered lighting load supplied to a sentinel light.

#### Street Lighting

This classification applies to an account for roadway lighting with a Municipality, Regional Municipality, Ministry of Transportation and private roadway lighting operation, controlled by photo cells. The consumption for these customers will be based on the calculated connected load times the required lighting times established in the approved OEB street lighting load shape template.

## MONTHLY RATES AND CHARGES

#### Residential Service Charge \$ 13.34 **Distribution Volumetric Rate** \$/kWh 0.0140 LRAM/SSM Rider \$/kWh 0.0002 Regulatory Asset recovery \$/kWh (0.0019) Retail Transmission Rate - Network Service Rate \$/kWh 0.0053 Retail Transmission Rate - Line and Transformation Connection Service Rate \$/kWh 0.0024 Wholesale Market Service Rate \$/kWh 0.0052 Rural Rate Protection Charge \$/kWh 0.0010 Standard Supply Service – Administrative Charge (if applicable) \$ 0.25 General Service Less Than 50 kW Service Charge \$ 29.55 Distribution Volumetric Rate \$/kWh 0.0124 LRAM/SSM Rider \$/kWh 0.0001 Regulatory Asset recovery \$/kWh (0.0019)Retail Transmission Rate - Network Service Rate \$/kWh 0.0048 Retail Transmission Rate - Line and Transformation Connection Service Rate \$/kWh 0.0022 Wholesale Market Service Rate \$/kWh 0.0052 **Rural Rate Protection Charge** \$/kWh 0.0010 Standard Supply Service - Administrative Charge (if applicable) 0.25 \$ General Service 50 to 4,999 kW Service Charge 302.58 \$ **Distribution Volumetric Rate** \$/kW 2.7568 LRAM/SSM Rider \$/kW 0.0282 Regulatory Asset recovery \$/kW (0.8029)Retail Transmission Rate - Network Service Rate \$/kW 1.9489 Retail Transmission Rate - Line and Transformation Connection Service Rate \$/kW 0.8765 Wholesale Market Service Rate \$/kWh 0.0052 **Rural Rate Protection Charge** \$/kWh 0.0010 Standard Supply Service - Administrative Charge (if applicable) \$ 0.25

Filed: October 10, 2008 PowerStream Inc. EB-2008-0244 Exhibit I Tab 6 Schedule 2 Page 3 of 4

# PowerStream Inc. PROPOSED TARIFF OF RATES AND CHARGES Effective May 1, 2009

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

	approved schedules of Rales, Charges and Loss Factors	-	
5	Large Use	E	B-2008-0244
	Service Charge Distribution Volumetric Rate LRAM/SSM Rider Regulatory Asset recovery Retail Transmission Rate – Network Service Rate – Interval Metered Retail Transmission Rate – Line and Transformation Connection Service Rate – Interval Metered Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kW \$/kW \$/kW \$/kW \$/kWh \$/kWh \$	3,978.94 0.4686 0.0000 (1.1177) 2.2864 1.0359 0.0052 0.0010 0.25
	Unmetered Scattered Load Service Charge (per connection) Distribution Volumetric Rate Regulatory Asset recovery Retail Transmission Rate – Network Service Rate Retail Transmission Rate – Line and Transformation Connection Service Rate Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kWh \$/kWh \$/kWh \$/kWh \$/kWh \$	14.35 0.0141 0.0011 0.0048 0.0024 0.0052 0.0010 0.25
	Service Charge Distribution Volumetric Rate Regulatory Asset recovery Retail Transmission Rate – Network Service Retail Transmission Rate – Line and Transformation Connection Service Rate Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kW \$/kW \$/kW \$/kWh \$/kWh \$	2.09 8.9101 (3.2643) 1.4893 0.7432 0.0052 0.0010 0.25
	Street Lighting Service Charge (per connection) Distribution Volumetric Rate Regulatory Asset recovery Retail Transmission Rate – Network Service Rate Retail Transmission Rate – Line and Transformation Connection Service Rate Wholesale Market Service Rate Rural Rate Protection Charge Standard Supply Service – Administrative Charge (if applicable)	\$ \$/kW \$/kWh \$/kW \$/kW \$/kWh \$/kWh \$/kWh	0.87 4.8335 (0.7314) 1.4744 0.6815 0.0052 0.0010 0.25

# **PowerStream Inc. PROPOSED TARIFF OF RATES AND CHARGES** Effective May 1, 2009

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

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136			
137	Customer Administration		
138	Arrears certificate	\$	15.00
139	Statement of account	Š	15.00
140	Duplicate invoices for previous billing	\$ \$	15.00
141	Request for other billing information	¢ ¢	15.00
172	Easement letter	\$ \$	15.00
175	Income tax letter	ф ¢	15.00
1/1/		¢ D	
172	Account history	<b>Þ</b>	15.00
140	Returned cheque (plus bank charges)	\$	15.00
149	Legal letter charge	\$	15.00
14/	Account set up charge/change of occupancy charge (plus credit agency costs if applicable)	\$ \$ \$ \$ \$	30.00
148	Special meter reads	\$	30.00
149	Meter dispute charge plus Measurement Canada fees (if meter found correct)	\$	30.00
1 <u>5</u> 0			
151	Non-Payment of Account		
152	Late Payment - per month	%	1.50
1 <u>5</u> 3	Late Payment - per annum	%	19.56
154	Collection of account charge – no disconnection	\$	30.00
155	Disconnect/Reconnect Charges - At Meter During Regular Hours	\$ \$	65.00
156	Disconnect/Reconnect Charges - At Meter After Hours	\$	185.00
157			
158	Specific Charge for Access to the Power Poles – per pole/year	\$	22.35
159	Temporary service install & remove – overhead – no transformer	\$	500.00
160		•	
11111111111111111111111111111111111111	Allowances		
162	Transformer Allowance for Ownership - per kW of billing demand/month	\$/kW	(0.60)
163	Primary Metering Allowance for transformer losses – applied to measured demand and energy	%	(1.00)
164		/0	(1.00)
165	LOSS FACTORS		
166	LOSSTACTORS		
165 166 167 168 169 170	Total Loop Factor - Secondary Material Customer - 5 000 kW	1.0346	
168	Total Loss Factor – Secondary Metered Customer < 5,000 kW		
160	Total Loss Factor – Secondary Metered Customer > 5,000 kW	1.0145	
170	Total Loss Factor – Primary Metered Customer < 5,000 kW	1.0244	
170	Total Loss Factor – Primary Metered Customer > 5,000 kW	1.0045	

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**Specific Service Charges** 

# BILL IMPACTS BY CUSTOMER CLASS

Bill impacts for typical customers have been calculated using the proposed rates,
including revised Low Voltage charges, the proposed Smart Meter rate adder, regulatory
assets recovery rate riders, and the LRAM/SSM rate riders. The revised Retail
Transmission Service (RTS) rates are also included. For customers on the Regulated
Price Plan (RPP), bill impacts have been calculated using the commodity prices on May
1, 2008:

- 5.0¢/kWh for the consumption below the threshold; and
- 5.9¢/kWh for the consumption above the threshold.

The threshold for the residential customers on RPP has been annualized at 800
kWh/month. The threshold for non-residential customers on RPP is 750 kWh/month.

For non-RPP customers the bill impacts were calculated using a commodity price of5.5¢/kWh for all levels of consumption.

The monthly total bill impacts for typical customers are presented in Table 1 on the next
page. The monthly impacts on the distribution portion of the bill are presented in Table 2
on the page after next.

#### Typical Bill Consumption per Demand per Class customer, kwh customer, kw Change % Change Residential 1,000 \$ (0.36) -0.3% \_ GS<50 2,000 \$ (1.34) -0.6% -GS>50 80,000 250 \$ (64.22) -0.8% Large Use 2,800,000 7,350 \$ (18,639.47) -7.6% USL 500 \$ 2.19 3.7% -Sentinel Lighting 180 \$ (0.10) -0.5% 1 **Street Lighting** 897,251 2,477 \$ 3,874.83 2.7%

## 18 Table 1: Summary of Monthly Bill Impacts for a Typical Customer – Total Bill

19

20

All bill impacts are less than 10% and, as a result, PowerStream has not developed any rate

22 mitigation measures.

# 24 Table 2: Summary of Monthly Bill Impacts for a Typical Customer – Distribution Portion

25

26

Class	Consumption per	Demand per	Typical Bill - Distribution charge						
Class	customer, kwh	customer, kw		\$ Change	% Change				
Residential	1,000	-	\$	(0.69)	-2.6%				
GS<50	2,000	-	\$	(1.96)	-3.7%				
GS>50	80,000	250	\$	(95.51)	-10.7%				
Large Use	2,800,000	7,350	\$	(19,352.71)	-104.3%				
USL	500	-	\$	1.90	9.5%				
Sentinel Lighting	180	1	\$	(0.14)	-2.8%				
Street Lighting	897,251	2,477	\$	3,483.33	5.6%				

The typical residential customer using 1,000 kWh per month would experience a \$0.69 decrease on the distribution portion of the bill (2.6%) and \$0.36 decrease in the total bill (0.3%). All customer classes, except Unmetered Scattered Load and Street Lighting, would have slight decreases in their distribution charges and total bills, due to the proposed credits in the regulatory asset rate riders.

Bill impacts are illustrated in Table 3 on the next three pages. The bill impacts for customers
with different ranges of consumption, as previously defined by the Board, are summarized in
Table 4 on the last page of this schedule.

# H

Residential

35 36

# Table 3: Monthly Bill Impacts for Typical customers

kWh kW					ss Factor reshold	1.0368 800		1.0346					
	C	Cu	rrent R	at	es			Propose	ed		IM	PACT	
Harmonized	Volume		RATE \$		CHARGE \$	Volume		RATE \$		CHARGE \$	\$	%	% of Total Bill
Monthly Service Charge	1	\$	13.23	\$	13.23	1	\$	13.34	\$	13.34	\$ 0.11	0.83%	13.19%
Distribution (kWh)	1,000	\$	0.0131	\$	13.10	1,000	\$	0.0140		14.00	\$ 0.90	6.87%	13.85%
Distribution (kW)	-	\$	-	\$	-	-	\$		\$	-	\$ -	0.00%	0.00%
LRAM / SSM adder	1,000	\$	-	\$	-	1,000	\$		\$	0.20	\$ 0.20	0.00%	0.19%
Regulatory Assets (kWh)	1,000	\$	-	\$	-	1,000	\$	(0.0019)	\$	(1.900)	\$ (1.90)	0.00%	-1.88%
Regulatory Assets (kW)		\$	-	\$	-	-	\$	; -	\$	-	\$ -	0.00%	0.00%
Sub-Total				\$	26.33		\$ 25.64		\$ 0.69	-2.62%	25.36%		
Other Charges	1,037	\$	0.0132	\$	13.69	1,035	\$	0.0132	\$	13.66	\$ (0.03)	-0.21%	13.51%
Transmission charges	1,037	\$	0.0072	\$	7.46	1,035	\$	0.0077	\$	7.97	\$ 0.50	6.72%	7.88%
Cost of Power Commodity (kWh)	800	\$	0.050	\$	40.00	800	\$	0.050	\$	40.00	\$ -	0.00%	39.56%
Cost of Power Commodity (kWh)	237	\$	0.059	\$	13.97	235	\$	0.059	\$	13.84	\$ (0.13)	-0.93%	13.69%
Total Bill before Taxes				\$	101.45				\$	101.10	\$ (0.35)	-0.34%	100%
Total Bill Including Taxes			\$	106.52				\$	106.16	\$ (0.36)	-0.34%		

#### General Service Less Than 50 kW

# kWh kW

# Loss Factor Threshold

#### 1.0368 750 1.0346

[	C	Cur	rent R	Rates Proposed							IMPACT				
Harmonized	Volume		RATE \$		CHARGE \$	Volume		RATE \$		CHARGE \$		\$	%	% of Total Bill	
Monthly Service Charge	1	\$	29.91	\$	29.91	1	\$	29.55	\$	29.55	\$	(0.36)	-1.20%	14.21%	
Distribution (kWh)	2,000	\$	0.0114	\$	22.80	2,000	\$	0.0124	\$	24.80	\$	2.00	8.77%	11.93%	
Distribution (kW)	-	\$		\$	-	-	\$	-	\$	-	\$	-	0.00%	0.00%	
LRAM / SSM adder	2,000	\$	-	\$	-	2,000	\$	0.0001	\$	0.20	\$	0.20	0.00%	0.09%	
Regulatory Assets (kWh)	2,000	\$	-	\$	-	2,000	\$	(0.0019)	\$	(3.80)	\$	(3.80)	0.00%	-1.83%	
Regulatory Assets (kW)	-	\$	-	\$	-	-	\$	-	\$	-	\$	-	0.00%	0.00%	
Sub-Total				\$	52.71				\$	50.75	-\$	1.96	-3.72%	24.41%	
Other Charges	2,074	\$	0.0132	\$	27.37	2,069	\$	0.0132	\$	27.31	\$	(0.06)	-0.21%	13.14%	
Transmission charges	2,074	\$	0.0065	\$	13.48	2,069	\$	0.0070	\$	14.48	\$	1.01	7.46%	6.97%	
Cost of Power Commodity (kWh)	750	\$	0.050	\$	37.50	750	\$	0.050	\$	37.50	\$	-	0.00%	18.04%	
Cost of Power Commodity (kWh)	1,324	\$	0.059	\$	78.09	1,319	\$	0.059	\$	77.83	\$	(0.26)	-0.33%	37.44%	
Total Bill before Taxes				\$	209.15				\$	207.88	\$	(1.27)	-0.61%	100%	
Total Bill Including Taxes	Total Bill Including Taxes \$				219.61				\$	218.27	\$	(1.34)	-0.61%		

General Service 50 to 4,999 kW kWh kW 80,000

Loss Factor

Threshold

250

1.0368 750 1.0346

	0	Cur	rent R	ate	es			Propose	ed		IMPACT					
Harmonized	Volume	RATE \$		CHARGE \$		Volume	RATE \$			CHARGE \$		\$	%	% of Total Bill		
Monthly Service Charge	1	\$	302.94	\$	302.94	1	\$	302.58	\$	302.58	\$	(0.36)	-0.12%	4.23%		
Distribution (kWh)	-	\$	-	\$	-	-	\$	-	\$	-	\$	-	0.00%	0.00%		
Distribution (kW)	250	\$	2.3627	\$	590.68	250	\$	2.7568	\$	689.20	\$	98.53	16.68%	9.64%		
LRAM / SSM adder	250	\$		\$	-	250	\$	0.0282	\$	7.05	\$	7.05	0.00%	0.09%		
Regulatory Assets (kWh)	-	\$	-	\$	-	-	\$	-	\$	-	\$	-	0.00%	0.00%		
Regulatory Assets (kW)	250	\$	-	\$	-	250	\$	(0.8029)	\$	(200.73)	\$	(200.73)	0.00%	-2.81%		
Sub-Total				\$	893.62				\$	798.11	-\$	95.51	-10.69%	11.16%		
Other Charges	82,944	\$	0.0132	\$	1,094.86	82,768	\$	0.0132	\$	1,092.54	\$	(2.32)	-0.21%	15.28%		
Transmission charges	250	\$	2.6400	\$	660.00	250	\$	2.8254	\$	706.35	\$	46.35	7.02%	9.88%		
Cost of Power Commodity (kWh)	750	\$	0.055	\$	41.25	750	\$	0.055	\$	41.25	\$	-	0.00%	0.58%		
Cost of Power Commodity (kWh)	82,194	\$	0.055	\$	4,520.67	82,018	\$	0.055	\$	4,510.99	\$	(9.68)	-0.21%	63.10%		
Total Bill before Taxes		•		\$	7,210.40		•		\$	7,149.23	\$ (61.16)		-0.85%	100%		
Total Bill Including Taxes				\$	7,570.92				\$	7,506.69	\$	(64.22)	-0.85%			

# 42

Large Use

Γ	C	Curi	rent R	ate	S			Propose	ed	IMPACT					
Harmonized	Volume RATE \$				CHARGE \$	Volume		RATE \$		CHARGE \$		\$	%	% of Tota Bill	
Monthly Service Charge	1	\$	8,979.30	\$	8,979.30	1	\$	3,978.94	\$	3,978.94	\$	(5,000.36)	-55.69%	1.83%	
Distribution (kWh)	-	\$	-	\$	-	-	\$	-	\$	-	\$	-	0.00%	0.00%	
Distribution (kW)	7,350	\$	1.3036	\$	9,581.46	7,350	\$	0.4686	\$	3,444.21	\$	(6,137.25)	-64.05%	1.58%	
LRAM / SSM adder	7,350	\$		\$	-	7,350	\$		\$	-	\$	-	0.00%	0.00%	
Regulatory Assets (kWh)	-	\$	-	\$	-	-	\$	-	\$	-	\$	-	0.00%	0.00%	
Regulatory Assets (kW)	7,350	\$	-	\$	-	7,350	\$	(1.1177)	\$	(8,215.10)	\$	(8,215.10)	0.00%	-3.78%	
Sub-Total				\$	18,560.76				-\$	791.95	-\$	19,352.71	-104.27%	-0.36%	
Other Charges	2,840,600	\$	0.0132	\$	37,495.92	2,840,600	\$	0.0132	\$	37,495.92	\$	-	0.00%	17.25%	
Transmission charges	7,350	\$	3.1045	\$	22,818.08	7,350	\$	3.3223	\$	24,418.91	\$	1,600.83	7.02%	11.23%	
Cost of Power Commodity (kWh)	750	\$	0.055	\$	41.25	750	\$	0.055	\$	41.25	\$	-	0.00%	0.02%	
Cost of Power Commodity (kWh)	2,839,850	\$	0.055	\$	156,191.75	2,839,850	\$	0.055	\$	156,191.75	\$	-	0.00%	71.86%	
Total Bill before Taxes				\$	235,107.76				\$	217,355.88	\$	(17,751.88)	-7.55%	100%	
Total Bill Including Taxes				\$	246,863.14				\$	228,223.67	\$	(18,639.47)	-7.55%		

Table 3 (continued)

#### Unmetered Scattered Load kWh kW

500

Loss Factor Threshold 1.0368 **1.0346** 750

	C	Cur	rent R	ate	es		Propose	ed		IMPACT					
Harmonized	Volume	RATE \$		CHARGE \$	Volume	RATE \$		CHARGE \$		\$	%	% of Total Bill			
Monthly Service Charge	Ily Service Charge 1 \$ 14.35 \$ 14.35		1	\$ 14.35	\$	14.35	\$	-	0.00%	24.59%					
Distribution (kWh)	500	\$	0.0114	\$	5.70	500	\$ 0.0141	\$	7.05	\$	1.35	23.68%	12.08%		
Distribution (kW)	-	\$	-	\$	-	-	\$ -	\$	-	\$	-	0.00%	0.00%		
LRAM / SSM adder	500	\$	-	\$	-	500		\$	-	\$	-	0.00%	0.00%		
Regulatory Assets (kWh)	500	\$	-	\$	-	500	\$ 0.0011	\$	0.55	\$	0.55	0.00%	0.94%		
Regulatory Assets (kW)	-	\$	-	\$	-	-	\$ -	\$	-	\$	-	0.00%	0.00%		
Sub-Total				\$	20.05			\$	21.95	\$	1.90	9.48%	37.61%		
Other Charges	518	\$	0.0132	\$	6.84	517	\$ 0.0132	\$	6.83	\$	(0.01)	-0.21%	11.70%		
Transmission charges	518	\$	0.0067	\$	3.47	517	\$ 0.0072	\$	3.72	\$	0.25	7.23%	6.38%		
Cost of Power Commodity (kWh)	518	\$	0.050	\$	25.92	517	\$ 0.050	\$	25.87	\$	(0.06)	-0.21%	44.31%		
Cost of Power Commodity (kWh)	-	\$	0.059	\$	-	-	\$ 0.059	\$	-	\$	-	0.00%	0.00%		
Total Bill before Taxes				\$	56.29			\$	58.37	\$	2.08	3.70%	100%		
Total Bill Including Taxes				\$	59.10			\$	61.29	\$	2.19	3.70%			

## Table 3 (continued)

kWh kW	180 0.50				ss Factor reshold	1.0368 750		1.0346								
1	C	Cur	rent R	ate	es	Proposed					IMPACT					
Harmonized	Volume RATE \$		CHARGE \$		Volume	RATE \$			CHARGE \$		\$	%	% of Total Bill			
Monthly Service Charge	ce Charge 1.0 \$ 2.01 \$ 2.01		1.0	\$	2.09	\$	2.09	\$	0.08	3.98%	11.74%					
Distribution (kWh)	-	\$		\$	-		\$	-	\$	-	\$	-	0.00%	0.00%		
Distribution (kW)	0.5		6.0842		3.04	0.5	\$	8.9101	\$	4.46		1.41	46.45%	25.03%		
LRAM / SSM adder	0.5	\$		\$	-	0.5			\$	-	\$	-	0.00%	0.00%		
Regulatory Assets (kWh)	-	\$	-	\$	-	-	\$	-	\$	-	\$	-	0.00%	0.00%		
Regulatory Assets (kW)	0.5	\$	-	\$	-	0.5	\$	(3.2643)	\$	(1.63)	\$	(1.63)	0.00%	-9.17%		
Sub-Total				\$	5.05				\$	4.91	-\$	0.14	-2.76%	27.60%		
Other Charges	187	\$	0.0132	\$	2.46	186	\$	0.0132	\$	2.46	\$	(0.01)	-0.21%	13.81%		
Transmission charges	0.5	\$	2.0877	\$	1.04	0.5	\$	2.2325	\$	1.12	\$	0.07	6.94%	6.27%		
Cost of Power Commodity (kWh)	187	\$	0.050	\$	9.33	186	\$	0.050	\$	9.31	\$	(0.02)	-0.21%	52.31%		
Cost of Power Commodity (kWh)	-	\$	0.059	\$	-	-	\$	0.059	\$	-	\$	-	0.00%	0.00%		
Total Bill before Taxes				\$	17.89				\$	17.80	\$	(0.09)	-0.51%	100%		
Total Bill Including Taxes				\$	18.79				\$	18.69	\$	(0.10)	-0.51%	1		

#### Street Lighting

Total Bill Including Taxes

Sentinel Lighting

kWh	897,251	
kW	2,477.01	

Loss Factor Threshold 1.0368 750 **Current Rates** Proposed IMPACT RATE CHARGE RATE CHARGE % of Total Volume Volume \$ % Harmonized Bill 63,805 3.57% Monthly Service Charge 0.84 53,595.97 0.87 55,510.11 1,914.14 40.22% Distribution (kWh) 0.00% 0.00% Distribution (kW) LRAM / SSM adder 2,477 2,477 11,972.62 39.35% 0.00% 8.67% 0.00% 3.4686 8.591.75 2.477 4.8335 3.380.87 2,477 Regulatory Assets (kWh) 0.00% 0.00% 2,477 \$ 2,477 \$ (0.7314) (1,811.68) (1,811.68) Regulatory Assets (kW) 0.00% -1.31% -62,187.71 65,671.04 \$ 47.58% Sub-Total 3,483.33 5.60% \$ \$ 930,269 \$ 0.0132 \$ 12,279.56 928,295 \$ 12,253.50 \$ (26.06) 349.51 Other Charges 0.0132 \$ -0.21% 8.88% Transmission charges 2,477 2.0148 4,990.67 2,477 \$ 2.1559 5,340.18 7.00% 3.87% -\$ Cost of Power Commodity 750 \$ 0.050 \$ 37.50 750 \$ 0.050 \$ 37.50 \$ -0.00% 0.03% (kWh) Cost of Power Commodity (kWh) 929,519 \$ 0.059 54,841.64 927,545 \$ 0.059 \$ 54,725.18 \$ (116.46) -0.21% 39.65% \$ Total Bill before Taxes

134,337.08

141,053.94

\$

\$

1.0346

138,027.40 \$

144,928.77 \$

\$

\$

3,690.31

3,874.83

2.75%

2.75%

100%

4	8
4	9

# Table 4: Total Bill Impacts – Summary for Different Levels of Load / Consumption

Class	Consumption	Load	2008 Bill	2009 Bill	Difference	Bill Impact	Max	Min
	kWh	kW			\$	%		
Residential	100		\$ 22.93	\$ 23.00	\$ 0.07	0.3%	0.3%	-0.4%
	250		36.49	36.49	0.00	0.0%		
	500		59.09	58.97	(0.11)	-0.2%		
	750		81.69	81.46	(0.23)	-0.3%		
	1,000		106.52	106.16	(0.36)	-0.3%		
	1,500		156.62	156.02	(0.60)	-0.4%		
	2,000		206.72	205.87	(0.84)	-0.4%		
General Service Less Than 50 kW	1,000		121.96	121.11	(0.86)	-0.7%	-0.5%	-0.7%
	2,000		219.61	218.27	(1.34)	-0.6%		
	2,500		268.43	266.86	(1.57)	-0.6%		
	5,000		512.55	509.78	(2.77)	-0.5%		
	10,000		1,000.78	995.61	(5.16)	-0.5%		
	12,500		1,244.89	1,238.53	(6.36)	-0.5%		
General Service 50 to 4,999 kW	15,000	60	1,746.94	1,731.90	(15.04)	-0.9%	-0.7%	-1.1%
	40,000	100	3,813.18	3,786.00	(27.18)	-0.7%		
	80,000	250	7,570.92	7,506.69	(64.22)	-0.8%		
	100,000	500	10,369.03	10,250.42	(118.61)	-1.1%		
	400,000	1,000	35,269.02	35,000.67	(268.35)	-0.8%		
	1,000,000	3,000	90,321.84	89,549.04	(772.80)	-0.9%		
Large Use	2,800,000	7,350	246,863.14	228,223.67	(18,639.47)	-7.6%	-3.8%	-7.6%
	5,000,000	10,000	418,955.04	395,488.21	(23,466.83)	-5.6%		
	8,000,000	15,000	660,042.60	627,467.55	(32,575.05)	-4.9%		
	10,000,000	17,500	816,910.55	779,781.39	(37,129.17)	-4.5%		
	12,000,000	20,000	973,778.51	932,095.23	(41,683.28)	-4.3%		
	15,000,000	22,000	1,200,980.55	1,155,653.98	(45,326.57)	-3.8%		
Unmetered Scattered Load	250	0	37.08	38.18	1.09	2.9%	4.3%	2.9%
	500	0	59.10	61.29	2.19	3.7%		
	750	0	81.38	84.64	3.26	4.0%		
	1,000	0	105.84	110.19	4.35	4.1%		
	1,500	0	154.78	161.30	6.53	4.2%		
	2,000	0	203.71	212.41	8.70	4.3%		
Sentinel Lighting	60	0.30	8.81	8.80	(0.02)	-0.2%	-0.2%	-0.8%
Container Eighning	180	0.50	18.79	18.69	(0.02)	-0.2 %	0.270	0.070
	270	0.50	27.12	26.94	(0.10)	-0.5%		
	350	1.00	34.77	34.50	(0.19)	-0.7%		
Street Lighting		1					0.70/	0.70/
Street Lighting	897,251	2,477	\$ 141,053.94	\$ 144,928.77	\$ 3,874.83	2.7%	2.7%	2.7%

# 1 REVENUE-TO-COST RATIOS BY CUSTOMER CLASS

- 2 The revenue-to-cost ratios are provided in the following:
- 3 Exhibit H, Tab 1, Schedule 2

# **RATE MITIGATION MEASURES**

The total bill impacts for typical customers are below 10%. PowerStream has accordingly not developed any rate mitigation measures.

# **DISTRIBUTION RATES / REVENUE REQUIREMENT VALIDATION**

The proposed distribution rates, as presented in Exhibit I, Tab 6, Schedule 2, will allow PowerStream to recover revenue requirement for 2009 Test year, as shown in Table 1 below.

#### Rates Design - Validation

		Р	rocee	eds from dist	tribution rates			Revenue re	equire	ements		Validation				
Customer Class	ed rate (w/o M adder)	Volume	Va	riable rate	volume	Total proceeds	Distribution revenue	Low voltage charges		insf. allowance recoveries	Total	Difference	Revenue re- allocation	Other difference	Due to rounding	
Residential	\$ 12.49	218,157	\$	0.0140	2,084,915,995	\$ 61,886,235.12	\$ 61,454,178	459,723	\$	-	\$ 61,913,901	(27,666)	45,627	(73,293)	YES	
GS Less Than 50 kW	\$ 28.70	23,700	\$	0.0124	830,295,025	\$ 18,457,967.02	\$ 18,295,929	167,160	\$	-	\$ 18,463,088	(5,121)	-	(5,121)	YES	
GS 50 to 4,999 kW	\$ 301.73	3,902	\$	2.7568	10,386,671	\$ 42,762,331.78	\$ 39,437,611	807,602	\$	2,516,727	\$ 42,761,940	392	-	392	YES	
GS 50 to 4,999 kW Legacy	\$ -	-	\$	-	-	\$ -	\$ -	-	\$	-	\$ -	-	-	-		
Large Use	\$ 3,978.09	1	\$	0.4686	91,492	\$ 90,610.12	\$ 222,847	8,408	\$	22,169	\$ 253,423	(162,813)	(162,816)	3	YES	
Unmetered Scattered Load	\$ 14.35	2,121	\$	0.0141	8,472,398	\$ 484,610.91	\$ 482,918	1,868	\$	-	\$ 484,786	(175)	-	(175)	YES	
Sentinel Lighting	\$ 2.09	142	\$	8.9101	1,733	\$ 19,004.32	\$ 12,740	114	\$	-	\$ 12,854	6,150	6,150	(0)	YES	
Street Lighting	\$ 0.87	63,805	\$	4.8335	118,896	\$ 1,240,806.84	\$ 1,122,579	7,188	\$	-	\$ 1,129,767	111,040	111,039	1	YES	
Total						\$ 124,941,566.12	\$ 121,028,803	\$ 1,452,062	\$	2,538,896	\$ 125,019,760	(78,194)	-	(78,194)		