Ontario Energy Board
P.O. Box 2319
27th. Floor
2300 Yonge Street
Toronto ON M4P 1E4
Telephone: 416- 481-1967
Facsimile: 416- 440-7656
Toll free: 1-888-632-6273

Commission de l'Énergie de l'Ontario
C.P. 2319
27e étage
2300, rue Yonge
Toronto ON M4P 1E4
Téléphone; 416- 481-1967
Télécopieur: 416- 440-7656
Numéro sans frais: 1-888-632-6273

Ontario

BY E-MAIL

January 13, 2016

Attention: Ms. Kirsten Walli, Board Secretary

Dear Ms. Walli:

Re: PowerStream Inc.
Application for Rates
Board File Number EB-2015-0003

Please find attached OEB staff's submission on this application.

Original Signed By

Martin Davies
Project Advisor, Electricity Rates & Accounting

2016 ELECTRICITY DISTRIBUTION RATES

PowerStream Inc.

EB-2015-0003

ONTARIO ENERGY BOARD

STAFF SUBMISSION

January 13, 2016

INTRODUCTION

PowerStream Inc. (PowerStream or the Applicant) filed a custom incentive rate-setting (Custom IR) application (the application) for the January 2016 to December 31, 2020 period on May 22, 2015. The proposed Custom IR plan proposes rates for each of the years 2016 through 2020. Rates for the 2017 to 2020 period are subject to annual adjustments. PowerStream provided detailed revenue requirement and sales forecasts for the 2015 bridge year and the 2016 to 2020 test years.

On April 16, 2015, the potential of a four-party merger involving PowerStream, Enersource, Horizon Utilities and Hydro One Brampton was announced. PowerStream's Custom IR application is for PowerStream as a "standalone" distributor and OEB staff's comments in this submission are made on that basis.

This submission reflects observations and concerns which have arisen from OEB staff's review of the record of this proceeding and are intended to assist the OEB in evaluating the application and in setting just and reasonable rates. OEB staff has not made submissions on every proposal in the application, but only those proposals where it believes that the views of OEB staff would be useful to the OEB.

THE APPLICATION

PowerStream requested a service revenue requirement of $200 million for the 2016 test year (or a base revenue requirement of $187 million). The service revenue requirement is forecast to rise to $255 million in 2020 (or a base revenue requirement of $242 million). The 2016-2020 forecast revenue requirement is broken down in the table below as summarized from PowerStream's evidence.[1]

[1] EB-2015-0003 PowerStream Inc.*2016 Electricity Distribution Rate Application* (Application) *IRR_RRFE_2015 08 21*.

	$ millions				
	2016	**2017**	**2018**	**2019**	**2020**
OM&A Expenses	94.6	100.2	102.1	104.5	106.6
Amortization/Depreciation	47.4	51.5	54.1	57.0	60.1
Property Taxes	1.6	1.6	1.6	1.6	1.7
Income Taxes (Grossed up)	-4.7	3.4	4.9	6.0	6.2
Deemed Interest Expense	23.2	25.8	27.9	29.6	31.2
Return on Deemed Equity	37.5	40.6	43.6	46.3	48.9
Service Revenue Requirement	199.6	223.0	234.2	245.0	254.7
Revenue Offsets	12.6	12.7	12.8	12.9	13.1
Base Revenue Requirement	187.0	210.3	221.4	232.0	241.6

OVERVIEW OF OEB STAFF'S SUBMISSION

OEB staff's submission is recommending that the OEB only approve rates for PowerStream for the three-year period of 2016, 2017 and 2018, rather than the five year period from 2016 to 2020 proposed by PowerStream due to concerns about the inadequacy of PowerStream's proposed approach to productivity and other areas such as customer engagement. OEB staff is further proposing reductions in PowerStream's proposed 2016 to 2018 Test Year revenue requirements and other changes which would result in lower recoveries in the 2016 to 2018 period.

For the 2016 to 2018 Test years, OEB staff is proposing: (i) annual 15% reductions to PowerStream's proposed capital program and reductions in OM&A increases to 2.1% annually, which is the OEB's current inflation rate for each of the three years. Taken together, these two proposed reductions are estimated to reduce the 2016 revenue requirement by roughly $3.8 million or about 2%, the 2017 revenue requirement by $11.4 million or about 5% and the 2018 revenue requirement by $15.1 million or about 6.5%.

This submission is organized based on the OEB approved Issues List.

1. Custom Application

1.1 Has PowerStream responded appropriately to all relevant OEB directions from previous proceedings, including commitments from prior settlement agreements?

Background

PowerStream stated that it had no outstanding OEB directives.

Discussion and Submission

OEB staff accepts PowerStream's submission on this issue.

1.2 What actions should the OEB require PowerStream to take at or near the end of the 5-year rate term (e.g. rebasing, plan assessment, measurement of customer satisfaction)?

Background

PowerStream did not provide any actions that it believed the OEB should require it to take at or near the end of the 5-year rate term.

Discussion and Submission

OEB staff has discussed under subsequent issue sections of this submission various actions that it believes PowerStream should be required to undertake to deal with deficiencies which OEB staff believes exist in PowerStream's application. As will be discussed subsequently, OEB staff is also of the view that PowerStream's application should only be approved for three years rather than the five years proposed by PowerStream (as discussed in section 2.2 of this submission).

1.3 Do any of PowerStream's proposed rates require rate smoothing or mitigation?

Background

PowerStream's distribution and total bill impacts by customer class are summarized in the table below:

PowerStream EB-2015-0003 Rate Impacts (%)

Class	2016 - York Region		2016 - Barrie		2017		2018		2019		2020	
	Dist	Total Bill	Dist	Total Bill	Dist	Total Bill	Dist	Total Bill	Dist	Total Bill	Dist	Total Bill
Residential	14.8	9.9	14.2	9.8	9.4	2.7	1.6	0.6	-1.4	-0.2	0.0	0.1
GS<50kW	15.5	14.8	14.0	14.5	8.1	1.9	3.3	0.8	2.4	0.8	2.9	0.8
GS > 50 kW	34.4	2.8	34.1	2.8	11.4	1.3	-3.7	-0.3	4.5	0.6	3.9	0.6
Large Use	36.7	1.7	36.7	1.7	12.9	0.9	5.7	0.5	5.3	0.5	4.6	0.5
Sentinel	15.6	5.4	15.6	5.4	11.5	4.3	4.5	1.8	4.1	1.6	3.3	1.4
USL	18.7	6.4	18.7	6.4	14.1	5.4	1.7	0.8	4.4	1.9	3.8	1.8
Streetlighting	0.8	2.3	0.8	2.3	4.6	1.4	-8.7	-1.0	4.7	1.0	2.2	0.6

The OEB has established that distributors must file a mitigation plan if total bill increases exceed 10%.

OEB staff notes that starting in 2016 distributors will begin to shift rate design for residential customers toward fully fixed rates, a change which introduces some new considerations for the issue of mitigation. The OEB has established that when assessing the combined effects of the shift to fixed rates and other bill impacts associated with changes in the cost of distribution service, a utility shall evaluate the total bill impact for a residential customer at the distributor's 10th consumption percentile.

PowerStream noted that typical residential and GS<50 kW customers have total bill impacts over 10% in 2016, but that it is not proposing a rate mitigation plan because this is limited to 2016 and is due to the elimination of the Ontario Clean Energy Benefit (OCEB) and the Debt Retirement Charge, the combined effect of which cause a total bill impact of approximately 7% in 2016.

PowerStream also discussed the effects of implementing the new fixed rate design, stating that it had applied the 10% test to customers who consume much less electricity than the typical residential customer. PowerStream stated that the 10th percentile for its residential customers is at 309 kWh. The total bill impact for a York Region customer at this consumption level in 2016 is 12.4% due to the elimination of the OCEB and debt retirement charge, with the impact being below the 10% level for all of the other years.

Discussion and Submission

OEB staff submits that as all total bill impacts are below the 10% threshold, with the exception of the 2016 impacts referenced above which are transitory, there is no need for a rate mitigation plan for this application. This approach is consistent with previous OEB decisions.

The OEB's recent Horizon Utilities Corporation Decision and Order[2] stated that:

> Changes to the bill resulting from the provincial government's decision to phase out the Ontario Clean Energy Benefit and the Debt Retirement Charge are not within the scope of the evaluation. While these impacts may be appreciable, the OEB's test recognizes that these changes neither are the OEB's decision nor of a magnitude that the OEB typically has tools to mitigate, especially in an Application with a scope as narrow as this annual update.

[2] EB-2015-0075 *Decision and Order* Horizon Utilities Corporation December 10, 2015, pp. 8-9.

The recent Algoma Power Inc.[3] and Hydro One Networks Inc[4]. decisions also included similar statements.

2. Outcomes and Incentives

2.1 Does PowerStream's Custom IR Application promote and incent acceptable outcomes for existing and future customers (including for example, cost control, system reliability, service quality, and bill impacts)?

Background

PowerStream stated that in addition to its ongoing customer engagement efforts which it outlined in its Distribution System Plan (DSP), it had also developed a customer engagement process with its residential and commercial customers designed specifically to obtain feedback on the DSP.

PowerStream stated that in the spring of 2014, it had engaged Innovative Research Group Inc. (Innovative), a national research and strategy firm to assist in determining how to incorporate customer needs and preferences into the DSP.

PowerStream stated that four engagement methods were used as part of this undertaking, which were: (i) an online DSP primer, (ii) residential and GS>50 focus groups, (iii) GS<50 workshops and (iv) key accounts – presentation and feedback.

PowerStream further stated that proposed estimated bill impacts were presented for each rate class and major capital projects to provide a background for PowerStream's proposed activities for 2016 to 2020.

PowerStream stated that in general, customers accepted the proposed rate increases, but there was a concern from some business customers that it had not demonstrated that it had looked for internal efficiencies prior to going to customers for the increase. PowerStream noted that there was some discussion during focus groups of it paying for increased capital budget requirements through its profits.

PowerStream concluded that it had derived significant benefits from the enhanced level of customer engagement conducted during the DSP preparation period and stated that it

[3] EB-2015-0051 *Decision and Rate Order* Algoma Power Inc. December 10, 2015, p.10
[4] EB-2015-0079 *Decision and Order* Hydro One Networks Inc. December 22, 2015, p. 7.

valued input from customers and was extremely pleased to confirm the level of general support customers have for its plans and approach to investment.

PowerStream was asked through an interrogatory[5] to explain how its DSP reflected customer preferences identified through customer engagement. PowerStream responded that its experience with engaging customers on the development of options for the DSP was that significant time and effort was required to educate customers on the distribution system and the electricity system in general. PowerStream stated that it valued the input which it had received from customers as it had confirmed the level of general support customers have for PowerStream's plans and approach to investment. PowerStream concluded that given the level of acceptance it had received from a representative and statistically significant sample of its customers, it did not feel it necessary to deviate from its initial plan.

Discussion and Submission

OEB staff submits that while PowerStream's customer engagement efforts were adequate for its initial DSP, improvements in its approach to customer engagement should be required for its next DSP as the preparation of the current DSP did not incorporate customer input into its actual development.

OEB staff notes that this was acknowledged by PowerStream during the oral hearing during cross-examination by OEB staff[6]:

> MS. HELT: But essentially it was once the plan was ready then the engagement with the customers commenced?
>
> MR. MACDONALD: That's correct.

OEB staff further notes that PowerStream acknowledged that if the customer engagement process had commenced earlier, it may have altered the development of the DSP[7]:

> MS. HELT: And do you think it might have made a difference had you retained Innovative earlier in the process, that it may have altered the development of your DSP?

[5] EB-2015-0003 PowerStream Inc. Section B Tab 2 Schedule 1, p.44 II-2-Staff-32
[6] Transcript, Vol. 1, p.191, L11-13.
[7] Transcript, Vol. 1, p. 195, L24 to p.196, L13.

MR. MACDONALD: Yes, I do think so.

MS. HELT: And how so?

MR. MACDONALD: Given more time, we could have talked to customers more about the work we were doing. Who knows? Maybe we could have even shown them some projects in real life so they understand what we were doing.

Given the luxury of time, there could have been a lot more dialogue with customers.

MS. HELT: And better customer understanding of the projects as well?

MR. MACDONALD: Yes, I think this has been a learning experience for PowerStream, too, how much work needs to be done before we can have a meaningful discussion with customers.

Furthermore. OEB staff notes that when PowerStream did receive specific feedback on concerns from customers about one of its projects, the replacement of its CIS system, PowerStream did not deviate from its initial plans for replacement of the CIS system, as discussed below[8]:

MS. HELT: Thank you. And then the last question relates to page 12 of Board Staff's compendium, and the discussion of the specific feedback you received concerning the implementation of the new CIS system.

At lines 11 and 12, you note that some questions were unable to see the added benefit of implementing a new system. And then beginning at line 23, you state:

"There was a sense during the in-person focus group sessions that PowerStream had not made the business case for this major investment and that the perceived value of implementing this system was not shared across all customer classes. PowerStream has strengthened its business case for this expenditure."

Now, earlier on when we were referring to 2.Staff.32, which is on page 1 of the compendium, you stated:

"Given the acceptance PowerStream received from a representative and statistically significant sample of its customers, the utility did not feel it necessary to deviate from its initial plan."

[8] Transcript, Vol. 1, p. 198 L14 to p.199, L26.

> So can you just discuss why the feedback that's referred to on page 12 of the compendium wouldn't suggest a need to deviate from the initial plan?
>
> MR. MACDONALD: Well, the time of this consultation we were pretty far along with our CIS system. And this implementation of this system spanned several years, so I don't know what we really could have done differently in terms of our CIS implementation based on customer feedback. We had a 30-year-old system that we desperately needed to replace, and that was well underway.
>
> MS. HELT: So essentially the system was so far along in the development of the actual system that you did solicit customer feedback, and although it wasn't positive, you were that far along, and it was necessary that you were committed to it. Is that fair?
>
> MR. MACDONALD: That's fair, and it's also -- perhaps it's a bit harsh, but as managers of the utility there are some things that we know we have to do because we know the business, and customers may have differing views. We can't do everything based on customer suggestions or feedback, although it is valuable in many, many areas.

OEB staff submits that the above excerpts from the cross-examination of Mr. Macdonald would support the view that PowerStream's customer engagement efforts for its next DSP application should begin earlier. PowerStream should also be required to provide specific discussion as to how the information received from these engagement activities was integrated into the development of the DSP. In addition, in assessing the level and nature of spending proposed in this application, OEB staff has taken the current deficiencies in PowerStream's approach to customer engagement into account in formulating its views as to an appropriate level of capital spending arising from the DSP.

2.2 Does the Custom IR Application adequately incorporate and reflect the four outcomes identified in the RRFE Report: customer focus, operational effectiveness, public policy responsiveness and financial performance?

Background

PowerStream submitted that its application had addressed the four outcomes of the RRFE.

Customer focus was addressed by providing customers with cost effective rates and including only the necessary operating costs and capital expenditures to maintain the expected levels of service and reliability.

PowerStream stated that it strived for operational effectiveness through its Organizational Effectiveness department, participation in the Excellence Canada (Gold Level

certification) and the use of the OEB's and internal scorecards to monitor performance. PowerStream noted that it had provided details of its productivity initiatives and an analysis that demonstrates that the forecasts used in the application deliver productivity savings that exceed the X factor of 0.3% for cohort 3 to which it is assigned.

PowerStream submitted that its commitment to public policy responsiveness could be seen in its involvement in OEB and industry working groups and with government to ensure that legislated changes are effectively implemented. PowerStream noted that it actively supported renewable energy, smart grid and conservation and demand management initiatives.

Where its financial performance is concerned, PowerStream noted that it endeavoured to earn the OEB allowed return on equity which required managing its business so that efficiencies are found and sustained.

Discussion and Submission

OEB staff discusses in the following section of its submission its concerns with PowerStream's approach to productivity improvements in the application as filed and the failure of the application to incorporate adequate incentives for productivity improvements.

OEB staff submits that as a result, the application as filed does not incorporate sufficient RRFE features to achieve a central RRFE policy objective of providing sufficient incentives for continuous improvement. OEB staff notes that the OEB in its Decision on Hydro One Networks Inc.'s Custom IR application[9] expressed a similar concern and for this and other reasons only approved rates for a three-year period rather than the five years requested by the applicant.

OEB staff submits that given the similar issues arising from PowerStream's approach to productivity improvement, it would be appropriate for the OEB to approve rates for 2016, 2017 and 2018 for PowerStream at this time. This would allow PowerStream to develop more appropriate productivity measures and also to deal with the deficiencies OEB staff has identified in PowerStream's customer engagement efforts before the OEB approves rates for a full five year period.

[9] *Decision,* March 12, 2015 EB-2013-0416/EB-2014-0247 Hydro One Networks Inc., pp. 8-9.

OEB staff submits that in the event the OEB was to determine that the Application should be approved for a full five year period, an earnings sharing mechanism should be adopted as will be outlined subsequently in section 2.4 of this submission.

2.3 Does the Custom IR Application adequately account for productivity and efficiency gains in its forecasts? Does the Custom IR Application adequately include expectations for productivity and efficiency gains relative to benchmarks that are external to the company (such as the Pacific Economics Group Research, LLC)?

Background

Productivity:

PowerStream stated that to understand the OEB's expectations regarding productivity, it had considered the OEB's methodology for incorporating productivity into the Incentive Regulation rate setting framework. PowerStream noted that for the 4th Generation IR and Annual IR Index, there is an implicit productivity factor built in to the price cap IR formula of inflation less productivity, "IPI-X", which is presently set to 0. In addition, PowerStream observed that the OEB has also established stretch factors for individual distributors based on a benchmarking exercise that compares a distributor's actual total costs (capital and OM&A) to the predicted cost based on an econometric model developed by the Pacific Economics Group Research, LLC (PEG) for the OEB. PowerStream noted that it had been assigned a stretch factor of 0.3% by the OEB for both 2014 and 2015 and based on the OEB's approach under Price Cap IR, concluded that the OEB's expectation would be for it to demonstrate annual productivity savings of 0.3% or greater.

(a) Calculation of Expected OEB Productivity Savings

PowerStream converted the stretch factor of 0.3% into a revenue requirement effect by multiplying its 2013 OEB approved revenue requirement by the stretch factor which resulted in expected 2013 productivity savings of approximately $0.5 million. By extrapolating this approach out over the life of the proposed Custom IR plan, PowerStream concluded that the OEB-expected productivity savings for the 2014 to 2020 period totalled $13 million. PowerStream calculated an overachievement of its estimated versus expected productivity savings of $2.9 million for the 2014 to 2020 period, as summarized in the table below[10]:

[10] Application, Section III, Tab 1, Schedule 1, p. 94, Table F-SEC-6-2

	2014	2015	2016	2017	2018	2019	2020	Total
OEB Expected Productivity Savings	$0.5	$0.9	$1.4	$1.9	$2.3	$2.8	$3.2	$13.0
Estimated Productivity Savings	$2.5	($0.4)	($0.2)	$1.5	$2.8	$4.1	$5.6	$15.8
Over (under) achieved	**$2.0**	**($1.4)**	**($1.6)**	**($0.4)**	**$0.5**	**$1.3**	**$2.4**	**$2.9**

(b) Calculation of Estimated Productivity Savings

PowerStream's estimated productivity savings shown in the above table arose from both capital projects and OM&A. The breakdown of these savings is shown in the following table[11]:

	2014	2015	2016	2017	2018	2019	2020	Total
Capital		$0.4	$0.8	$1.2	$1.6	$2.1	$2.6	$8.6
OM&A	$2.5	($0.8)	($1.0)	$0.3	$1.2	$2.0	$3.0	$7.2
Total	**$2.5**	**($0.4)**	**($0.2)**	**$1.5**	**$2.8**	**$4.1**	**$5.6**	**$15.8**

(i) Capital Savings

PowerStream's estimated capital savings arose from one project, which is the rehabilitation of end-of-life or beyond underground cable during the 2016 to 2020 Custom IR plan term. PowerStream stated that it had managed to achieve significant savings in the costs of rehabilitating underground cable through the use of cable injection instead of replacement and based on PowerStream's experience, it had been determined that the amount of cable replacement for 2015 to 2020 could be reduced by 22 kilometres per year through cable injection. The cost savings arising from this approach constitute the capital savings shown in the above table.

PowerStream stated in response to an interrogatory[12] that cable injection was the only program included in the calculation of productivity savings from capital, although the pole reinforcement program had been discussed, but the savings from this program had not been calculated, nor included in

[11] Application, Section III, Tab 1, Schedule 1, p. 94, Table F-SEC-6-1
[12] Interrogatory Responses, Section B Tab 2 Schedule 1, p.7 II-1-Staff-13

the estimated productivity savings. PowerStream also stated that it had not attempted to measure the productivity of all capital programs.

(ii) OM&A Savings

The estimated OM&A savings of $7.2 million shown in the above table were derived from the table below, reproduced from PowerStream's evidence[13]:

				Custom IR Term				
"Status Quo" OM&A	2013 BA	2014	2015	2016	2017	2018	2019	2020
Prior year OM&A starting point	$ 83,319	$ 83,319	$ 87,911	$ 91,795	$ 95,192	$ 98,369	$ 101,081	$ 104,220
Inflation adjustment-(Table 5)		$ 1,416	$ 1,407	$ 2,019	$ 2,094	$ 2,164	$ 2,224	$ 2,293
Customer growth adjustment (Table 5)		$ 182	$ 172	$ 178	$ 187	$ 191	$ 197	$ 205
Net incremental new costs (Table6)		$ 2,994	$ 2,305	$ 1,200	$ 895	$ 356	$ 719	$ 484
"Status Quo" OM&A	$ 83,319	$ 87,911	$ 91,795	$ 95,192	$ 98,369	$ 101,081	$ 104,220	$ 107,202
Historical and Forecasted OM&A in Application	$ 81,192	$ 85,454	$ 92,558	$ 96,216	$ 98,112	$ 99,920	$ 102,195	$ 104,193
Variance/Productivity savings		$2,457	($763)	($1,024)	$257	$1,161	$2,025	$3,009

The "Variance/Productivity savings" line at the bottom of the table totals approximately $7.2 million for the years 2014 to 2020. OEB staff notes that these savings are derived by measuring the historical and forecasted OM&A in the application against the line item "Status Quo" OM&A.

The "Status Quo" OM&A is derived each year beginning in 2014 by taking the 2013 OEB approved OM&A of $83.3 million and adding three adjustments, which are: (1) Inflation Adjustment, (2) Customer Growth Adjustment and (3) Net Incremental New Costs. The assumed inflation adjustment is the annual OEB determined rate. The Customer Growth Adjustment is determined by multiplying expected customer growth by the expected effect of customer growth on OM&A. The calculation of these adjustments is shown in the table below[14]:

[13] Application, Rate Proposal Exhibit F Tab 1, p.5 Table 4.
[14] Application, Rate Proposal Exhibit F Tab 1, p.5 Table 5.

Adjustment Factors	2014	2015	2016	2017	2018	2019	2020
Inflation	1.70%	1.60%	2.20%	2.20%	2.20%	2.20%	2.20%
Customer Growth adjustment factor:							
Customer Growth (A)	1.91%	1.71%	1.69%	1.72%	1.70%	1.70%	1.72%
Customer Growth effect on OM&A (B)	11.45%	11.45%	11.45%	11.45%	11.45%	11.45%	11.45%
Customer Growth adjustment (A*B)	0.22%	0.20%	0.19%	0.20%	0.19%	0.19%	0.20%

Net Incremental New Costs are summarized in the table below[15]:

			Custom IR Term					
Net incremental new costs	2014	2015	2016	2017	2018	2019	2020	2016-2020 Total
New CIS incremental costs	$1,349	$1,310	($122)	($158)	($182)	$1	$1	($460)
Vegetation management	$299	$300	$614	$526	$531	$536	$542	$2,749
Compliance	$262	$185	$132	$18	$18	$18	$19	$205
Risk Management	$330	$757	$518	$485	($36)	$138	($103)	$1,002
Customer expectation	$754	($248)	$58	$25	$25	$25	$25	$158
Total	**$2,994**	**$2,305**	**$1,200**	**$895**	**$356**	**$719**	**$484**	**$3,654**

PowerStream stated that the net incremental cost table above tied to the OM&A cost drivers in Appendix 2-JB, except that it did not include the compensation, growth or asset management cost drivers as those were captured in the inflation and customer growth adjustment factors above.

Discussion and Submission

OEB staff notes that PowerStream's service revenue requirement is forecast to rise from $199.6 million in the 2016 Test year to $254.7 million in the 2020 Test year. OEB staff further notes that PowerStream's stated productivity savings for the 2014 to 2020 period of $2.9 million are very small when compared to the cumulative service revenue requirement in the same period of over $1.5 billion.

OEB staff is also of the view that the approach to deriving the calculations of the savings is very subjective in nature and should not give the OEB the same degree of confidence that real productivity savings are being achieved as would be the case with the

[15] Application, Rate Proposal Exhibit F Tab 1, p.5 Table 6.

application of a stretch factor. PowerStream acknowledges that only one capital project was used to determine the capital productivity savings and that other capital projects were not assessed in a similar fashion and that it would have been a difficult task to assess all the capital projects in a similar fashion. OEB staff further notes that similar concerns would apply to the calculation of the "Status Quo" OM&A that is used to determine the OM&A productivity savings, particularly with respect to the 'net incremental new costs' adjustment component. The selection criteria for OM&A cost drivers to be incorporated in, or excluded from this adjustment is not entirely clear to OEB staff and appears in any event to contain a significant element of subjectivity.

OEB staff would further note that it is not suggesting that PowerStream will either achieve sufficient productivity or insufficient productivity improvements in the Custom IR period if its approach to productivity is accepted by the OEB. OEB staff's concern is that the absence of an externally applied annual productivity adjustment, would imply that it would be much more difficult for both the OEB and stakeholders to have confidence that PowerStream is in fact achieving sufficient productivity gains given the highly subjective nature of the approach which it is using.

Background

Benchmarking:

PowerStream noted that there can be a range of benchmarking techniques to provide an indication of the reasonableness of a distributor's costs.

PowerStream stated that it has been common for electricity distributors to assess their costs by employing internal benchmarking measures and by keeping a watch on industry standards. PowerStream further stated that its DSP provides information on the measures it uses to monitor quality and drive continuous improvement in its distribution system planning and implementation work.

PowerStream stated that in the context of industry standards, it had paid close attention to the OEB's scorecard since its introduction and strives to ensure that it meets OEB standards.

PowerStream noted that prior to the implementation of the RRFE, the OEB had used as a standard for cost comparison, peer-to-peer benchmarking, based on the OEB's annual

year book. With implementation of the RRFE, the OEB determined that the Pacific Economic Group ("PEG") econometric model ("the PEG model") would be used for benchmarking distributor cost performance and for informing the OEB's annual assignment of stretch factors to distributors

PowerStream observed that while the PEG model is meant to replace the peer-to-peer method, it was PowerStream's observation that parties to rates proceedings continued to be interested in the peer-to-peer benchmarking approach so PowerStream provided discussion of both methods in its application.

Econometric Benchmarking (PEG Model)

PowerStream stated that it had used the PEG model to derive future values of predicted costs and had compared them to its actual and forecasted costs using PEG's definitions of capital and OM&A costs. The results of this exercise were as shown in the table below[16]:

Year	Predicted Total Costs	Actual Total Costs	Actual OM&A	Actual Capital
2010	$212,561	$196,831	$51,332	$145,499
2011	218,280	204,310	54,882	149,428
2012	216,915	207,288	58,480	148,808
2013	219,646	212,560	60,250	152,309
2014	234,155	236,035	65,541	170,494
2015	241,911	251,926	69,674	182,253
2016	250,838	267,255	70,309	196,946
2017	260,667	281,330	72,465	208,866
2018	274,017	297,427	75,437	221,990
2019	288,558	312,578	77,734	234,844
2020	303,387	327,274	79,734	247,539

PowerStream noted that the results of the analysis showed that its forecasted costs remained within ±10% of Predicted Costs, which coincided with the OEB's criteria for Stretch factor, Group 3 which is where PowerStream currently resides.

However, PowerStream stated that the predicted cost model is designed to compare a utility's costs to the predicted costs for a "typical" utility. PowerStream stated that it is

[16] Rate Proposal Exhibit F Tab 2, p.2.

currently experiencing different operating conditions than typical in the industry and these differences may not be fully reflected in the historical data used to calculate predicted and actual costs, which means the PEG model will not accurately reflect these cost pressures. PowerStream characterized its different operating conditions as including:

- Substantial increases in the capital costs related to sustainment of assets; replacement of capital stock and distribution infrastructure, some of which was financed by contributed capital and therefore never attracted a depreciation charge;

- Extraordinary expenditures like a new transformer station; and

- A new Customer Information System, which requires substantial initial investments.

PowerStream stated that its need for increased capital spending on sustainment causes the capital portion of actual (and forecasted) cost to continue to rise faster than predicted costs until 2018-2019, at which time the actual costs and predicted costs are increasing at the same rate.

PowerStream concluded that it is important to distinguish between the accuracy with which the PEG model can be used to benchmark the costs of an LDC operating under usual circumstances and the accuracy with which it can be used to assess the costs of a distributor facing unusual business conditions, such as those with which PowerStream was faced. PowerStream concluded that Custom IR application methodology would be most appropriate for a distributor confronting the unusual circumstances which it faces as it is a rate-setting method that is intended to be customized to a specific applicant's circumstances.

Peer-to-Peer Benchmarking

PowerStream discussed the limitations of peer-to-peer benchmarking in its application but stated that it provided some indication of the reasonableness of the actual historical amounts that are a reference point for explaining and justifying the forecasted amounts.

PowerStream provided an OM&A per customer comparison based on the OEB's 2013 Yearbook, which showed that of the 73 Ontario LDCs included, its OM&A cost per customer is the 13th lowest and is 74.0% of the average and 84.7% of the median OM&A cost per customer.

PowerStream also presented a rates comparison with other Southern Ontario utilities of similar size and/or geographic proximity to its service territory through a 2014 total bill comparison with the goal of having rates in the lowest quartile. This comparison showed that for a typical residential customer or GS<50 customer out of a sample of 25 distributors, PowerStream had the fourth lowest bill, while for the typical GS>50 customer, out of a sample of 24 distributors, PowerStream had the second lowest bill.

Discussion and Submission

OEB staff is in agreement with PowerStream that the peer-to-peer benchmarking studies which it has provided do support the view that its 2014 costs and typical bills are reasonable when compared to the rest of the industry. This result has mitigated the reduction arising from OEB staff's assessment underpinning its submission for both capital and OM&A proposals from PowerStream.

OEB staff does however have some concerns arising from the econometric benchmarking evidence provided by PowerStream. PowerStream's analysis shows that it goes from being a distributor with actual costs 7% below predicted costs in 2010 to one with actual costs 8% higher than predicted costs by 2020 which is the end of the plan period.

OEB staff is not convinced that what PowerStream characterizes as its non-typical operating conditions would justify its view that it is currently experiencing different operating conditions than those that are typical in the industry. OEB staff notes that the factors cited by PowerStream, specifically substantial increases in capital costs, extraordinary expenditures for a new transformer station and a new customer information system are costs which are not unique to PowerStream in the current industry operating environment. OEB staff does not agree that PowerStream's circumstances are unique or that it is operating under conditions that are not typical.

2.4 Does the Custom IR Application adequately provide value to the customer (such as the X-Factor, Y-Factor and a shared earnings mechanism)?

Background

PowerStream's application is structured with five test years and no annual adjustment mechanism incorporating X-Factors, Y-Factors and similar approaches. PowerStream's approach to productivity has been extensively discussed in that section of OEB staff's submission and OEB staff has nothing further to add in this section of the submission on that matter.

PowerStream did not propose an earnings sharing mechanism, but was asked about its position on such a mechanism during the interrogatory process, specifically whether or not it would be supportive of incorporating earnings sharing into its plan.[17] PowerStream responded that it was sharing benefits with its customers as contemplated by the RRFE in its rate proposal.

In a subsequent interrogatory process PowerStream was asked its view about the adoption of an earnings sharing mechanism similar to that accepted by the OEB in the Horizon Utilities Corporation EB-2014-0002 proceeding.

This earnings sharing mechanism was described in the Horizon Utilities settlement proposal that was ultimately accepted by the OEB[18] as being consistent with the OEB findings in the Enbridge Decision.[19] Earnings in excess of the OEB's maximum regulatory return on equity, as established in the annual cost of capital parameters for each of 2015 to 2019 were to be divided on a 50:50 basis between Horizon Utilities and its ratepayers. The ratepayer share of earnings would be credited to a newly proposed deferral account for clearance at the next annual rate filing.

PowerStream responded that there was nothing in theory that would preclude it from adopting a similar earnings sharing mechanism, but that this could be an issue for the settlement conference, or hearing. PowerStream reiterated its position that its rate proposal incorporated sharing benefits with customers as contemplated by the RRFE.

Discussion and Submission

OEB staff has argued in section 2.2 of this submission that the OEB should only approve PowerStream's application for a three-year period. OEB staff does not believe that an

[17] Application, Section II Tab 1 Schedule 1, p.16 A-CCC-13.
[18] Horizon Utilities Corporation EB-2014-0002 Settlement Proposal Filed: September 22, 2014, pp. 29-30.
[19] EB-2012-0459 Enbridge Gas Distribution Inc. *Decision With Reasons* July 17, 2014.

earnings sharing mechanism would be necessary if the proposed three-year approval is adopted by the OEB.

However, should the OEB decide to grant approval of PowerStream's application for the full five-year period requested, given the concerns raised about whether the application meets all of the requirements of a Custom IR, OEB staff believes that the adoption of an earnings sharing mechanism would be desirable. OEB staff notes that the OEB recently approved an earnings sharing mechanism for Toronto Hydro[20] arising from its Custom IR application. OEB staff submits that an earnings sharing mechanism similar to that granted by the OEB to Horizon Utilities and described above would be most appropriate given the similar nature of the two applications characterized by five test years.

2.5 Does the Application adequately plan and prioritize capital expenditures?

OEB staff discusses this issue in section 3.2 of this submission which is the detailed discussion of Powerstream's proposed Distribution System Plan.

2.6 Is the monitoring and reporting of performance proposed by PowerStream adequate to demonstrate whether the planned outcomes are achieved?

Background

PowerStream submitted that the OEB's scorecard and RRR reporting processes provide satisfactory reporting for monitoring of its performance and that the OEB's reporting processes are the most appropriate means of reporting and monitoring performance.

PowerStream noted the requirement for Custom IR filers to provide annual reporting on capital spending. PowerStream stated that, subject to further direction from the OEB, it proposed to report its capital spending in the same manner as Exhibit G, Tab 2, Table 3 and further proposed that this be filed as an addendum to the annual RRR filing.

Discussion and Submission

OEB staff submits that PowerStream's proposed monitoring and reporting of performance is adequate to demonstrate whether or not the planned outcomes are

[20] *Decision and Order* EB-2014-0116 Toronto Hydro-Electric System Limited December 29, 2015, p.2

achieved. OEB staff notes in this context its recommendation that the OEB only approve the Application for a three-year period.

OEB staff submits that while the general principles established by the OEB for the Custom IR approach suggest that the OEB could impose additional reporting requirements given the length of the term and the extent of capital investment typically expected to be undertaken by Custom IR applicants, OEB staff is of the view that the reporting proposed by PowerStream is sufficient, given the OEB's ability to initiate a review should financial or operational performance erode unacceptably.

2.7 Are PowerStream's proposed off-ramps and annual adjustments appropriate? Has PowerStream demonstrated adequately its ability and commitment to manage within any rates set via this proceeding, given that actual costs and revenues will vary from those forecast?

Background

PowerStream proposed to file an annual update based on a similar schedule and process to that of annual IRM filings[21] and would file the first such annual update for rates effective January 1, 2017 by July 28, 2016.

PowerStream stated that the filing would be a mainly mechanical update to the evidence provided and approved in the present proceeding, with the items to be updated including:

1. The weighted average cost of capital (WACC) based on the OEB's latest parameters and any new debt issued.
2. The cost of power based on the most current cost estimates for commodity issued by the OEB plus approved uniform transmission rates, sub-transmission and low voltage rates.
3. Application of the updated WACC to the rate base for the year as approved in this proceeding and adjusted for the cost of power update referenced in (2) above.
4. Recalculation of the tax amount based on legislated tax changes and the revised revenue requirement based on the adjustments in steps 1 to 3 above, including updates for income tax rates, CCA rates and tax credit amounts.

[21] EB-2015-0003 PowerStream Inc. Oral Hearing Undertakings, No. J1.8.

5. Recalculation of distribution rates based on the approved revenue allocation percentages determined in this proceeding, including OEB directed rate design changes such as the transition to full fixed charge rates for the Residential class.
6. Retail transmission service and low voltage rates.
7. Disposition of deferral and variance accounts on the same basis as the OEB directs for IRM filers.

Discussion and Submission

OEB staff notes that PowerStream has not proposed any additional off-ramps to those which have already been established by the OEB and has no concerns in this area.

The annual adjustments proposed by PowerStream are not untypical of those that have been seen by the OEB in other Custom IR applications that are characterized by five test years, although updates to low voltage rates are not typical of annual IRM filings. Furthermore, the updates to the cost of power are for the purposes of adjusting the working capital allowance. OEB staff is of the view that PowerStream should be expected to manage with the WCA allowance approved within this proceeding the same as distributors under the Price Cap IR rate-setting option.

OEB staff submits that the OEB should move towards the reduction of these types of adjustments as the Custom IR process becomes more established both to reduce regulatory burden and encourage utilities to increase their abilities over time to manage within the rates set in the initial Custom IR application.

3. Revenue Requirement

3.1 Is the rate base component of the revenue requirement, including the working capital allowance, for 2016 – 2020 as set out in the Custom IR Application appropriate?

Background

PowerStream's proposed rate base component of its revenue requirement is summarized in the table below:

	$ millions				
	2016	2017	2018	2019	2020
Gross Fixed Assets (average)	1,127.5	1,257.1	1,388.3	1,514.3	1,642.0
Accumulated Depreciation (average)	-205.6	-255.6	-309.1	-365.5	-425
Net Fixed Assets (average)	**921.9**	**1,001.5**	**1,079.2**	**1,148.8**	**1,217.0**
Allowance for Working capital (7.5%)	86.2	90.3	93.8	95.9	97.7
Total Rate Base	**1,008.1**	**1,091.8**	**1,173.0**	**1,244.7**	**1,314.7**

PowerStream stated that its Property Plant and Equipment (PP&E) Net Book Value (NBV) amounts are net of contributed capital and accumulated depreciation.

In response to an OEB staff interrogatory, PowerStream stated that it had updated its application using the OEB's new default working capital allowance of 7.5%[22].

Discussion and Submission

OEB staff submits that subject to the concerns which it discusses in section 3.2 of this submission related to PowerStream's proposed Distribution System Plan spending levels, it has no additional concerns with PowerStream's proposed rate base. OEB staff notes that PowerStream has revised its application to deflect the OEB's new default working capital level of 7.5% and accepts this level as appropriate for PowerStream.

3.2 Are the Distribution System Plan, capital programmes and related expenditures, associated with the revenue requirement for 2016 – 2020, as set out in the Custom IR Application, appropriate and is the rationale for planning and prioritizing appropriate and adequately explained and supported, considering:

- **i. customer feedback and preferences;**
- **ii. productivity and sharing of benefits:**
- **iii. benchmarking of costs;**
- **iv. end-of-life criteria, health index, data governance, and the overall relationship of each planning component;**
- **v. reliability and service quality;**
- **vi. impact on distribution rates;**
- **vii. trade-offs with OM&A spending;**
- **viii. government-mandated obligations; and**
- **ix. the applicant's objectives?**

[22] Section B Tab 2 Schedule 1 p. 25 II-1-Staff-19 August 21, 2015.

Background

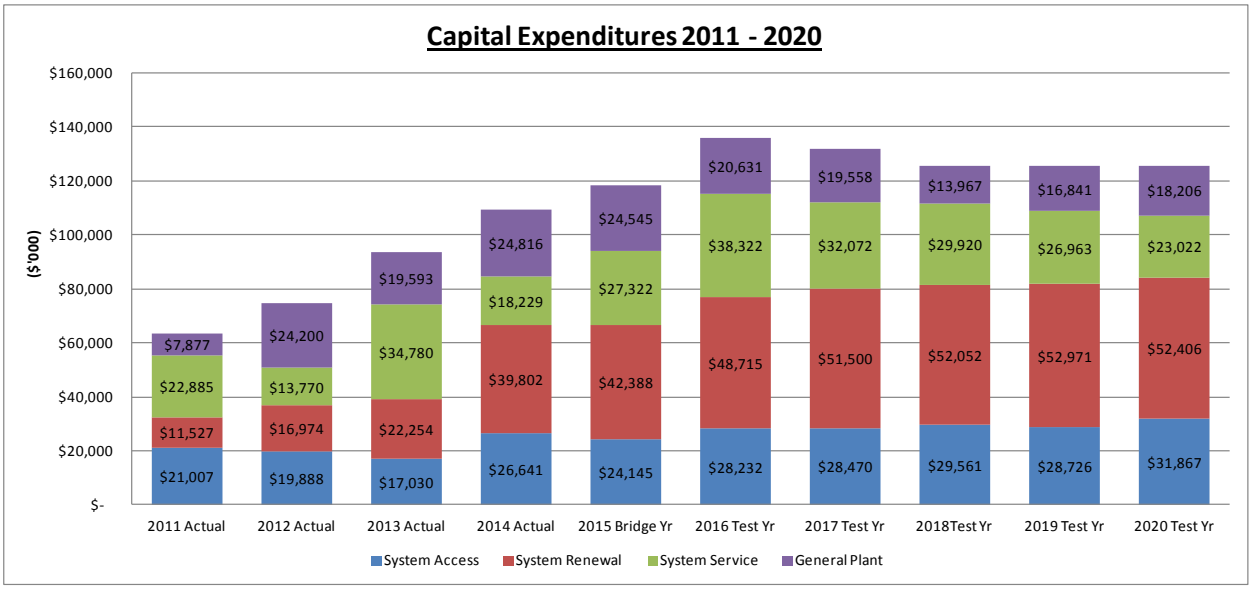
Introduction:

PowerStream has filed a 5 year Distribution System Plan (DSP) in keeping with the OEB's filing requirements. The DSP describes the company's approach to planning, prioritization and asset management and includes regional planning, local stakeholder consultations, renewable generation connections and smart grid considerations. PowerStream submitted that it has completed this DSP with a consideration for customer preferences and operational effectiveness. The DSP includes the following:

- a description of the Asset Management Process;
- a description of the coordinated planning and regional planning initiatives;
- a description of customer engagement activities;
- a system capability assessment;
- information for renewable energy generation connections;
- forecasted smart grid development; and
- a five-year capital expenditure plan.

Capital Expenditure Budget:

PowerStream's 2016-2020 DSP contains a test-year capital expenditure budget by investment category as summarized below:



	2011 Actual	2012 Actual	2013 Actual	2014 Actual	2015 Bridge Yr	2016 Test Yr	2017 Test Yr	2018 Test Yr	2019 Test Yr	2020 Test Yr
Total Capital Expenditures ($'000)	$ 63,296	$ 74,832	$ 93,657	$ 109,488	$ 118,400	$ 135,900	$ 131,600	$ 125,500	$ 125,501	$ 125,500
	Total 2011-2015				$ 459,673	Total 2016-2020				$ 644,001
	% Change (2011 - 2015 vs 2016-2020)									40%

OEB staff notes that PowerStream is requesting approval for a 5 year test year capital expenditure budget that is 40% (or $184 million) higher than that of the previous five years. PowerStream's projections include significant increases in three out of the four investment categories, namely: a 35% increase in System Access capital expenditures, a 94% increase in System Renewal capital expenditures and a 28% increase in System Service capital expenditures. Expenditures for the General Plant category are projected to be 12% lower than was the case in the previous five years.

OEB staff considers PowerStream's proposed expenditures to be excessive and recommends that they should be reduced by 15% of the total capital DSP 2016-2020 spending. This is the equivalent of approximately $97 million total in 2016-2020 and an average of $19 million per year.

OEB staff's recommendation is based on concerns related to both specific capital programs and PowerStream's overall approach to capital budgeting as outlined in the DSP. OEB staff's recommendation is based on an envelope approach and OEB staff would consider it reasonable for PowerStream to make its capital spending decisions within the framework of the overall approved amount. The programs identified support OEB staff's position that PowerStream can adequately manage effectively with a lower capital budget.

OEB staff is also concerned that PowerStream has provided little or no evidence in its application as to any reductions in OM&A spending that can be anticipated as a result of the proposed increased capital spending and considers this deficiency as further justification for the proposed decrease.

SPECIFIC CAPITAL PROGRAMS

The areas of concern, impact amounts and the key reasons for them are summarized in the table below. These programs are then mapped to the investment categories for a more detailed discussion:

#	Capital Spending/Program	Potential for Reduction 2016-2020	Rationale
1	New Connections and Subdivisions	$28.3M	PowerStream has acknowledged the difficulty in forecasting this type of capital work and has also stated that it expects slowing customer growth. OEB staff accordingly believes that the most appropriate approach may be to base the test year forecast on actual levels (i.e. historical) of spending with an adjustment for inflation, which results in the proposed reduction.
2	Cable Replacement Program	$25.6M	PowerStream is proposing a 98% increase in cable replacement unit cost with inadequate justification provided.
3	Pole Replacement Program	$9.0M	PowerStream has not provided sufficient justification for the increased pole replacement rate and the replacement target does not take into account poles that are replaced as a result of other programs. OEB staff is of the view that PowerStream can manage with a lower replacement rate of 300 poles a year.
4	Rear Lot Supply Remediation Program	$30.0M	OEB staff feels that this program was insufficiently justified lacking among other elements detailed cost estimates and reliability impacts. OEB staff's view is that this program should be reviewed as part of PowerStream's next DSP with stronger evidence provided in support of it.
5	Residential Meter "ICON F" Meter Replacement Program	$8.7M	OEB staff supports PowerStream being proactive in dealing with security issues of this kind, but given OEB staff's recommendation that PowerStream's application only be approved for three years and that most costs for this program occur in 2019 and 2020 submits that this program should be reviewed again in the next DSP filing.

6	Major IT Projects	$15.8M	OEB staff considers that the proposed spending for this program has inadequate analytical justification and lacks evidence supporting the view that the major IT projects will ultimately deliver value to the customer. The $15.8 million amount is 50% of the proposed expenditure.

Discussion & Submission

a) <u>System Access Capital Expenditure Budget</u>

The Test Year capital budget for the System Access investment category is presented below:

	2015	2016	2017	2018	2019	2020
System Access	($ 000)	($ 000)	($ 000)	($ 000)	($ 000)	($ 000)
i. New Connections and Subdivisions	13,671	14,718	15,801	16,404	17,037	17,674
ii. Road Authority	6,259	9,702	8,679	8,357	5,719	6,222
iii. Metering	3,887	3,025	3,060	3,720	4,715	6,556
iv. Other Customer Initiated Work	329	787	929	1,080	1,256	1,415
v. RGEN FIT/microFIT (Net Rate Base)	-	-	-	-	-	-
v. RGEN FIT/microFIT (Gross Rate Base)	280	137	110	-	-	-
Total System Access (Rate Base)	24,145	28,232	28,470	29,561	28,726	31,867

OEB staff notes that the total 2016-2020 budget, represents an increase of 35% compared to the 2011-2015 historical period. The increase is stated as largely due to the combination of the addition of more customers and road authority work. OEB staff's concerns in this category relate to the forecast for connection of new residential and commercial developments.

i) New Connections and Subdivisions Budget:

PowerStream attributed approximately 55% of the total System Access Capital Budget to the connection of new customers. These are non-discretionary investments and PowerStream is forecasting an annual average increase in such expenditures of 5% in the 2015-2020 period.

PowerStream stated that customer growth in its service area is slowing relative to prior years and that these types of investments “are very difficult to forecast” and “experience

has demonstrated that there are no reliable leading indicators that could be used to forecast activity with any degree of accuracy".[23]

Accordingly, PowerStream stated that it had undertaken a bottom up approach to developing the estimates and had relied on historical levels of investment, known upcoming projects and local economic factors.

Given the difficulty in forecasting this type of capital work combined with the added complexity of slowing customer growth, OEB staff is concerned that the proposed budget may be overstated.

Under such circumstances, OEB staff submits that the most appropriate approach may be to base the test year forecast on actual levels (i.e. historical) of spending, which is further supported by the fact that PowerStream acknowledges slowing customer growth..

Using such an approach and based on the 2013-2014 actual spending (2011-2012 actual spending included upstream charges[24]) and incorporating 2.1% inflation (as 2015 rate-setting parameter), new subdivision commercial and residential development (as represented in the Investment summaries #101896, #101911, #101887, #101906) OEB staff estimates such spending to be 50% lower (or $28.3 million) than that proposed by PowerStream for the 2016-2020 period.

b) System Renewal Capital Budget

PowerStream's System Renewal capital expenditure budget is presented below:

	2015	2016	2017	2018	2019	2020
System Renewal	($ 000)	($ 000)	($ 000)	($ 000)	($ 000)	($ 000)
i. UG Lines - Planned Asset Replacement	20,687	21,601	22,862	23,781	24,666	25,186
ii. Distribution Lines - Emergency/Reactive Replac	8,416	8,636	8,730	8,888	8,925	8,504
iii. Overhead Lines - Planned Asset Replacement	7,698	7,907	9,082	8,558	9,144	9,022
iv. Storm Hardening& Rear Lot Conversion	3,500	7,900	8,000	7,500	6,900	7,200
v. Stations/P&C - Asset Replacement	2,087	2,671	2,827	3,325	3,336	2,493
Total System Renewal	42,388	48,715	51,500	52,052	52,971	52,406

[23] Interrogatory no. 2-Staff-86

[24] PowerStream IRR, II-2-Staff-86 and Oral Hearing, Transcript Volume 3, p. 161

OEB staff's concerns with the system renewal budget relate to: (1) the proposed underground cable remediation program, (2) the proposed pole replacement rate of 400 poles/year and (3) the expenditure levels proposed for the Rear-Lot Remediation program.

i) Underground Cable Replacement Program:

The test year capital expenditure budget for the Underground Cable Remediation program is presented below:

	Capital Expenditure $				
	2016	**2017**	**2018**	**2019**	**2020**
Cable Replacement	12,538,684	13,607,273	14,288,297	15,085,861	15,340,181
Cable Injection	4,138,312	4,255,465	4,375,771	4,499,323	4,626,219
Source: Investment Summary #100835, 100851					

OEB staff notes that a major component of PowerStream's investment plan is the replacement and rejuvenation (through injection) of cable which was discussed at some length during the proceeding. OEB Staff is concerned that PowerStream did not adequately consider alternatives to this program in making the decision to proceed with it and that the average cable replacement unit costs in the test years are excessive compared to historical actual unit costs.

OEB staff notes that PowerStream justified replacement/Injection cable volumes in the Cable Remediation Report[25]. PowerStream reviewed four cable injection life extension scenarios (15, 20, 25 and 30 years), however, all scenarios assumed the same budget level and remediation rate. There was no consideration of a different budget level, reliability outcome and/or pacing of investment increase. Therefore, it has not been determined that the proposed cable program replacement will deliver value for money to the customers, as no alternatives have been analyzed and no economic analysis has been completed to support the decision for cable investments.

[25] EB-2015-0003, IRR to II-Staff-69, Section B, Tab 1, Schedule 6, Page 115 of 151

OEB Staff notes that cable unit costs vary significantly between different parts of the application. OEB staff has used the unit cost numbers provided at the oral hearing which provide an average cable replacement unit cost of $524/m in 2016-2020[26], compared to historical average costs of $265/m in 2011-2014[27], which represents a 98% increase in unit costs.

PowerStream provided an explanation of the cable unit cost variance[28]. Mr. Klajman stated that when PowerStream was doing a cable remediation project in an area, there were cable segments that could be replaced immediately and cable segments that could not be replaced immediately and required a second visit for replacement ("left behind cable segments"). The costs per unit for the "left behind cable segments" are higher compared to the first option, which is called "main stream". PowerStream provided the following costs, $421/m for "main stream" and $515/m (22% higher) for "left behind" cable segments costs in 2016[29]. Furthermore, PowerStream confirmed that there were no "left behind" cables replaced in 2014 and earlier[30]. Thus, when the $421/m cost for "main stream" cable in 2016 is compared with the average historical $265/m "left behind" cable cost in 2011-2014, OEB staff notes that this still represents a substantial increase of 59%.

OEB staff submits that there was no meaningful explanation provided by PowerStream for the cable replacement unit cost increase. Using a historical average unit cost as a base with 2.1% inflation rate and 22% adjustment for the "left behind" cables, which OEB staff would view as reasonable adjustments, would result in a reduction of the costs of the cable replacement program of $25.6M.

ii) Pole Replacement Program:

The test year capital expenditure budget for the Pole Replacement program is presented below:

[26] Undertaking J2.10
[27] PowerStream Response to II-1-Staff-16, Table 16a
[28] Technical Conference, Transcript, pp. 78-79
[29] Undertaking JTC 1.9
[30] Oral Hearing, Transcript Volume 3, p. 11, l. 23-26

	Capital Expenditures				
	2016	2017	2018	2019	2020
Pole Replacement	$ 4,933,143	$ 5,570,700	$ 5,870,246	$ 6,241,483	$ 6,244,377
Source: Investment Summary # 100867					

PowerStream is proposing to replace 400 poles a year (or 1% of its pole population) during the test year period, which is based on the Asset Condition Report. OEB staff submits that an annual pole replacement level of 400 is too high and a replacement rate of 300 poles/year is more reasonable.

OEB staff bases this position on two considerations.

First, OEB staff notes that PowerStream has confirmed its annual pole replacement target does not take into account poles that are replaced as a result of other programs[31] such as replacements due to road work requirements or the Rear-Lot Remediation program which would support the view that PowerStream's proposed replacement level is too high. As part of the Rear-Lot program PowerStream is estimating replacing 177 poles in the 2015-2020 period. No information is available for pole replacements under other programs.

Secondly, PowerStream tested 10,827 poles in 2014 and identified 370 poles (Code A and B) considered for replacement[32]. It was stated that the results of the testing could be extrapolated to the entire population of 38,070 wood poles[33].

Therefore, OEB staff assumes that 1,301 poles will be expected to be coded A and B in total, averaging only 260 poles a year within a five year period.

OEB staff notes that during the 2011-2014 period PowerStream replaced approximately 313 poles/year[34], a replacement rate that is markedly lower than the proposed rate. Furthermore, PowerStream's earlier asset condition study had recommended a replacement rate of 300 poles/year. Finally, the failure curves used to determine replacements may be underestimating the mean life of poles while considering in the

[31] Oral Hearing, Transcript Volume 3, p. 26
[32] EB-2015-0003, PowerStream IRR, B-1-6, II-2-Staff-72
[33] Oral Hearing, Transcript Volume 3, pp. 25-26
[34] Interrogatory G-SEC-24

data sample only failed poles in the analysis and no inclusion of poles that have not yet failed.

OEB staff submits that for the preceding reasons the pole replacement program budget could be reduced by approximately $9.0 million to reflect a reduced pole replacement rate of 300 poles/year.

iii) Rear-Lot Supply Remediation Program

PowerStream proposed the replacement and relocation of rear-lot distribution equipment in response to the threat of major storm events such as the 2013 ice storm as well as providing a means of achieving reliability improvements[35].

PowerStream stated that the capital budget estimate for the program was derived using the unit cost from one comparable historical job of $12,400 per customer[36]. In order to estimate the cost of the "underground option", the historical job value was multiplied by a factor of 1.47. The test year unit costs are estimated to be $16,000 per customer.[37]

OEB staff's concerns pertain to the approach used to estimate the expenditures for this program. In OEB staff's view it is not appropriate to base capital expenditure estimates on one comparable job. The application of multipliers raises further concerns about the accuracy of the capital expenditure estimates. In OEB staff's view costing estimates for a program of this magnitude should be based on detailed analysis and design specifications.

PowerStream stated that it is planning to remediate Rear-Lots within a 15-year period which was selected based on three considerations: cost and affordability, end-of-life considerations as many of the assets are at end of life, and on the CIMA Report which suggested an increase in the frequency of extreme weather events from 17 years to 14 years could be anticipated. However, PowerStream acknowledged that it may have to

[35] EB-2015-0003, E G/T2, 5.4.5 Justifying Capital Expenditures, Appendix A: Project Investment Summaries, Project Code: 103659
[36] Response to OEB staff 2-Staff-49
[37] Oral Hearing, Transcript Volume 3, pp. 48-50

extend the program to beyond 15 years due to the complexity of some of the work and if program costs increase[38].

OEB staff's concern with PowerStream's approach is its reliance on unpredictable weather events to determine the time period. In OEB staff's view, PowerStream should have undertaken a more multi-faceted analysis to determine an appropriate time in which to complete the program. This would have included efforts to engage affected customers in developing PowerStream's plans.

PowerStream identified reliability as one of the major drivers of the Rear Lot conversion program[39]. The recommendation to convert all rear lots was based on the CIMA report for Storm Hardening activities as a result of the 2013 Ice Storm and its reliability impact on customers.

However, PowerStream did not provide any evidence that analyzed the contribution of the Rear lot infrastructure to the power outage impact of the Ice Storm. OEB staff also notes that the latest Five Year Work Reliability Work Plan estimated Rear lot relocation program savings in the range of 100,000 – 200,000 CMIs[40]. Therefore, applying the $1/CMI value used in the Prioritization tool, OEB staff calculates a $100,000 - $200,000 annual value as a result of the Rear Lot remediation program. This number is considerably lower than the $6M annual cost proposed by PowerStream to be spent on the program.

OEB staff also notes that the asset condition evidence contradicts PowerStream's assertion that many of the rear-lot assets are at end-of-life. OEB staff notes that the asset condition evidence shows that 79% of rear-lot assets are in "Good" condition[41] and that the assets were built fairly recently (in the 2000-2010 period).

OEB staff submits that for all these reasons, the program has been inadequately justified and that there is flexibility for PowerStream to better pace and prioritize this $30 million

[38] Interrogatory 2-Staff-48
[39] Tab 2, TCQ-2 G-SEC-19, Appendix B, Page 23, "Hardening the Distribution System Against Sever Storms – Final Report" CIMA
[40] Section III, Tab 4, Schedule 1, BOMA-11, Appendix B, Five Year Work Reliability Work Plan 2015-2019, p.18 Table 8
[41] PowerStream IRR, C-2-1, II-2-Staff-45, Appendix 45.3

project which would allow the OEB to consider reductions in the spending on this program.

PowerStream could refile this program for approval as part of its next DSP which would allow it to develop better and more detailed program plans and justification, including detailed cost estimates for the program. OEB staff notes in this context that more immediate rear lot infrastructure requirements would be addressed through other renewal programs, e.g. the pole replacement program.

iv) Residential Meter "ICON F" Meter Replacement Program

The test year capital expenditure budget for "ICON F" Meter Replacement Program is presented below:

	Capital Expenditures				
	2016	**2017**	**2018**	**2019**	**2020**
"ICON F" Meter Replacement	$ 494,361	$ 494,746	$ 872,435	$ 2,280,384	$ 4,517,454

Source: Investment Summary # 102175

OEB staff supports PowerStream being proactive in dealing with security issues of this kind, but given OEB staff's recommendation that PowerStream's application only be approved for three years and that most costs for this program occur in 2019 and 2020 submits that this program should be reviewed again in the next DSP filing.

c) System Service Capital

PowerStream's System Service material investments budget is presented below:

Total Material Investments System Service ($000)					
2015	**2016**	**2017**	**2018**	**2019**	**2020**
23,305	33,398	27,652	23,496	21,260	18,066

PowerStream stated that investments in this category are modifications to its distribution system that ensure operational objectives are met and future customer requirements can be addressed. Projects are driven by initiatives to improve system reliability and/or

system capacity constraints. These are necessary as greater demands are placed on the system from increasing customer requirements, increased capacity for stations and lines, distribution automation, embedded generation (RGEN), and Smart Grid initiatives (distribution related) including energy storage. These investments are required to support the operation, reliability and expansion of the distribution system.

OEB staff notes that system service capital is mostly related to station and line capacity projects and that PowerStream justifies the increase based on its high growth peak load forecast[42]. While OEB staff is not recommending any cuts in this area, OEB staff does note that to the extent that the high level of growth in the peak load forecast does not occur, the level of expenditures proposed may also not be necessary.

d) General Plant

PowerStream's General Plant material investments budget is presented below:

Total Material Investments General Plant ($000)					
2015	**2016**	**2017**	**2018**	**2019**	**2020**
17,779	7,889	8,911	8,253	10,545	8,233

PowerStream noted that investments in this category are modifications, replacements or additions to its assets where these assets are not part of the electrical distribution system. General Plant projects include investments in information systems, communication systems, vehicles, buildings/facilities and tools and equipment necessary to support the operation and maintenance of the distribution system. General Plant also includes specific Smart Grid pilot projects and initiatives that do not pertain to the distribution system, such as home technologies and electric vehicles.

OEB staff only has submissions for this category on major IT projects.

[42] Application, Interrogatory Responses August 21, 2015 II-1-Staff-15, p.6.

Major IT Projects

PowerStream is planning to spend $31.6M on the major IT projects in 2016-2020[43] as is summarized below:

	Capital Expenditures				
	2016	**2017**	**2018**	**2019**	**2020**
CIS Modifications	$ 3,884,100	$ 6,708,900	$ 2,996,000	$ 2,996,000	$ 2,996,000
JD Edwards Application Upgrade				$ 2,396,800	
MSBPI	$ 10,000	$ 60,000	$ 899,999	$ 50,000	$ 10,000
Phone System Enhancement Upgrade				$ 50,500	$ 908,999
Storage Expansion	$ 300,000	$ 300,000	$ 300,000	$ 1,000,000	$ 400,000
Work force Management / Mobile Dispatch	$ 2,675,000	$ 802,500	$ 802,500	$ 535,000	$ 535,000
Source: Investment Summary # 102180, 102968, 103204, 102169, 102009, 102263					

OEB staff notes that IT related projects are typically intended to automate business processes that in return help to improve productivity and bring hard financial benefits to the company that will be eventually passed to the consumers.

However, OEB staff further notes that without an understanding of the benefits, it is not possible to conclude whether a project is beneficial, provides net positive value and, therefore should be undertaken.

[43] E G/T2, 5.4.5 Justifying Capital Expenditures, Appendix A: Project Investment Summaries, Project Code: 102180, 101991, 102968, 103204, 102196, 102009, 102263

OEB staff is concerned that while proposing significant investments in major IT systems, PowerStream has not completed an appropriate financial evaluation of the projects, e.g. using a Net Present Value analysis.

OEB staff therefore submits that there is no evidence that these projects will ultimately deliver value for money to the customers.

In this context, OEB staff notes that a major contributor to the program is CIS Modifications, explained as hardware and software upgrades required to keep the newly installed CIS going after the go-live date. The CIS Modification project alone is worth of $19.5M in 2016-2020 which is incremental to the $42M already invested, or an increase in the total CIS cost of 46%.

Given the absence of appropriate financial analysis for the major IT projects and the lack of details as to how customers will benefit from the implementation of the project, OEB staff considers that the proposed spending for this program has inadequate analytical justification and lacks evidence supporting the view that the major IT projects will ultimately deliver value to the customer. The $15.8 million amount is 50% of the proposed expenditure.

Given the uncertain environment, OEB staff questions if it is prudent for PowerStream to invest more in its CIS until it is known if this CIS will still be required. The OEB could consider other funding approaches rather than including this capital in rate base.

CAPITAL BUDGETING APPROACH

Project Prioritization Process

Background

OEB staff is concerned with certain assumptions in the project prioritization process which are integral to the development of the test year capital expenditure budget.

Discussion and Submission

PowerStream stated that its annual capital budgeting process begins with all business units being required to prepare a ten-year capital expenditure plan and five-year budgets. Project leads enter project information such as costs, year of expenditure, rationale into the Capital Budget Management System and answer a series of questions about each project. The answers to the questions form the basis for scoring based on certain Value Measures such as hard and soft financial benefits, risks and cost.

The Value Function combines all the Value Measures to compute the value of an investment. This information is input into the optimization program to determine the optimal mix of projects based on certain constraints. Various scenarios are examined and the optimization results are reviewed by the Optimization Team until an acceptable portfolio of projects is developed for senior management approval. The process is described in the pre-filed evidence[44].

OEB staff has three concerns in this area: (i) the Value Function used in the optimization process, (ii) use of Hard Financial Benefits, (iii) the calculation of reliability cost and risk values.

(i) Calculation of the Value Function

As noted above, PowerStream uses Copperleaf's C55 optimization program to prioritize projects. All projects are valued based on a Value Function. The Value Function is a weighting of a number of Value Measures. The Value Measures include risk mitigation, hard and soft financial benefits, impacts on Key Performance Indicators (KPI), and cost. The Value Function combines all the Value Measures to compute the overall value of an investment. The Value Function of an investment reflects the total value that the project brings to the company, taking into account all of its financial benefits, impact on KPIs, risk mitigation and costs.

[44] Section II, Tab 2, Exhibit G, DSP section 5.3.3, p. 16.

PowerStream uses the Value Function methodology to justify projects[45]. This method assigns $1,000 to a positive or negative value given to a project, and then the value streams are discounted to the present date[46]. PowerStream explained that a project's value score represents the total discounted net value of benefits and costs of the project, being either its actual cash benefits, or risk mitigation, or KPI impact assessment equalized in monetary terms[47]. However, PowerStream noted that the value scores are simply used to compare projects within the prioritization program and do not reflect a project's net value to the company and customers.

In OEB staff's view, PowerStream's approach appears similar to the NPV approach where all the benefits are monetized and future value streams are discounted to the present date. However, a matter of concern for staff is that the project value scores are not representative of the net value of the project to the company and customers.

Further, PowerStream confirmed that its overall project portfolio is based on a capital threshold set through managerial decision[48]. These aspects taken together raise concerns in staff's view regarding the robustness of the project justification and selection processes.

(ii) Hard Financial Benefits

PowerStream explained that hard financial benefits represent benefits that deliver actual cash savings to the company and that the costs can be removed from the capital and OM&A programs[49]. However, under cross-examination PowerStream confirmed that the Hard Financial Benefits do not translate to a proportionate reduction in the capital budget and instead should only be viewed avoided cost.[50] PowerStream provided information that the Hard Financial Benefits for the proposed capital program are in excess of $250 million[51]. This leads OEB staff to believe that the benefits used for the purposes of

[45] E.g PowerStream IRR to II-2-Staff-38 and to II-2-Staff-60, Technical Conference Transcript p. 62, l. 11-21 and p. 84, l.4-5, Oral Hearing Transcript, Volume 3, pp. 57-58.
[46] Argument-in-Chief, December 14, 2015, p. 13
[47] Oral Hearing Transcript, Volume 3, pp. 34-41
[48] EB-2015-0003, IRR to II-Staff-51, Appendix 51a
[49] Oral Hearing Transcript, Volume 3, p. 39-40
[50] Undertaking JTC-3.2
[51] Interrogatory no. 2-Staff-51(g)

prioritization may not be reflective of the actual benefits, thus raising concerns regarding the overall prioritization and planning processes.

(iii) Calculation of Reliability Cost and Risk Values

OEB staff is also concerned with the reliability cost formula that is used in prioritization process. PowerStream uses the following formula to calculate reliability cost[52]:

*reliabilityCost = cmiCost*0.89 + (frequencyCost + durationCost)*0.11*

OEB staff understands that 89% and 11% weighting in the formula reflects the customer mix of residential and commercial/industrial customers.

The parameter cmiCost is an average interruption cost of the outage per customer per a duration of 1 min, computed using $20/kWh cost of an unserved kWh for mixed residential and commercial/industrial customer.

Given that the cmiCost is based on mixed load, it is not clear to OEB staff why it is weighted by only the residential customer count.

The parameters "frequencyCost" and "durationCost" are selected based on the load type, either residential or commercial/industrial. Therefore, further weighting of these parameters by the commercial/industrial customer percentage is also unclear.

Lastly, an additional 5% is added to the durationCost parameter, as a probability of lost redundancy during the outage. This value is not supported by actual data and appears to be high.

OEB staff also observes that the risk matrix is very sensitive to the probability and consequence values and a small increase in either can increase the value score significantly, thereby affecting the prioritization results.

[52] PowerStream IRR, C-2-1, II-2-Staff-51, Appendix 51a, p. 9-11

OEB staff also notes that some of the input parameters in the optimization program are defined and are not based on analysis. For example, Technological Innovation was assigned a value of $1,000 for each of the years it applies to.

Resource Plan

OEB staff is concerned that PowerStream's budgeting process does not include a detailed labour resource mix required to execute its planned capital program. At the hearing, PowerStream stated that in developing its capital expenditure estimates, it has assumed that the capital work will be completed by internal labour resources, even though some of the work will eventually be done by external resources[53]. Further, PowerStream stated that the execution of programs by external labour resources is 3% lower compared to internal labour resources[54]. Given the above evidence, staff is concerned that the expenditures related to programs that rely on blended labour resources may be overstated. OEB staff is also concerned that PowerStream's capital plan lacks incentives for contractors to be more productive[55].

Conclusion

OEB staff submits that these methodological concerns taken in conjunction with the specific cuts proposed above would provide further justification for the overall 15 percent cut proposed by OEB staff in PowerStream's 2016 to 2020 capital expenditures.

3.3 Is the capital structure and cost of capital component of the revenue requirement for 2016 – 2020 as set out in the Application appropriate?

Background

PowerStream stated that in calculating the cost of capital for each of the years in the Custom IR Plan it had used the OEB's current deemed capital structure of 56% long-term debt, 4% short-term debt and 40% equity.

[53] Oral Hearing Transcript, Volume 3, pp. 6-7
[54] Oral Hearing Transcript, Volume 2, p. 109, l. 12-14
[55] Oral Hearing Transcript, Volume 3, pp. 5-6

PowerStream further stated that it had used the return on equity (ROE) as per the OEB's letter of November 20, 2014 of 9.30%. PowerStream added that it was using this value as a placeholder as it was proposing that this parameter be updated for setting 2016 rates as per the OEB's current practice, when data for 2016 becomes available. PowerStream noted that it was also proposing that in the 2017 to 2020 period, this parameter be subject to annual adjustments based on the OEB's annual update for the corresponding rate years.

PowerStream proposed a similar approach regarding the cost of short-term debt using the OEB's deemed rate from its letter of November 20, 2014 as a placeholder.

Where the cost of long-term debt was concerned, PowerStream proposed that the long-term debt rate used to determine distribution rates will be subject to adjustment annually based on the OEB methodology and the deemed long-term rates effective at the time of the update and the actual cost of the issued debt.

PowerStream stated that going forward, it anticipated additional long-term borrowing in the 2016 to 2018 period to ensure that it has adequate funding available and to maintain the prescribed debt to equity ratio.

Discussion and Submission

OEB staff submits that the capital structure and cost of capital component of the revenue requirement for 2016 – 2020 as set out in the application is appropriate.

3.4 Is the depreciation component of the revenue requirement for 2016 – 2020 as set out in the Application appropriate?

Background

PowerStream stated that it had used the same depreciation methodology as approved in its 2013 COS in-service basis for actual additions and an estimate of half-year depreciation on forecast additions. PowerStream further stated that it had used the same useful lives as approved in its 2013 COS application with the addition of new classes for the underground rehabilitated cable (20 years) and the new CIS (10 years).

Discussion and Submission

OEB staff submits that the depreciation component of the revenue requirement for 2016 – 2020 as set out in the Application is appropriate, subject to the impact of any proposed adjustments to the capital program.

3.5 Is the taxes / PILs component of the revenue requirement for 2016 – 2020 as set out in the Application appropriate?

Background

PowerStream stated that it had used the OEB's PILs model and had revised this model to accommodate five test years, replicating the same calculations and methodology. PowerStream further stated that it had followed the OEB's guidance in completion of the tax model.

Discussion and Submission

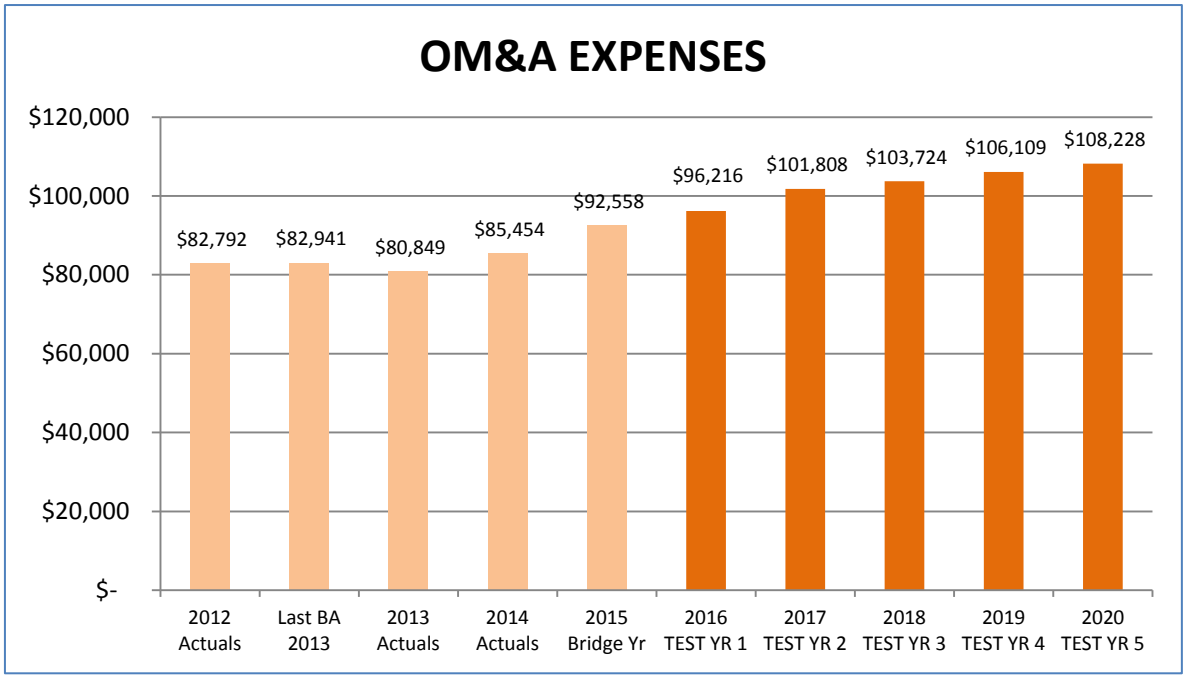
OEB staff submits that the taxes / PILs component of the revenue requirement for 2016 – 2020 as set out in the Application is appropriate, subject to the impact of any proposed adjustments to the capital program.

3.6 Are the OM&A programmes and related components of the revenue requirement for 2016 – 2020, as set out in the Custom IR Application, appropriate and is the rationale for planning choices appropriate and adequately explained and supported, considering:

i. customer feedback and preferences;
ii. productivity and sharing of benefits:
iii. benchmarking of costs;
iii. reliability and service quality;
v. impact on distribution rates;
vi. trade-offs with capital spending;
vii. government-mandated obligations; and
viii. the applicant's objectives?

Background

PowerStream's OM&A Budget for the historical period and test years is presented below:



	2012 Actuals	Last BA 2013	2013 Actuals	2014 Actuals	2015 Bridge Yr	2016 TEST YR 1	2017 TEST YR 2	2018 TEST YR 3	2019 TEST YR 4	2020 TEST YR 5
OM&A EXPENSES	$ 82,792	$82,941	$ 80,849	$85,454	$ 92,558	$96,216	$101,808	$103,724	$106,109	$108,228
%Change			*-2%*	*6%*	*8%*	*4%*	*6%*	*2%*	*2%*	*2%*

A breakdown of the key drivers of the annual increases in the OM&A budget is shown in the table below[56]:

[56] Application, Exhibit J Tab 1, p.2 February 24, 2015 modified to incorporate update for monthly billing costs in Interrogatory Responses Section A Tab 1 Schedule 1, p. 2, August 21, 2015.

	OM&A Changes Per Year ($000's)							
	2013A	**2014A**	**2015B**	**2016T**	**2017T**	**2018T**	**2019T**	**2020T**
Opening Balance	82,941	80,849	85,454	92,556	96,215	101,807	103,722	106,105
Business-as-Usual Additions								
Compensation	-204	538	2,508	1,136	267	745	787	901
Asset Management	-922	1,949	579	472	578	364	416	369
Risk Management	-109	330	757	518	485	-36	138	-103
Growth	-73	59	144	369	140	232	87	106
Customer Expectation	95	754	-248	58	25	25	25	25
Compliance	-361	262	185	132	18	18	18	19
Other	-2,930	929	1,464	482	15	110	265	139
Sub Total	-4504	4821	5389	3167	1528	1458	1736	1456
Extra-ordinary Items								
Vegetation Management	1,872	-1,565	403	614	526	531	536	542
CIS Implementation	0	1,349	1,310	-122	-158	-182	1	1
Sub Total	1,872	-216	1,713	492	368	349	537	543
Monthly Billing Costs	0	0	0	0	3,696	108	110	121
Closing Balance	80,849	85,454	92,556	96,215	101,807	103,722	106,105	108,225
Year over Year $		4,605	7,102	3,659	5,592	1,915	2,383	2,120
Year over Year %		5.7%	8.3%	4.0%	5.8%	1.9%	2.3%	2.0%

The key drivers of the increase to the OM&A budget in the above period are: (i) compensation which is discussed in the subsequent section, (ii) the expanded vegetation management program; (ii) the move to monthly billing, and (iv) CIS Implementation.

OEB staff is concerned about the overall magnitude of PowerStream's 2014 and 2015 OM&A increases of 6 percent and 8 percent both of which are well above current inflation levels. OEB staff notes that PowerStream is proposing further increases of 4 percent in the 2016 Test year and 6 percent in the 2017 Test year with 2 percent increases proposed for the 2018 to 2020 period.

OEB staff submits that given the 14% increase in 2014 and 2015 it would be reasonable for the OEB to allow PowerStream 2.1% increases annually, which is the OEB's current inflation rate for both the 2016 and 2017 Test years. While OEB staff appreciates that some of the increases in OM&A costs are attributable to programs that were approved in

prior proceedings and others are driven by policy changes, OEB staff is concerned by the magnitude of spending in certain areas as will be discussed and believes that a two percent increase in 2016 and 2017 would help to address these concerns.

OEB staff also believes that a 2.1 percent allowed increase would provide PowerStream with additional incentives to achieve further efficiency gains given the concerns expressed by OEB staff about PowerStream's approach to productivity adjustments above. In addition, OEB staff is concerned that the proposed OM&A levels do not adequately reflect customer feedback as PowerStream did not engage its customers sufficiently early in the process of establishing its OM&A programs to allow customer input to be adequately reflected in the proposed programs. Finally, as has been discussed in the DSP section of this submission, PowerStream has provided little or no evidence in its application as to any reductions in OM&A spending that can be anticipated as a result of the proposed increased capital spending.

OEB staff's specific concerns with PowerStream's proposed expenditures are discussed in the following sections:

Vegetation Management

PowerStream's forecast of vegetation management expenses for the Application period is shown in the table below[57]:

Cumulative Costs	2013 Actual	2014 Actual	2015 Bridge Yr	2016 Test Yr	2017 Test Yr	2018 Test Yr	2019 Test Yr	2020 Test Yr
Vegetation Management OMA Budget ($ 000)	$ 1,461	$ 1,760	$ 2,060	$2,674	$3,200	$3,731	$4,267	$4,809

OEB staff notes that PowerStream is proposing over a 300 percent increase in these expenditures by 2020, compared to the 2013 actual level.

PowerStream explained the large increase as being due to a decision to move towards a more proactive approach to vegetation management.

[57] Application Section III Tab 1 Schedule 1, p. 82 F-Energy Probe-7

Prior to 2012, vegetation management in PowerStream's south service territory was undertaken on a 5-year cycle and in the north was undertaken on a 3-year cycle.

In 2012, PowerStream decided to move to a more proactive vegetation management program and to a 3-year cycle across all service areas. PowerStream continued on the 3-year cycle in 2013 and 2014.

Following the 2013 ice-storm, PowerStream conducted an internal review of its vegetation management practices and is now proposing to:

(i) reduce the rear-lot cycle from 3-years to 2-years,
(ii) extend rural area cycles from 3-years to 4-years and
(iii) to maintain the urban area cycle at 3-years.

In addition to the changes to the cycles, PowerStream is also proposing to increase the size of the clearing area and to implement clearing techniques such as blue-skying, which is the approach where the utility cuts all the trees/limbs overhanging lines so that they don't overlap with the wires. In light of these proposed changes PowerStream is forecasting increased incremental costs for vegetation management. The tables below provide the incremental costs and the cumulative costs of the vegetation management budget.

Discussion and Submission

PowerStream stated that the changes to the vegetation management program that are proposed for the Test year period arise from the recommendations contained in the Navigant Consulting study titled *2013 Ice Storm Review* (Navigant Report) and the CIMA study titled *Hardening of Distribution Systems Against Severe Storms* (CIMA Report)[58].

OEB staff is concerned that the cost estimates that support the program increase are not based on a unit cost structure, but rather set through a high-level consultant's estimate (tripling of existing costs) and discussion with internal stakeholders and external contractors. This approach may lead to a potentially high variability of the actual costs as

[58] Application Section IV Tab 2 TCQ-2 G-SEC-19 Appendices A and B.

well as making it difficult for PowerStream and the OEB to track the progress of the program against its scope and costs.

While OEB staff acknowledges that the CIMA study and the Navigant study recommend an increase to the vegetation management program, these studies do not analyze net value benefits to customers and also recommend other remedies that may not be as costly to adopt as those proposed by PowerStream and which can be incorporated into the current cycles.

For example, the Navigant Study recommends identifying the geographic areas with significant tree coverage to assess vulnerabilities and augment the tree-trimming program (# 24), coordinating with municipalities to avoid tree-planting near power lines (#25) and encouraging customers to proactively perform tree-trimming on their properties (#26).

OEB staff notes that PowerStream hasn't presented a detailed analysis of these and other recommendations and stated that "at present,… does not have sufficient data by localized area to tailor vegetation management cycles to specific areas based on reliability performance. PowerStream is investigating how such data can be effectively captured and maintained, and such analysis may factor into the vegetation management program in future."[59]

OEB staff submits that the move from a 3-year cycle to a 2-year cycle for rear lot feeders has not been sufficiently justified. Neither study mentioned above recommends shortening of the 3-year cycle for the rear lot.

OEB staff believes that there will be a limited value provided to the customers in improved reliability of the proposed increases when compared to the incremental increases in spending by a total of $2.7 million in the 2016 to 2020 period. OEB staff therefore recommends maintaining the allowed vegetation management program cost recovery at the 2014 year actual level ($1.7M), with inflation increases which is in line with OEB staff's overall recommendation of an overall two percent OM&A increase.

[59] Interrogatory Response II-2-Staff-53-(d)

Monthly Billing

On April 15, 2015, the OEB announced that all electricity utilities are to move to monthly billing effective Jan 1, 2017. On August 21, 2015, PowerStream updated its application to reflect the incremental costs related to its move to monthly billing. PowerStream has budgeted $3.69 million in 2017 and increasing to $4 million by 2020. The incremental OM&A costs are[60]:

Table A-1	2017	2018	2019	2020
Labour	$ 1,138	$ 1,161	$ 1,187	$ 1,214
Bill Printing & Processing	$ 853	$ 865	$ 878	$ 891
Postage	$ 2,090	$ 2,184	$ 2,277	$ 2,380
Payment processing fees	$ 153	$ 155	$ 156	$ 158
Total Cost	**$ 4,233**	**$ 4,365**	**$ 4,498**	**$ 4,643**
Less Offsets:				
E-billing offset to postage	$ 184	$ 204	$ 224	$ 244
Bad Debts reduction	$ 353	$ 357	$ 360	$ 364
Total Offsets	**$ 537**	**$ 561**	**$ 584**	**$ 608**
Total Incremental OMA Costs	**$ 3,696**	**$ 3,804**	**$ 3,914**	**$ 4,035**

Discussion and Submission

OEB staff notes that the total incremental OM&A costs for monthly billing proposed by PowerStream for approval in this application are roughly 4 percent of PowerStream's total OM&A costs. This number seems on the high side, especially given the amounts for additional postage are running at $2 million or more in each of the years 2017 to 2020. OEB staff submits that the magnitude of the monthly billing cost recovery proposed by PowerStream provide further support for OEB staff's proposed 2 percent increase in OM&A in 2017, as this lower level of increase would provide PowerStream with a greater incentive to get these costs down, possibly through enhanced use of e-billing, greater mechanization of the process, or other similar approaches. OEB Staff notes that the move to monthly billing is a significant contributor to the reduced default working capital allowance of 7.5%

[60] Application Section A Tab 1 Schedule 1, p. 2.

3.7 Is the compensation strategy for 2016 – 2020 appropriate and does it result in reasonable compensation costs?

Background

PowerStream's compensation costs and the changes in these costs in the 2012 to 2020 period are summarized in the table below[61]:

PowerStream - Compensation Costs 2012-2020

	Employees			Total Salary & Wages ($000)			Total Benefits ($000)			Total Compensation ($000)		
	No.	Chg	Chg%	Amt.	Chg	Chg%	Amt.	Chg	Chg%	Amt.	Chg	Chg%
2012A	518.94			48,689			12,856			61,545		
2013BA	550.65	31.71	6.11	51,161	2472	5.08	15,492	2636	20.50	66,653	5108	8.30
2013A	533.10	-17.55	-3.19	51,152	-9	-0.02	13,926	-1566	-10.11	65,078	-1575	-2.36
2014A	544.09	10.99	2.06	54,479	3327	6.50	14,275	349	2.51	68,755	3677	5.65
2015F	567.45	23.36	4.29	54,886	407	0.75	15,444	1169	8.19	70,331	1576	2.29
2016F	566.87	-0.58	-0.10	56,811	1925	3.51	16,046	602	3.90	72,857	2526	3.59
2017F	561.87	-5	-0.88	58,460	1649	2.90	16,584	538	3.35	75,044	2187	3.00
2018F	562.87	1	0.18	60,078	1618	2.77	16,952	368	2.22	77,030	1986	2.65
2019F	564.87	2	0.36	61,654	1576	2.62	17,359	407	2.40	79,014	1984	2.58
2020F	562.87	-2	-0.35	62,942	1288	2.09	17,739	380	2.19	80,681	1667	2.11

PowerStream noted that it was planning an increase in full time equivalent employees (FTE) from the 2013 OEB approved level of 551 to 563 in 2020, an increase of 12 FTEs. OEB staff notes that this is an overall increase of 2.2% over the seven year period, though if the 2103 actual was used instead, the overall increase would be 5.6%.

PowerStream stated that it had engaged in collective bargaining with the Power Workers Union (PWU) in 2013 with the annual inflation adjustment under the collective agreement reached being 2.5% for 2013 and 2.75% for 2014-2015. PowerStream stated that the next round of bargaining would cover the period from April 1, 2016 to March 31, 2019.

PowerStream was asked through an interrogatory[62] the assumptions which it was making regarding the outcome of its next collective agreement with the PWU. PowerStream stated in response that there are no additional assumptions regarding the outcome of the next collective bargaining process in the 2016 to 2020 plan, except the annual inflation adjustments. In response to another interrogatory[63] PowerStream stated

[61] Derived from Application, Rate Proposal, Exhibit J Tab 2, p.2, Appendix 2-K.
[62] Application Section III Tab 1 Schedule 1, p.304, J-SEC-33.
[63] Responses to Interrogatories Section B Tab 3 Schedule 1, p.3 III-Staff-93

that it is not proposing any mechanism for true up specific to labour cost increases in connection with employees in the collective bargaining group or any other employee group.

PowerStream stated that average yearly incentive pay is commonly referred to at PowerStream as the Performance Incentive Program, in which senior management and all permanent non-union employees are eligible to participate. PowerStream stated that this program has not changed since its last rate application.

Discussion and Submission

OEB staff notes that PowerStream's total compensation costs are forecast to increase from $70,331,000 in 2015 to $80,681,000 in 2020. This represents a 14.7% increase over the five years of the Custom IR term, or roughly just under 3% per annum.

OEB staff notes however that the total compensation increases proposed in the 2016 to 2019 period are all well above the 2 percent range, ranging from a low of 2.6 percent in 2019 to a high of 3.6 percent in 2016.

OEB staff submits that as has been argued in the section above restricting PowerStream to an overall OM&A increase in the two percent range would provide it with an additional incentive to keep its compensation costs down in the Custom IR period.

3.8 Are the proposed other operating revenues for 2016 – 2020 appropriate?

Background

PowerStream provided the table below which summarized its proposed other operating revenues for the 2016 to 2020 period[64]

[64] Application Exhibit I Tab 1, p. 1

Other Operating Revenues ($)	2013 Board-Approved*	2013 Actuals	2014 Actuals	Bridge Year[3]	TEST YEAR 1	TEST YEAR 2	TEST YEAR 3	TEST YEAR 4	TEST YEAR 5
				2015	2016	2017	2018	2019	2020
Specific Service Charges	3,385,000	3,463,771	3,478,694	3,488,043	3,471,316	3,474,784	3,475,039	3,474,966	3,476,285
Late Payment Charges	2,500,000	1,923,553	2,182,713	2,022,227	2,038,288	2,076,532	2,045,682	2,053,501	2,058,572
Other Distribution Revenues	2,032,000	1,947,598	1,966,180	1,977,232	2,001,095	2,025,296	2,047,023	2,070,949	2,095,056
Other Income or Deductions	4,868,598	6,206,278	6,416,221	4,999,616	5,079,905	5,141,699	5,248,937	5,339,537	5,439,173
Total	12,785,598	13,541,200	14,043,807	12,487,117	12,590,603	12,718,312	12,816,681	12,938,953	13,069,086

* OEB 2013 Approved Budget is $ 9,844,598. Difference of $ 2,941,000 relates to Joint Services Revenue included in Other Operating Revenue.

OEB staff notes that PowerStream's Other Operating Revenue is anticipated to increase from $12,487,117 in the 2015 Bridge year to $13,069,086 in the 2020 Test year, an increase of less than 5% over five years.

Discussion and Submission

OEB staff does not have concerns with respect to PowerStream's proposed Other Operating Revenues, other than those related to specific service charges which are discussed in that section of the submission.

4. Load Forecast, Cost Allocation and Rate Design

4.1 Is the load forecast, including the application of CDM savings and setting of the savings references for the LRAMVA appropriate?

Background

PowerStream has documented its customer and load forecasting methodology in Exhibit H/Tab 1. The forecast consists of customer or connections, and the kWh and kW demand, as applicable, by customer class. Forecasts are provided for each year of the five-year CIR period from 2016 to 2020, as well as for the bridge year 2015.

PowerStream provided an updated load forecast in August.

Methodology

PowerStream has adopted an augmented approach in the preparation of its Application. PowerStream notes that in previous cost of service applications, consumption was

estimated in an aggregate manner, and then allocated to individual customer classes. In this Application, PowerStream has modelled consumption (and hence demand for applicable demand-billed customer classes) on a class-specific basis. The general approach is similar, where a multivariate regression technique is used for classes with significant customer and demand data. More customized approaches are used for smaller customer classes, such as Unmetered Scattered Load, Large Use, and Sentinel Lighting. After the forecasts are developed, further adjustments are made to account for kWh and kW impacts of CDM programs that occur in the bridge and test year periods.

PowerStream has documented the exogenous (i.e., regressor) variables used to explain customer and consumption data.

Consistent with OEB policy and practice, PowerStream has also made adjustments to the consumption and demand forecasts in the test period to reflect new CDM initiatives forecasted for the 2015-2020 period and which are beyond CDM impacts embedded in the historical data.

Discussion and Submission

PowerStream's customer and load forecasting approach in this application is consistent with the Filing Requirements. OEB staff also notes that the move to class-specific modelling is an augmentation of previous load forecasting approaches, and that similar approaches have been filed in cost of service applications, and have been accepted by the OEB in previous applications.

In general, OEB staff notes that PowerStream has attempted to derive models with unique and applicable explanatory variables. For example, heating degree days (HDD) are based on a 10°C base, while cooling degree days (CDD) use an 18°C threshold. One feature of some of PowerStream's models is the use of an autoregressive term, labelled as AR(1). What this means is that the forecasting error in a time period, while stochastic or random in nature, is influenced by the error in the immediately preceding period:

$$e_t = \beta e_{t-1} + x_t$$

OEB staff notes that this type of approach is recognized as methodologically appropriate. It is generally indicative of other explanatory variables which are unknown at this time.

From a practical perspective, the inclusion of the AR(1) term improves the fit and reduces the size of the regression errors, but does not bias the estimated model coefficients. However, OEB staff does provide some comments with respect to PowerStream's approach and included regressor variables.

First, the range of historical data used for the regression is monthly data from 2008 to 2014, a total of 84 observations. This would normally be sufficient. However, PowerStream is also forecasting for the bridge year (2015) and the five-year test period – six years or 72 monthly observations. The forecast period is almost as long as the regression period. Any errors in the modelling will, in all likelihood, be amplified the further out in the forecast. Since the customer and load forecast is not proposed to be updated during the test period, any errors in the forecasts at this time will persist for the whole period from 2016 to 2020, subject to any "re-opening" of the multi-year plan. It would be preferable, for multi-year applications such as Custom IR for utilities to use as long a historical series as is possible, while also recognizing that structural changes or data availability and quality must also be taken into account and may reduce the length of historical data to be used.

Second, PowerStream has included in a number of equations binary variables related to individual month/year periods or to individual months in all years. For example, in the residential equation, binary variables for the months of January (20)08, February (20)08, November (20)10 and June (20)14 are included. In addition, binary variables are included for the months of November and December across all years in the residential equation. All class-specific equations contain individual mixes of monthly and individual month/year binary variables.

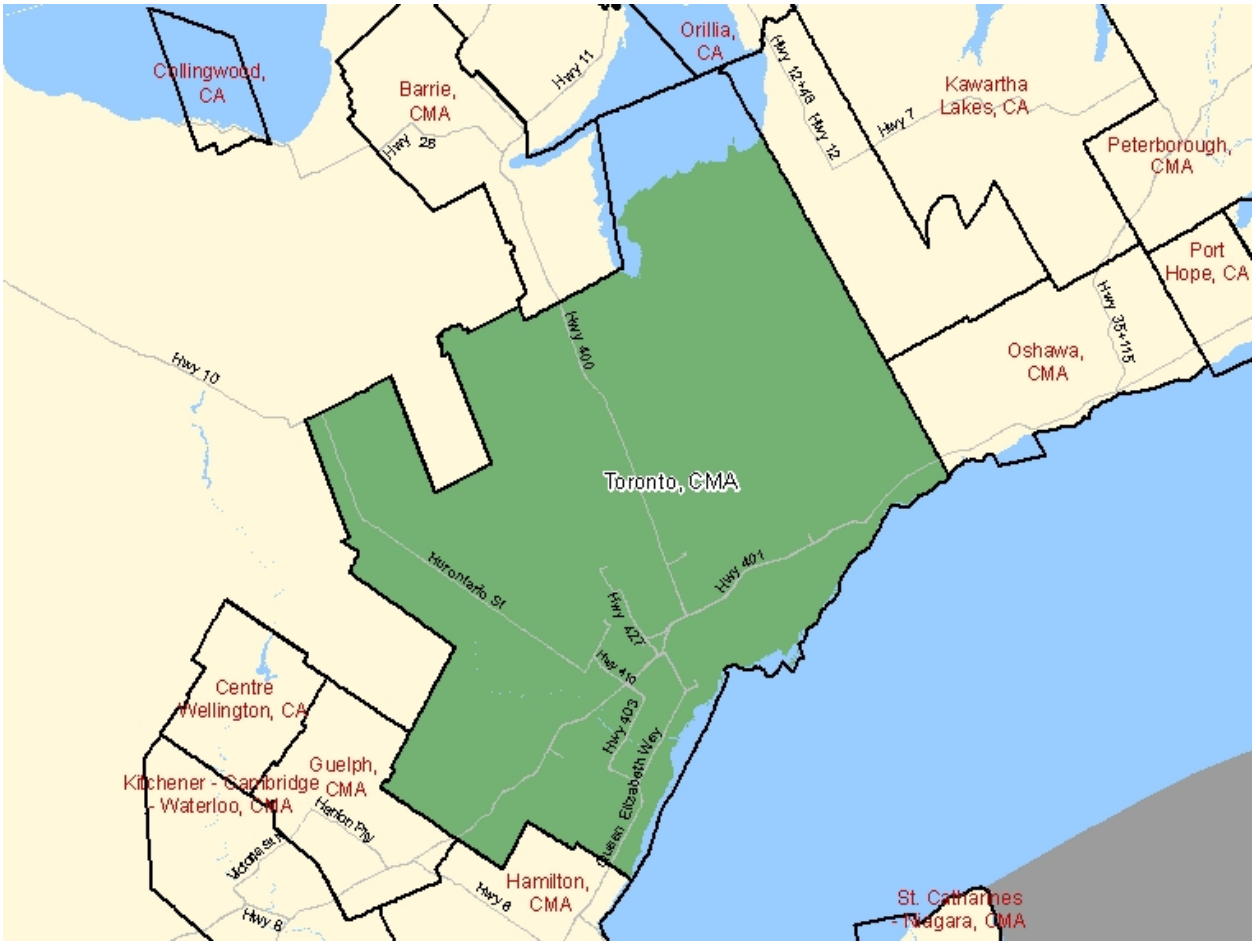
The effect of the use of binary variables is to reduce the regression errors. If associated with an individual data point, it makes the regression error zero. The reason for using such variables is to minimize the influence of outliers in biasing the estimated model. However, such binary variables should be used with caution, and only as necessary.

OEB staff submits the PowerStream has not adequately explained the need for the inclusion of monthly binary variables, and that the periods or months identified do not seem to be intuitive. (For example, a binary variable for December 2013 would likely be logically interpreted with the ice storm in that period, but the monthly specific binary

variables identified above are not explained, and the reason why these are “outliers” unexplained by the values of the regressor variables is not intuitive.)

OEB staff observes that PowerStream’s forecast for customers and consumption is largely dependent on the Toronto CMA (Census Metropolitan Area) population variable. PowerStream notes that the Toronto CMA largely corresponds with PowerStream’s service territory.

OEB staff disagrees. The Toronto CMA is shown in the following picture taken from publicly available information.



Source: https://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/details/page_Map_Carte_Detail.cfm?Lang=E&G=1&Geo1=CMA&Code1=535&Geo2=PR&Code2=01&Data=Count&SearchText=&SearchType=Begins&SearchPR=01&B1=All&Custom=&TABID=1&geocode=535

PowerStream's south service territory (Vaughan, Richmond Hill, Markham and Aurora) is included in the Toronto CMA. The Barrie CMA would cover a large portion of PowerStream's north area. With the exception of some of the outlying and smaller communities in the former Barrie Hydro's (PowerStream North) service territory such as Beeton, all of PowerStream would be covered by the sum of the Toronto and Barrie CMAs. In OEB staff's submission, a better explanatory variable would be the summation of the Toronto and Barrie CMAs, and for which adequate data should be available both historically and on a forecast basis.

Reliance on Toronto CMA data is likely to understate the growth in PowerStream's service territory. While PowerStream's South service territory is part of the Toronto CMA, it is still a minority of the area. Toronto and other more mature urban areas, with lower overall growth rates will dominate in the Toronto CMA data. This is not to say that there are not older and more mature cores in the communities that PowerStream serves, but it is also apparent that expansion in these communities has been more pronounced in the last few decades and, subject to economic factors, would be expected to continue. Communities in PowerStream's North territory, and specifically Barrie, have also experienced higher expansion. Reliance on Toronto CMA data has likely understated the growth in customers and electricity consumption and demand.

CDM Impacts

In its Argument-in-Chief, PowerStream states:

> The load forecasts have been adjusted to reflect the future impacts of anticipated CDM activity. The impacts of all past CDM program activity including measure persistency are embedded in the actual sales data and captured in the regression models. The load forecasts for the rate plan years were only adjusted by the estimated future CDM impacts based on PowerStream's 2015 – 2020 CDM plan approved by the IESO.[65]

OEB staff observes that none of PowerStream's class-specific equations include historical CDM as a separate regressor variable. It is true that historical CDM impacts are reflected in the actual data and will be captured in the estimated regression models; the

[65] Argument-n-Chief, December 14, 2015, para. 86

impacts will largely be through the coefficients of other variables although some impact will likely be captured in the residuals.

Without all of the historical data and extensive econometric analysis, it is not possible to ascertain exactly to what extent and where the CDM impacts are captured by other variables and reflected in estimated coefficients. However, multicollinearity amongst variables may give guidance here. Over the regression period from 2008 to 2014 inclusive, CDM has shown steady increases due to the promotion of CDM programs by the Government the OPA/IESO and by the distributors. Over the same period, population and economic activity have also generally trended upwards. Due to their very nature, correlation between binary variables with CDM is likely low, and accordingly OEB staff postulates that very little of the impact of the omitted CDM variable is reflected in their coefficients.

Since CDM acts to decrease demand, OEB staff suggests that the omission of CDM as an explicit variable, and capture of its impact by other variables will likely be reflected in lower coefficients for population or economic activity, variables with which the CDM variable is likely to be correlated with over the regressor period. This is very much the case as HDD, CDD and population or economic activity variables are the only non-binary variables in the class-specific models.

As noted, PowerStream has made manual adjustments to reflect the impacts of new CDM initiatives undertaken in 2015 and planned for the test period 2016 to 2020 in accordance with PowerStream's CDM plans as filed and reviewed with the IESO.

Half-Year Rule Effects

PowerStream notes that the CDM adjustments take into account the "half-year" rule in the first year of each year's CDM program, reflecting the fact that the CDM targets are annualized but that the real impacts will not be full year in the first year. OEB staff submits that these adjustments are consistent with OEB policy.

However, OEB staff is concerned overall with the combined approach based on the forecasted results. As has been noted on the record, PowerStream has documented continual growth in customers and connections for most classes and overall, while consumption and demand declines persistently over the test period. In aggregate,

customers/connections increases by about 1.8% per year, while aggregate consumption decreases by about 0.40% (geometric mean). This implies that the CDM impact is about -2.2% per annum in aggregate. The impact on individual customer classes varies.

While the adjustment for new CDM is appropriate, OEB staff is concerned that the implicit reflection of historical CDM on regressor coefficients, along with the forecasts of population and economic activity, persists historical CDM activity. OEB notes that PowerStream stated in its evidence that "the impacts of 2011-2014 CDM programs were already implicitly reflected and embedded in the actual sales data that are the basis for the regression load forecast."[66] The net result is to understate the impact of population and economic activity and to overstate the impact of both historical and future CDM on the forecasts. This, in OEB staff's view, may be leading to the situation of persistent demand and consumption decline despite healthy customer growth in PowerStream's service territory.

Conclusion

OEB staff submits that given the growth in customers and connections forecast by PowerStream and discussed above, the persistent decline in consumption and demand forecast by PowerStream over the test period appears to be somewhat anomalous.

OEB staff submits that given this anomaly the OEB should use PowerStream's 2015 actual load rather than the forecast for rate-setting purposes in 2016 and consider modest increases in the forecast in subsequent years. OEB staff considers the anomalous nature of PowerStream's load forecast as being another justification for the OEB to only approve the Application for three years.

[66] Exhibit H Tab 2 p. 3.

4.2 Are the proposed billing determinants appropriate?

Background

PowerStream provided its proposed billing determinants using the results from its new forecasting approach to load, customers and connections.

In August, PowerStream updated its billing determinants based on the August 2015 Conference Board of Canada economic forecast.

Discussion and Submission

Subject to the adjustments noted in OEB staff's submission on the PowerStream's load forecast, OEB staff accepts PowerStream's proposed billing determinants.

4.3 Are the inputs to the cost allocation model appropriate?
4.4 Are the costs appropriately allocated?

Background

PowerStream stated that it had followed the guidance in the *"Report of the Board: Review of Electricity Distribution Cost Allocation Policy"* (EB-2010-0219) dated March 31, 2011 and had prepared a Cost Allocation Study for each of the five test years using the OEB's cost allocation model. PowerStream noted that it had engaged the services of Elenchus Research Associates Inc. to assist with updating of load profiles for the load forecasts of the test years and to review the 2016 to 2020 cost allocation models.

PowerStream confirmed that the OEB's cost allocation models had been used to determine the proportion of its total revenue requirement that is recoverable from each rate class in each rate year.

Discussion and Submission

OEB staff submits that PowerStream's inputs to the cost allocation model are appropriate and that the costs are appropriately allocated, subject to the discussion of the appropriateness of the revenue-to-cost ratios in section 4.5 of this submission.

4.5 Are the revenue-to-cost ratios for all rate classes over the 2016 – 2020 period appropriate?

Background

PowerStream's proposed revenue-to-cost ratios are as shown in the table below[67]:

Class	Proposed Revenue-to-Cost Ratios					Policy Allowed Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	%
Residential	102.4	103.6	104.6	105.4	106.1	85 - 115
GS < 50 kW	99.9	100.7	100.9	101.1	101.1	80 - 120
GS > 50 kW	96.6	94.3	92.7	91.4	90.4	80 - 120
Large User	85.0	85.0	85.0	85.0	85.0	85 - 115
Street Lighting	88.1	85.1	82.4	81.7	81.0	70 - 120
Sentinel Lighting	84.7	83.6	83.5	83.2	83.2	80 - 120
Unmetered Scattered Load (USL)	91.3	94.8	96.3	97.2	98.0	80 - 120

Discussion and Submission

OEB staff notes that PowerStream's proposed revenue-to-cost ratios are roughly in the middle of the allowed range for the Residential and GS<50kW classes and below the average for the other classes, except for the Large User class which is at the bottom end of the range.

PowerStream provided an explanation for the Large User class being at the bottom of the range as being due to a revenue allocation adjustment being required for the Large Use customer class, to increase the revenues and bring the revenue-to-cost ratios (which were in the 65 to 71 percent range) within the Policy Allowed Range. PowerStream proposed that the revenue-to-cost ratio be increased to the bottom of the Policy Allowed Range and that since the Residential customer class has the highest revenue-to-cost ratio, the additional revenue had been credited to this customer to move its revenue-to-cost ratio closer to 1.00.

OEB staff notes that the following revenue-to-cost ratios were approved in PowerStream's previous cost of service proceeding (EB-2012-0161)[68]:

[67] Application, Exhibit L, Tab 1, p.2, Table 2.
[68] PowerStream Inc. EB-2012-0161 Settlement Agreement Filed: October 24, 2012, p. 27, Table 7.1.

Residential		102.3
GS < 50 kW		98.3
GS 50 to 4,999 kW		97.5
Large Use		85.2
USL		103.8
Sentinel Lighting		94.7
Street Lighting		89.2

OEB staff notes that the proposed 2016 ratios are all reasonably close to these levels with the exception of the USL class which is reduced from 103.8 to 91.3 percent and the sentinel lighting class which is reduced from 94.7 to 84.7 percent.

OEB staff further notes that under PowerStream's proposal, the residential class revenue-to-cost ratio will increase from 102.4 percent in 2016 to 106.1 percent in 2020 and the GS<50 kW ratio from 99.9 percent in 2016 to 101.1 percent, while the GS>50 kW ratio is proposed to decrease from 96.6 percent in 2016 to 90.4 percent in 2020, the Large User ratio is held constant at the 85% minimum and the street lighting ratio is proposed to drop from 88.1 percent in 2016 to 81 percent in 2020.

PowerStream was asked to explain in an interrogatory why the proposed revenue to cost ratios for some customer classes are moving away from 100% over the test years.[69] PowerStream explained this as the result of changes in the allocated costs and not due to changes in relative rates, or any attempt to re-balance Revenue-to-Cost ratios. PowerStream further stated that it does not propose to adjust Revenue-to-Cost ratios which are within the OEB target range.

OEB staff is concerned about the differing trends in these ratios with the smaller customer class ratios generally increasing, while the larger class customer ratios are decreasing. While OEB staff is not recommending any changes in these ratios, OEB staff does believe that PowerStream should provide a more extensive explanation for these differentials should they persist in its next cost-of-service application.

[69] Application Section III Tab 1 Schedule 1, p. 335 L-VECC-34

4.6 Are PowerStream's proposed charges for street lighting appropriate?

Background

PowerStream filed its Custom IR application with the OEB on May 22, 2015. On June 12, 2015, the OEB issued a new cost allocation policy for the streetlighting rate class. In response to an OEB staff interrogatory,[70] PowerStream stated that it had updated the application to reflect the new cost allocation policy for the streetlighting class.

Discussion and Submission

OEB staff submits that as PowerStream has updated its application to reflect the OEB's new cost allocation policy, its proposed charges for street lighting are appropriate.

4.7 Are the proposed fixed and variable charges for all rate classes over the 2016 – 2020 period appropriate?

Background

PowerStream stated that its proposed distribution rates have been set to recover the base revenue requirement for each of the test years 2016 to 2020 and reflect the revenue-to-cost ratios outlined in section 4.5.

PowerStream noted that the current fixed/variable split in distribution revenue was approved by the OEB in its previous cost of service application, as shown below[71]:

[70] EB-2015-0003 PowerStream Inc. *Interrogatory Responses* Section B, Tab 2, Schedule 1, p.38 Filed August 21, 2015 (Interrogatory Responses).
[71] Interrogatory Responses, Section A Tab 1 Schedule 1, p. 8.

	2013 Board Approved	
Customer Class	Variable	Fixed
Residential	44.9%	55.1%
GS<50 kW	59.8%	40.2%
GS>50 kW	83.1%	16.9%
Large Use	51.3%	48.7%
Unmetered Scattered Load	46.5%	53.5%
Sentinel Lights	67.0%	33.0%
Street Lighting	48.4%	51.6%
	58.3%	**41.7%**

PowerStream stated that it had followed the residential rate design requirements outlined in the policy issued by the OEB on April 2, 2015. The table below provides the proposed 2016 to 2020 fixed/variable splits:

	2016		2017		2018		2019		2020	
Customer Class	Variable	Fixed	Variable	Fixed	Variable	Fixed	Variable	Fixed	Variable	Fixed
Residential	43.4%	56.6%	32.1%	67.9%	21.1%	78.9%	10.4%	89.6%	0.0%	100.0%
GS<50 kW	58.7%	41.3%	62.6%	37.4%	64.0%	36.0%	64.9%	35.1%	65.4%	34.6%
GS>50 kW	84.8%	15.2%	86.1%	13.9%	86.5%	13.5%	86.8%	13.2%	87.1%	12.9%
Large Use	60.8%	39.2%	65.3%	34.7%	67.6%	32.4%	69.4%	30.6%	70.8%	29.2%
Unmetered Scattered Load	47.4%	52.6%	47.5%	52.5%	47.5%	52.5%	47.4%	52.6%	47.3%	52.7%
Sentinel Lights	47.8%	52.2%	48.0%	52.0%	48.0%	52.0%	48.0%	52.0%	48.0%	52.0%
Street Lighting	40.0%	60.0%	38.5%	61.5%	36.8%	63.2%	36.7%	63.3%	36.0%	64.0%
	57.8%	**42.2%**	**52.5%**	**47.5%**	**46.8%**	**53.2%**	**41.1%**	**58.9%**	**35.6%**	**64.4%**

PowerStream stated that for the residential fixed monthly charge transition, it was proposing a four-year implementation period commencing in 2017 and reaching a 100% fixed charge in 2020. PowerStream proposed the one year delay due to concerns with the total bill impacts in 2016 for the Residential 10th percentile consumption level already discussed in section 1.3 of this submission. PowerStream noted that the 2016 bill impacts for these customers are already above 10% before any increase is considered in the fixed charge portion of the distribution charge.

Discussion and Submission

OEB staff notes that the fixed/variable ratios proposed by PowerStream, as shown in the table above move from an overall 42/58 fixed/variable percentage split in 2016 to a 64/36 split in 2020 with residential customers at a 100% fixed charge by 2020.

OEB staff notes that the OEB's Filing Requirements[72] state regarding the transition to a fully fixed monthly distribution service charge for residential customers that it is to be implemented over a period of four years beginning in 2016, not 2017 as PowerStream has proposed. However, the Filing Requirements go on to note that;

> Due to timing, distributors that have filed cost of service applications in the first half of 2015 for January 1, 2016 rates may request an exception for 2016 and propose a transition beginning with 2017 rates. All other applicants are expected to file proposals to implement this policy

While in OEB staff's view it is preferable to begin the implementation to residential fixed rates in 2016 as most distributors are doing, OEB staff accepts PowerStream's proposal as it is consistent with the approach outlined in the Filing Requirements.

OEB staff therefore submits that the movements in the fixed/variable split proposed by PowerStream are reasonable and in-line with OEB policy and should be approved by the OEB.

4.8 Are the proposed LV Rates appropriate?

Background

PowerStream stated that it has some embedded supply points from Hydro One distribution assets and that it treats Hydro One's LV charges as a "pass-through," as prescribed by Article 220 of the OEB's Accounting Procedures Handbook.

PowerStream further stated that its proposed 2016 LV charges are based on the 2016 forecast of LV costs of $4,654,991 and that these costs have been allocated to the customer classes based on the methodology previously approved in PowerStream's 2013 rate model, which is based on the OEB's 2006 EDR Model. The cost allocation is based on transmission connection amounts. The forecasted LV costs for 2017 through 2020 are allocated on the same basis, with forecasted billing determinants used to calculate the LV rate. PowerStream proposed that the LV rates would be among the items to be updated as part of the annual adjustment process.

[72] July 16, 2015 *Filing Requirements For Electricity Distribution Rate Applications -2015 Edition for 2016 Rate Applications Chapter 2 Cost of Service* Section 2.8.2, p.57

Discussion and Submission

OEB staff submits that PowerStream's proposed LV rates are appropriate as they are calculated using a methodology which is consistent with that previously approved by the OEB.

4.9 Are the proposed Retail Transmission Service Rates appropriate?

Background

PowerStream stated that it had updated its retail service transmission rates based on its forecasted wholesale costs using the most current approved uniform transmission rates and Hydro One Distribution sub-transmission rates. PowerStream proposed that these rates would be among the items to be updated as part of the annual adjustment process.

Discussion and Submission

OEB staff submits that PowerStream's proposed retail transmission service rates are appropriate subject to any updates that may be necessitated by any changes to the current approved uniform transmission rates and Hydro One Distribution sub-transmission rates that may occur prior to the finalization of its 2016 rates by the OEB.

4.10 Are the proposed specific service charges for miscellaneous services over the 2016 – 2020 period reasonable?

Background

In its February 24, 2015 rate proposal to intervenors, PowerStream stated that it was not preparing to alter the list or change the charges during the Custom IR term.

In response to an interrogatory during this process,[73] PowerStream stated that it had not done an analysis of the cost of providing these services and had not considered increasing the charges each year to at least cover part of the increase associated with inflation and wage increases.

[73] Application Section III, Tab 1, Schedule 1, p.254 I-Energy Probe-30

PowerStream stated that it had accepted the OEB-established default rates as reasonable. PowerStream also stated in response to another interrogatory[74] that it would be willing to agree to a similar arrangement to that in the EB-2014-0002 Horizon Utilities Corporation Settlement Proposal establishing that Horizon Utilities would retain an external consultant to conduct a study of its specific service charges for the purpose of determining appropriate levels of the charges.

Subsequent to the filing of the application with the OEB, an OEB staff interrogatory[75] asked PowerStream to state why it believed that it was reasonable to leave its specific service charges unchanged for the five-year period of the application. PowerStream stated that it had provided an analysis of these charges in response to another interrogatory[76] and based on this analysis it appeared that the actual cost of providing the services covered by the specific service charges may be significantly greater than the costs recovered at the current rates. PowerStream accordingly expressed the belief that it would be reasonable to update these rates and provided calculations of the updated charges.

On November 5, 2015, the OEB announced the initiation of a comprehensive policy review of miscellaneous rates and charges applied by electricity distributors for specific activities or services they provide to their customers.[77]

Discussion and Submission

OEB staff submits that the updated specific service charges that were calculated by PowerStream during the interrogatory process and which it stated would be reasonable to use for these rates should be accepted by the OEB.

These would result in the following changes in existing charges[78]:

[74] Application Section III, Tab 1, Schedule 1, p.255 I-Energy Probe-31
[75] Application Section B, Tab 2, Schedule 1, p.31 II-1-Staff-22
[76] Application Section B, Tab 2, Schedule 6, p. 2 II-SIA-3
[77] Ontario Energy Board *Review of Miscellaneous Rates and Charges (EB-2015-0304)* November 5, 2015 (Miscellaneous Charges Review).
[78] Application Section B, Tab 2, Schedule 6, p. 2 II-SIA-3

Current Charge	II-SIA-3
$ 15.00	$ 20.00
$ 30.00	$ 45.00
$ 65.00	$ 90.00
$ 165.00	$ 240.00
$ 185.00	$ 270.00
$ 415.00	$ 585.00
$ 500.00	$ 560.00

The impact on base revenue requirement is shown in the table below[79]:

	Curent Rates	Updated Rates	Change, $
2016	$3,471,316	$5,097,408	$1,626,092
2017	$3,474,784	$5,102,362	$1,627,578
2018	$3,475,039	$5,102,379	$1,627,340
2019	$3,474,966	$5,101,970	$1,627,004
2020	$3,476,285	$5,103,592	$1,627,307

OEB staff notes that PowerStream's proposed updates are based on its use of its current actual vehicle and labour rates and the calculation methodology from the Distribution Handbook. While OEB staff has some concerns that the methodology in the Distribution Handbook may need to be updated as part of the OEB's policy review, OEB staff believes that these charges would be a better reflection of costs today than the original 2006 Rate Handbook charges which are now ten years old.

OEB staff notes that PowerStream's proposal did not include an update to its specific charge for access to power poles of $22.35. OEB staff is mindful of the fact that this charge has recently been the subject of updates in a number of proceedings including in the Custom IR applications of Toronto Hydro-Electric System Limited and Hydro Ottawa Limited. OEB staff would be concerned that this rate would remain in effect for another

[79] Application Section B, Tab 2, Schedule 6, p. 2 II-SIA-3

five years under such circumstances, but OEB staff notes that the first component of the OEB proceeding referenced above is a prioritized review of wireline pole attachments.[80]

OEB staff accordingly submits that while it believes PowerStream's revised specific service charges proposal discussed above should be accepted that the OEB should require that PowerStream incorporate into its annual adjustment process through the Custom IR period any determinations arising from the Miscellaneous Charges Review that would impact any of its specific service charges.

4.11 Are the proposed line losses over the 2016 – 2020 period appropriate?

Background

PowerStream stated that it had calculated the billing loss adjustment factors pertaining to secondary-metered customers with demand less than 5,000 kW in accordance with the OEB's Filing Requirements and that its proposed loss adjustment factors are based on the average of the three most recent complete years from 2011 to 2013. PowerStream proposed to use the current OEB approved Supply Facility Loss Factor (SFLF) of 1.0045. The SFLF is also proposed to be used as the current OEB approved loss adjustment factor for primary metered Large Use (>5000 kW demand customers) as well as the current OEB approved secondary metered loss factor of 1.0100. PowerStream's proposed loss adjustment factors are shown in the table below:

[80] Miscellaneous Charges Review, p.2.

Biling Loss Factors	2013 Approved	Proposed 2016 -2020 Test Years
Total Loss Factor - Primary Metered Customer < 5,000 kW	1.0243	1.0266
Total Loss Factor - Secondary Metered Customer < 5,000 kW	1.0345	1.0369
Total Loss Factor - Primary Metered Customer > 5,000 kW	1.0045	1.0045
Total Loss Factor - Secondary Metered Customer > 5,000 kW	1.0145	1.0145
Supply Facilities Loss Factor	1.0045	1.0045
Distribution Loss Factor - Primary Metered Customer < 5,000 kW	1.0197	1.0220
Distribution Loss Factor - Secondary Metered Customer < 5,000 kW	1.0299	1.0323
Distribution Loss Factor - Primary Metered Customer > 5,000 kW	1.0000	1.0000
Distribution Loss Factor - Secondary Metered Customer > 5,000 kW	1.0100	1.0100

Discussion and Submission

OEB staff notes that PowerStream's proposed loss factors are either remaining the same as the 2013 approved levels or are increasing slightly. While OEB staff does not oppose PowerStream's proposal regarding its line losses, OEB staff notes that PowerStream is not anticipating any reductions in its levels of line losses in spite of the significantly higher proposed levels of capital expenditures in the next five years. The OEB may wish to require PowerStream to do a study of losses prior to the next rebasing application.

5. Deferral and Variance Accounts

5.1 Should the existing deferral and variance accounts proposed for continuation be continued?

Background

PowerStream did not propose in its Rate Proposal to intervenors of February 24, 2015 to discontinue any existing deferral and variance accounts. PowerStream was asked through an interrogatory[81] whether it was requesting the closure of any existing deferral or variance accounts.

[81] Application Section III Tab 1 Schedule 1, p.351 N-Energy Probe-51.

In its response, PowerStream noted that two existing deferral and variance accounts were no longer active and the residual balances had been included for disposition in the current application. As such, the following two accounts could be closed:

- 1508 Other Regulatory Assets, Sub-account IFRS Transition Costs Variance; and
- 1555 Smart Meter Capital and Recovery Offset Variance Account, Sub-accounts Stranded Meter Costs.

Discussion and Submission

OEB staff submits that the above two accounts should be closed.

5.2 Should the OEB approve any new deferral or variance accounts?

Background

PowerStream requested a new deferral account to capture the net book value of meters removed from service to comply with the OEB's May 21, 2014 Distribution System Code ("DSC") amendment requiring all General Service over 50 kW customers to have meters capable of recording time-of-use electricity consumption.

Discussion and Submission

OEB staff notes that the OEB has already established Account 1557 Meter Cost Deferral Account for the tracking of incremental capital and OM&A costs. This is further discussed in the OEB's March 2015 "Accounting Procedures Handbook Guidance."

OEB staff accordingly submits that PowerStream's request should not be accepted by the OEB.

5.3 Are the balances and the proposed methods for disposing of the balances in the existing deferral and variance accounts, appropriate (such as Account 1508)?

Background

PowerStream stated that it was seeking disposition of deferral and variance account ("DVA") balances as at December 31, 2014 plus accrued interest up to December 31, 2015, totalling a net amount of $10.8 million to be recovered from customers. These

amounts are summarized in the table below with positive amounts denoting recovery from customers (debit) and negative amounts denoting amounts payable to customers (credit):

Summary of DVA Amounts for Disposition ($)

Account Descriptions	Account Number	Total Claim
Group 1 Accounts		
LV Variance Account	1550	- 251,135
SME Variance account	1551	96,857
RSVA - Wholesale Market Service Charge	1580	- 6,133,746
RSVA - Retail Transmission Network Charge	1584	4,026,087
RSVA - Retail Transmission Connection Charge	1586	1,487,908
RSVA - Power (excluding Global Adjustment)	1588	637,394
RSVA - Global Adjustment	1589	10,422,091
Recovery of Regulatory Asset Balances	1590	2
Group 1 Sub-Total (including Account 1589 - Global Adjustment)		10,285,458
Group 1 Sub-Total (excluding Account 1589 - Global Adjustment)		- 136,633
RSVA - Global Adjustment	1589	10,422,091
Group 2 Accounts		
Other Regulatory Assets - Sub-Account - OEB Cost Assessments /Hone charges	1508	273,870
Other Regulatory Assets - Sub-Account - Pension Contributions	1508	-
Other Regulatory Assets - Sub-Account - Deferred IFRS Transition Costs	1509	- 146,323
Other Regulatory Assets - Sub-Account - Incremental Capital Charges	1508	288,985
Retail Cost Variance Account - Retail	1518	217,879
Renewable Generation Connection OM&A Deferral Account	1532	281,576
Smart Grid OM&A Deferral Account	1535	2,304,057
Smart Grid Funding Adder Deferral Account	1536	- 525,761
Retail Cost Variance Account - STR	1548	1
RSVA - One-time	1582	2
Other Deferred Credits	2425	2
Group 2 Sub-Total		2,694,288
PILs and Tax Variance for 2006 and Subsequent Years	1592	- 1,012
Total of Group 1 and Group 2 Accounts (including 1562 and 1592)		12,978,735
LRAM Variance Account	1568	- 504,257
Special purpose Charge Assessment Variance Account	1521	
Total including Account 1568 and 1521		12,474,478
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Capital[10]	1555	-
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Recoveries[10]	1555	-
Smart Meter Capital and Recovery Offset Variance - Sub-Account - Stranded Meter Costs[10]	1555	599,111
Smart Meter OM&A Variance[10]	1556	-
		-
IFRS-CGAAP Transition PP&E Amounts Balance + Return Component[9]	1575	- 2,392,747
Accounting Changes Under CGAAP Balance + Return Component[9]	1576	-
Total Amount for Disposition		**10,680,841**

PowerStream stated that the Group 1 and 2 total for disposition is net of the following adjustments:

- Account 1508 sub-account OPEB Deferral Account in the amount of $2,062,300 credit has been excluded from the amount for disposition. PowerStream noted that as per the OEB-approved accounting order (EB-2012-0161), this amount, if disposed, is to be amortized over the average employee remaining service years, resulting in a fairly small amount. PowerStream stated that it proposed to defer recovery and leave this amount to absorb any further actuarial revaluation.
- Account 1508 sub-account CGAAP-CWIP Differential Deferral Account in the amount of $2,759,700 debit has been excluded from the amount for disposition. PowerStream stated that the reason for this is that this balance is already being recovered through approved rate riders which run to December 31, 2016.
- Account 1508 sub-account Incremental Capital Module (ICM) amounts have been excluded from the amount for disposition and replaced with the ICM true-up amount.
- Green Energy deferral accounts for capital, account 1531 Renewable Generation Enabling Investments deferral and account 1534 Smart Grid capital deferral have been removed as these amounts are added to fixed assets and included in rate base. Account 1536 Smart Grid funding adder has been adjusted to reflect the true up amount.

PowerStream stated that for Group 1 and 2 and account 1589 Global Adjustment, the proposed disposition period is two years to reduce the rate impact for customers . For other accounts (1568 and 1575), the proposed disposition period is one year, which is consistent with the OEB's guideline.

IFRS Transition Accounts

PowerStream noted that it currently has several deferral accounts related to the transition to IFRS that were approved in its 2013 Cost of Service application:

- Account 1508 Subaccount – Post Retirement Employee Benefits ("PREB")
- Account 1508 Subaccount – CGAAP CWIP Differential ("CWIP")
- Account 1575 IFRS-CGAAP Transitional PP&E Amounts ("PP&E Amount")

PowerStream stated that it does not propose to dispose of the PREB account at this time as it is meant to track amounts resulting from actuarial revaluations and allow them to be recognized over a longer period than is the case under IFRS, i.e. the average remaining service life of the employees. PowerStream noted that the magnitude of the amount is small when converted to an annual amount on the service life basis.

PowerStream stated that there are approved rate riders for recovery of the CWIP amount that are in effect until December 31, 2016. Accordingly this balance has been excluded from the amounts for disposition.

PowerStream noted that the PP&E amount was deducted from rate base in the 2013 COS and in order to amortize that amount over four years, ¼ of the PP&E amount was deducted from depreciation expense in calculating the 2013 Test Year revenue requirement. PowerStream stated that in this application, it has not made any adjustment to rate base or revenue requirement for the remaining balance at December 31, 2015 of $2,392,750 credit (refund to customers) and that this amount has been included in the DVA amounts for disposition as a separate rate rider.

Discussion and Submission

OEB staff submits that PowerStream's proposals for the disposition of the existing DVA balances are reasonable, subject to PowerStream's two commitments it made as a result of OEB staff questions at the Technical Conference. These were first to recalculate the rate riders using the billing determinant quantities excluding wholesale market participant customers' quantities and second to update the evidence using the most recent version of the deferral and variance account workform to incorporate the appropriate treatment of wholesale market participants.[82]

Subject to PowerStream's confirmation that these two updates will be incorporated as part of the draft rate order process, OEB staff has no additional concerns with PowerStream's evidence in this area.

[82] Transcript, Technical Conference, September 9, 2015, pp. 71-72.

OEB staff notes that PowerStream was asked through an interrogatory about the status of its OPEB Deferral Account[83] In its initial response[84] and in a subsequent updated response,[85] PowerStream provided a forecast of the OPEB amount in rates for 2015 and 2016, but not the amounts paid. Subsequently, PowerStream provided the amounts paid in response to a question at the Technical Conference[86] Based on this response, PowerStream is projecting a 2016 variance of $715,000 more collected than paid. As this amount is below PowerStream's materiality threshold of $935,000, no change from the accrual method is proposed by OEB staff at this time.

- All of which is respectfully submitted –

[83] Interrogatory II-1-Staff-30
[84] August 21, 2015
[85] September 4, 2015
[86] Technical Conference Transcript September 9, 2015, p.7.