<u>Exhibit 7</u>:

COST ALLOCATION

Exhibit 7: Cost Allocation

Tab 1 (of 1): Cost Allocation Model

OVERVIEW OF COST ALLOCATION

This exhibit will provide the history of Bluewater Power's cost allocation results, and detail the results proposed for the 2013 Test Year.

History of Bluewater Power's Cost Allocation

Bluewater Power completed and filed its initial cost allocation study in January 2007, following the Boards *Cost Allocation Informational Filing Guidelines for Electricity Distributors* issued on November 15, 2006. This informational filing was used as the basis for the rate design proposed in Bluewater Power's 2009 Rate Application (EB-2008-0221). The cost allocation model was adjusted to reflect the movement of some of the customers in the Intermediate and Large Use rate class to better represent the load profiles of each of these rate classes. In addition, the distribution revenue Transformer Allowance Credit was removed from both the costs and revenues in the Cost Allocation Model.

Table 1 below details the final revenue-to-cost ratio's that were approved by the OEB as part of the 2009 rate rebasing.

Table 1 – Revenue-to-Cost ratio's implemented in 2009 Rates

Customer Class Name	Revenue to Cost Ratio
Residential	1.03
General Service <50 kW	1.10
General Service 50 to 999 kW	0.90
General Service 1,000 to 4,999 kW	1.01
Large	1.07
Unmetered Scattered Load	0.70
Sentinel Lighting	0.47
Street Lighting	0.56
TOTAL	1.00

At that time, the USL, Sentinel and Streetlighting categories were well below the target ranges established by the Board which were targeted to be between 0.80 and 1.20 for USL, and between 0.70 and 1.20 in the case of sentinel and streetlighting. As a result, section 7.1 of the 2009 Settlement Agreement detailed the following:

> *"The Parties further agree that for the purpose of designing the 2009 rates the R/C Ratios targets obtained from the Modified CAIF should be adjusted to reflect further movement towards unity as follows:*
>
> - *The R/C Ratio target for the GS<50kW class is reduced from 1.12 to 1.10;*
> - *The R/C Ratio target for the GS>50kW class is increased from 0.88 to 0.90;*
> - *The R/C Ratio targets for the lighting categories (USL, Streetlight, and Sentinel) to move one quarter of the way to a R/C Ratio of .85, with the excess revenue allocated to the Large Use class for the Test Year.*
>
> *The results of these adjustments are set out in the table below.*
>
> *Bluewater Power has agreed that: in its 2010 Rate Application it will move each of the lighting categories one-third of the way to 0.85; in its 2011 Rate Application it will move each of the lighting categories one-half of the way to 0.85; and in its 2012 Rate Application it will each of the lighting categories to a R/C Ratio of 0.85. In each year, the excess revenue will be allocated to the class with the highest R/C Ratio until it is no longer the highest, and then proportionately between the two or more classes with the highest R/C Ratios so that their R/C Ratios remain equal with each other, and so on, from year to year."*

Bluewater Power in each of its 2010, 2011 and 2012 IRM rate applications made the above noted adjustments and Table 2 details the Revenue-to-cost ratio's as per the 2012 IRM rate application.

<u>Table 2 – 2012 IRM revenue-to-cost Ratio's</u>

Rate Class	2012 IRM Revenue Cost Ratio
Residential	1.03
General Service Less Than 50 kW	1.03
General Service 50 to 999 kW	0.90
General Service 1,000 to 4,999 kW	1.01
Large Use	1.03
Unmetered Scattered Load	0.85
Sentinel Lighting	0.85
Street Lighting	0.85

Another item in the Settlement Agreement Section 7.1 that was agreed to by all Parties related to Bluewater Power undertaking a:

> "*study of its costs to serve its customers in the Large Use Rate classes. The purpose of the study derives from the fact that Bluewater Power did not fully update its 2006 Cost Allocation Model (based on 2004 actual expenses) for the 2009 Test Year. Instead Bluewater Power adjusted the Cost Allocation Model to reflect the impact of the loss of two customers. The study will assist both in determining the costs to serve customers in this rate class and determining the balance of rates among all rate classes in the future. The study shall be filed as evidence in Bluewater Power' next rebasing rate application.*"

Bluewater Power engaged Elenchus to perform a review of what would be required of a large use study, and Elenchus has provided that review in Attachment 2 to this Schedule.

Bluewater Power's 2013 Cost Allocation Study

The Board issued a *Report of the Board – Review of Electricity Distribution Cost Allocation Policy* dated March 31, 2011 followed by Board Staff issuing a *Staff Report to the Board – Implementation of the Revisions to the Board's Electricity Distributor Cost Allocation Policy* dated August 4, 2011. The purpose of these reports was to develop specific changes to version 2 of the Cost Allocation Model. Bluewater Power has used the direction of the Reports in completing the cost allocation model for the 2013 submission. Version 3 of the OEB model has been updated with 2013 Test Year costs, annual loads, and customer numbers. The hourly load profiles prepared by Hydro One for the 2006 Cost Allocation Informational Filing were used for the 2013 submission and were justified to be appropriate in the Elenchus 'Report on Cost Allocation' filed at Exhibit 7, Tab 1, Schedule 1, Attachment 1.

Weighting Factors

Section 2.6.4 of the March 2011 Board Report indicated the "default weighting factors should be utilized only in exceptional circumstances." Therefore, Bluewater Power undertook an analysis to determine the appropriate weighting factors to be used in the current cost allocation model, and the results are presented in Tables 3 and 4, along with the original OEB default weighting factors.

<u>Weighting Factor for Services</u>

The analysis for the Services weighting factor included a review of our internal policy in regard to the installation and cost recovery for services. Account 1855 – Services is defined as: "*This account shall include the cost installed of overhead and underground conductors leading from a point where wires leave the last pole of the overhead system or the transformers or manhole, or the top of the pole of the distribution line, to the point of connection with the customer's electric panel. Conduit used for underground service conductors shall be included herein*." The policy of Bluewater Power is to charge customers other than residential customers for the cost of their service such that there are no service costs being booked to account 1855 for non-residential customers. As the only costs being booked to account 1855 are related to residential customers the weighting factor for residential customers is deemed to be 1.0 and all other rate classes are allocated a weighting of 0 as indicated in Table 3 below.

<u>Table 3 – Weighting Factors for Services</u>

-	Residential	GS <50	GS>50-Regular	GS> 50-TOU	GS >50-Intermediate	Large Use	Street Light	Sentinel	Unmetered Scattered Load
Bluewater Power 2013 Weighting Factors	1	0	0	0	0	0	0	0	0
Prior OEB Default Weighting Factors	1	2	10	10	10	30	1	1	1

<u>Weighting Factors for Billing and Collecting</u>

In determining the weighting factors for Billing and Collecting an analysis of the relative complexity of producing a bill was reviewed. Factors considered were:

- The amount of manual intervention such as calculating the global adjustment for Class A customers (affecting the Large Use class),

- The amount of administrative tracking such as managing the connections related to the unmetered scattered load categories such as additions and deletions from the category.

- Whether the rate category has interval meters whereby the amount of data is far greater than for non-interval categories. This would apply to the Intermediate and Large use categories as opposed to the GS>50 category with non-interval meters.

The relative weighting of one rate class compared to the others is far closer under Bluewater Power's analysis than it was using the OEB default values as evident in Table 4. Bluewater Power could not justify the disparity of the classes to the extent that the OEB default weighting factors identified.

Table 4 – Weighting Factors for Billing and Collecting

	Residential	GS <50	GS>50-Regular	GS >50-Intermediate	Large Use	Street Light	Sentinel	Unmetered Scattered Load
Bluewater Power 2013 Weighting Factors	1.0	0.89	0.1 4	0.86	1.14	1.0	0.06	1.06
Prior OEB Default Weighting Factors	1.0	2.0	7.0	7.0	15.0	1.0	0.1	5.0

Weighting Factors for Meter Reading

The weighting factor for Meter reading used in the 2013 model is 1.0 for residential and GS<50 classes, and 3.0 for the other metered categories. The difference is related to the fact that the residential and GS<50 classes are smart metered and therefore not manually read whereas the other categories require either foot reading or gathering of MV90 interval data.

Cost Allocation Results

As discussed above, the data used by Bluewater Power is consistent with the cost and load data proposed for the 2013 Test Year revenue requirement. The resulting revenue-to-cost ratio's from the cost allocation model are detailed in Table 5 below.

Table 5 – Initial Revenue-to-cost Ratio's

Customer Class	Service Revenue Requirement	%	Miscellaneous Revenue (mi)	%	Base Revenue Requirement	%	Revenue to Expenses %
Residential	13,718,685	59.76%	714,812	66.17%	13,003,873	59.44%	92.87%
General Service < 50 kW	2,868,271	12.49%	116,462	10.78%	2,751,809	12.58%	112.78%
General Service > 50 to 999 kW	2,981,166	12.99%	102,760	9.51%	2,878,406	13.16%	119.20%
General Service 1000 to 4999 kW	1,014,089	4.42%	38,755	3.59%	975,334	4.46%	85.08%
Large Use	1,296,326	5.65%	53,021	4.91%	1,243,305	5.68%	115.25%
Unmetered Scattered Load	106,926	0.47%	4,839	0.45%	102,087	0.47%	164.80%
Sentinel Lighting	58,839	0.26%	2,970	0.27%	55,869	0.26%	108.34%
Street Lighting	912,637	3.98%	46,630	4.32%	866,007	3.96%	91.02%
TOTAL (from Column C of sheet O1)	22,956,939	100.00%	1,080,249	100.00%	21,876,690	100.00%	

As illustrated in Table 5, the results for the USL class indicate a revenue-to-cost ratio of 164.80% which is outside the Board's required range. The swing to a much higher revenue-to-cost ratio as compared to the 2009 results of 70% is the direct result of the change to the billing and collecting weighting factor. This is a relatively small revenue class, so the change to the weighting factor from 5.0 in the 2006 CAIF and again in 2009 to a factor of 1.06 in the 2013 Test Year results in a decrease to the costs relative to the revenue. As a sensitivity analysis, by using a billing and collecting weighting factor of 5.0, the resulting revenue-to-cost ratio for this class would decrease to approximately 60%. However, Bluewater Power cannot justify that the billing factor should be that much greater than 1.0 and therefore proposes to alter the proposed revenue-to-cost ratio from 164% to the top end of the Board approved range; that being 120%.

The revised revenue-to-cost ratios after the above noted re-balance are shown in Table 6 below. The General Service 1000 to 4999 kW (Intermediate) rate category had the lowest revenue-to-cost ratio of 0.85, so the adjustment to the USL rate category has been applied to the Intermediate category. The adjustment equated to approximately $50,000 being allocated to the Intermediate rate class and the revenue to cost ratio increased from the original calculated ratio of 0.85 to the revised ratio of 0.90.

Bluewater Power is not proposing any adjustments after 2013 as all the ratios are proposed to be within the Board's target ranges.

Table 6 – Proposed 2013 Revenue-to-Cost Ratios

Customer Class Name	Rate Application Service Revenue Requirement	Costs per Cost Allocation Model	2013 Proposed Revenue to Cost Ratio	OEB Floor Target	OEB Ceiling Target
Residential	12,741,010	13,718,684	0.93	0.85	1.15
General Service < 50 kW	3,234,843	2,868,271	1.13	0.80	1.20
General Service > 50 to 999 kW	3,553,585	2,981,166	1.19	0.80	1.20
General Service 1000 to 4999 kW	910,358	1,014,089	0.90	0.80	1.20
Large Use	1,494,080	1,296,326	1.15	0.85	1.15
Unmetered Scattered Load	128,594	106,926	1.20	0.80	1.20
Sentinel Lighting	63,746	58,839	1.08	0.80	1.20
Street Lighting	830,723	912,638	0.91	0.70	1.20
Total	22,956,939	22,956,939			

The OEB Appendix 2-P is presented as Exhibit 7, Tab 1, Schedule 1, Attachment 3.

The following output sheets are provided as Exhibit 7, Tab 1, Schedule 1, Attachment 4 as requested in the Board's filing guidelines and an excel version of the entire cost allocation model will be filed:

- Sheet I-6.1 Revenue
- Sheet I-6.2 Customer Data
- Sheet I-8 Demand Data
- Sheet O-1 – Revenue-to-Cost Ratio's
- Sheet O-2 – Fixed Charge Floor/Ceiling

Bluewater Power Distribution Corporation
2013 Cost Allocation Study

A Report Prepared by
Elenchus Research Associates Inc.

On Behalf of
Bluewater Power Distribution Corporation

October 9, 2012

Table of Contents

Table of Contents 1
1 Introduction 1
1.1 Purpose of the Cost Allocation Study 2
1.2 Bluewater's 2009 Cost Allocation Information Filing 3
1.3 Structure of the Report 4
2 Overview of the Bluewater 2013 CA Study 5
2.1 Model Run Included in the Bluewater Cost Allocation Study 5
2.2 Load and customer Information 5
2.3 Cost Information 7
3 Bluewater Cost Allocation Study Methodology 8
3.1 2013 Bluewater CA Model 8
3.1.1 Hourly Load Profile (HONI File) 8
3.1.2 Demand Allocators (HONI File) 8
3.1.3 2013 Demand Data (Bluewater-2013 Model) 9
3.1.4 2013 Customer Data (Bluewater-2013 Model) 10
3.1.5 2013 Revenue to Cost Ratios 10
4 Summary of Revenue to Cost Ratios 11
5 Fixed Charge Rates 13

1 INTRODUCTION

Bluewater Power Distribution Corporation ("Bluewater") has prepared its 2013 EDR Application as a cost of service rate application based on a forward test year. The relevant filing requirements for this Application are set out in Chapter 2 of the June 28, 2012 update to the document entitled *Ontario Energy Board, Filing Requirements for Electricity Transmission and Distribution Applications* ("Filing Requirements").

Section 2.10 of the Filing Requirements sets out the expectations of the Board with respect to Exhibit 7: Cost Allocation. The Filing Requirements state:

> *A completed cost allocation study using the Board approved methodology must be filed. This filing must reflect future loads and costs and be supported by appropriate explanations and live Excel spreadsheets. The 2011 update of the model issued by the Board will be available on the Board's web site.*

Bluewater asked Elenchus Research Associated (Elenchus)[1] to assist it by preparing an appropriate cost allocation study for its 2013 cost of service rate application. In addressing this issue, Elenchus was guided by the Filing Requirements and the November 28, 2007 *Report of the Board, Application of Cost Allocation for Electricity Distributors* (EB-2007-0667) ("CA Application Report") which "sets out the Board's policies in relation to specific cost allocation matters for electricity distributors".[2]

The CA Application Report observes at page 2 that:

> *The Board is cognizant of factors that currently limit or otherwise affect the ability or desirability of moving immediately to a cost allocation framework that might, from a theoretical perspective, be considered the ideal. These influencing factors include data quality issues and limited modelling experience, and are discussed in greater detail in section 2.3 of this Report.*

The "influencing factors" discussed in section 2.3 of the report are:

- **Quality of the data:** The Board notes "that accounting and load data can be improved." (p. 5)

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[1] John Todd, President of Elenchus Research Associates, was the lead consultant for the development and implementation of the methodology used by Bluewater and documented in this report. John Todd's curriculum vitae is available at www.elenchus.ca.

[2] Ontario Energy Board, *Report of the Board, Application of Cost Allocation for Electricity Distributors* (EB-2007-0667), November 28, 2007, page 1.

- **Limited modelling experience:** The Board observed that "the cost allocation model is complex, and the data required for the model was not always readily available for modelling." (p. 6)
- **Status of current rate classes:** The Board points out that "Any changes in customer classification or load data could have a significant impact on future cost allocation studies" (p. 6).
- **Managing the movement of rates closer to allocated costs:** The Board notes:

> *The Board considers it appropriate to avoid premature movement of rates in circumstances where subsequent applications of the model or changes in circumstances could lead to a directionally different movement. Rate instability of this nature is confusing to consumers, frustrates their energy cost planning and undermines their confidence in the rate making process. (p. 6)*

In utilizing the Board's cost allocation model for Bluewater's 2013 cost allocation study, Elenchus has been cognizant of these "influencing factors" as they apply to Bluewater.

1.1 PURPOSE OF THE COST ALLOCATION STUDY

In the context of a cost of service rate application based on a 2013 forward test year, the primary purpose of the cost allocation study ("CA Study") is to determine the proportions of a distributor's total revenue requirement that are the "responsibility" of each rate class.

In addition, cost allocation studies provide revenue to cost ratios for each customer class that can be examined to ensure that they generally fall within the Board-specified ranges (or move toward those ranges where appropriate to mitigate rate impacts) and generally are not moving away from 100%.

Conceptually, the desired results can be achieved in either of two ways.

- **Prospective Year CA Study:** A cost allocation study for the 2013 test year can be based on an allocation of the 2013 test year costs (i.e., the 2013 forecast revenue requirement) to the various customer classes using allocators that are based on the forecast class loads (kW and kWh) by class, customer counts, etc. By definition, this approach will result in a total revenue to cost ratio at proposed rates of 100%. Assuming there is a revenue deficiency for the test year, the total revenue to cost ratio at current rates will be somewhat below 100%.

- **Historic Year CA Study:** As an alternative, an historic year cost allocation study can be prepared that determines the proportion of costs allocated to each class for the most recent historic year. In the case, the CA Study will rely on actual costs, weather adjusted loads, customer counts, etc. that are not affected by forecast errors. Assuming the costs and loads are relatively stable so that the proportionate cost responsibility of each rate class in the historic year is a reasonable proxy for the 2013 test year cost responsibility, the resulting proportionate cost responsibilities can be used to allocate the 2013 revenue requirement to the various classes.

The Bluewater CA Study uses the first of these methods in order to ensure compliance with the Board's direction in the Filing Requirements that the CA Study should "reflect future loads and cost". Relying on a Prospective Year CA Study is also appropriate at this time since the Ontario economy has suffered over the past three years and, as a result, many distributors have experienced significant changes in the load profiles of their customer classes. These changes could have a significant impact on the allocation of costs to the classes and the resulting revenue to cost ratios. This approach implicitly assumes that the economic recovery will be slow and, as a result, the relative loads of customer classes are more likely to reflect 2013 loads than 2011 loads during the next IRM cycle.

1.2 BLUEWATER'S 2009 COST ALLOCATION INFORMATION FILING

Bluewater has not filed a new cost allocation, and asked Elenchus to prepare its 2013 cost allocation from scratch. The last cost allocation study filed by Bluewater was in 2008 in Proceeding EB-2008-0221 and was based on the 2006 Informational Filing adjusted for the loss of some customers. The 2013 model was performed in accordance with the internal documentation in the v 3 Cost Allocation Model (CA Model).

Bluewater's 2009 CAIF relied on the Board's 2006 Cost Allocation Model ("CA Model") and was prepared in accordance with the September 29, 2006 Board report entitled *Cost Allocation: Board Directions on Cost Allocation Methodology for Electricity Distributors* ("the Directions"), the subsequent (November 15, 2006) *Cost Allocation Informational Filing Guidelines for Electricity Distributors* ("the Guidelines"), and the *Cost Allocation Review: User Instruction for the Cost Allocation Model for Electricity Distributors* ("the Instructions").

1.3 STRUCTURE OF THE REPORT

The remainder of this report is divided into three additional sections. Section 2 provides an overview of the Bluewater CA Study, explaining the model run included in the study, as well as the load and cost information used for the run. Section 3 explains the methodology used to develop the 2013 Bluewater model by documenting each step taken in completing the model. Section 4 summarizes the results of the Bluewater CA Study, showing the class revenue requirements and revenue to cost ratios generated by the CA model.

2 OVERVIEW OF THE BLUEWATER 2013 CA STUDY

2.1 MODEL RUN INCLUDED IN THE BLUEWATER COST ALLOCATION STUDY

Section 2.10.3 of the updated Filing Requirements specifies that the third table in Appendix 2-P, "...includes the following information for each class" that should be provided based on:

- "The previously approved ratios most recently implemented by the distributor;
- "The ratios that would result from the most recent approved distribution rates and the distributor's forecast of billing quantities in the test year, prorated upwards or downwards (as applicable) to match the revenue requirement, expressed as a ratio with the class revenue requirements derived in the updated cost allocation model; and
- "The ratios that are proposed for the Test Year, which are the proposed class revenues, together with the updated cost allocation model" which is the appropriate 2013 model.

For clarity, the following designations are used.

- **Bluewater-2009**: The Bluewater 2009 revenue to cost ratios.
- **Bluewater-2013:** The version 3 CA Model with 2013 loads, costs, and revenues.

2.2 LOAD AND CUSTOMER INFORMATION

The updated Filing Requirements specify that "This filing must reflect future loads and costs..." and "If updated load profiles are not available, the load profiles of the classes may be the same as those provided by Hydro One for use in the Informational Filing, scaled to match the load forecast as it relates to the respective rate classes", (Section 2.10.1, p. 42)

The Bluewater 2013 model has been prepared using the following load and load profile information:

- **Annual Loads (kW and kWh, as appropriate) and customer counts:** The 2013 load forecast and customer counts by class being used by Bluewater in its application were also used for the 2013 CA models. Bluewater's load forecast was prepared by Elenchus.
- **Hourly load profile:** The hourly load profiles prepared by Hydro One for the 2006 CAIF was used for all classes.

The hourly load profiles provided by Hydro One for all of the classes for the 2006 model were considered to be appropriate for use in the 2013 models for the following reasons.

1. Elenchus explored alternatives for updating the hourly load profiles by rate class comparable to the estimated load profiles that Hydro One prepared for the LDCs for their 2006 CA Models. Hydro One advised that they no longer have the capacity to produce a significant number of LDC-specific hourly load profiles. As far as Elenchus is aware, no other entity has the necessary information and models to produce comparable quality hourly load profiles for Ontario LDCs. It therefore was not practical for distributors to update their hourly load profiles by class except in exceptional circumstances.
2. There would be little point in investing in updated load profiles without also investing in updated saturation surveys for the residential class in each service area. These are expensive and time consuming to undertake as they involve a survey of a statistically significant sample of customers.
3. With the widespread rollout of smart meters and the collection of smart meter data, Ontario distributors will have better hourly load profile by class data than the Hydro One estimates. Unless there is evidence of a significant change in circumstances, investing in new hourly load profile by class estimates would be a questionable use of ratepayer funds when superior hourly load profile information will be available in the next few years at minimal incremental cost.
4. Both time-of-use commodity pricing and changes to the design of distribution rates can be expected to alter the hourly load profiles of the affected classes.

5. The 2006 hourly load profiles were based on 2004 actual loads and updated hourly load profiles would be based on 2011 actual loads.

2.3 Cost Information

As noted earlier, Elenchus' preferred methodology for preparing 2013 cost allocation models is to use the prospective 2013 test year as the basis for the CA Study, assuming appropriate expense and asset information is available for the 2013 test year. In the case of Bluewater, the financial information for the forecast year has been prepared at the USoA level consistent with the level of detail embedded in the OEB's cost allocation model. [3]

[3] Some information (i.e., meter counts and some amortization detail) that is used in the Board's CA Model is not explicitly forecasted for the test year. These values were estimated using scaling factors based on prior year ratios. For example, the ratio of meters to customers was assumed to be constant. The portion of the total costs accounted for in this manner was too small for any plausible estimation errors to have a significant impact on the test year revenue to cost ratios.

3 BLUEWATER COST ALLOCATION STUDY METHODOLOGY

This section documents Elenchus' methodology for the Bluewater Cost Allocation Study, the 2013 CA Model.

3.1 2013 BLUEWATER CA MODEL

3.1.1 HOURLY LOAD PROFILE (HONI FILE)

For the Bluewater CAIF, HONI provided data files with three worksheets that were to be used as input to the 2006 CAIF:

- **Data Summary:** actual and weather normalized monthly kWh by class, disaggregated by weather sensitive and non-weather sensitive load for relevant classes.
- **Hourly Load Shape by Class:** GWh by class for each hour in 2004.
- **Input to Cost Allocation Model**: The 1CP, 4CP, 12CP, 1NCP, 4NCP, 12NCP allocators are derived from the hourly load profiles.

The Bluewater hourly load shapes derived by Hydro One for the 2006 CAIF were not updated. However, the demand allocators derived by Hydro One for the 2006 CAIF were revised to reflect changes in the relative loads for the classes from 2004 to 2013. This was done by scaling the hourly load profiles of each class on the Hourly Load Shape by Class worksheet of the HONI file to levels consistent with the 2013 load forecast while maintaining the hourly load shapes.

For the Intermediate and Large User customer classes, 2011 actual interval hourly data was used.

3.1.2 DEMAND ALLOCATORS (HONI FILE)

The demand allocators used in the Bluewater-2013 CA model were derived using the same methodology as Hydro One used for the 2006 file; however, they were re-determined using the forecast 2013 hourly load profiles resulting from the preceding step. Using the 2013 hourly load profiles by class, the 12 monthly coincident and non-coincident peaks for the rate classes were determined on the Hourly Load Shape by Rate Class worksheet. The allocators were then derived as follows.

- The 1, 4 and 12 NCP values for each class were calculated by selecting the peak in the year (1 NCP), summing the four highest monthly peaks (4 NCP) and summing the 12 monthly peaks for each class (12 NCP), respectively.
- The total 1, 4 and 12 NCP values are the totals of the corresponding class NCP values.
- The 1, 4 and 12 CP values for each class were derived by identifying the hour in each month when the coincident peak occurred and then selecting the peak in the year (1 CP), adding the demands during the four highest coincident peak hours (4 CP) and summing the demand for each class during the 12 monthly coincident peak hours (12 CP), respectively.
- The total 1, 4 and 12 CP values are the totals of the corresponding class CP values, which are the values used to identify the relevant coincident peak hours.

3.1.3 2013 Demand Data (Bluewater-2013 Model)

The demand allocators derived in the updated Hydro One file as described in the preceding section were input at the appropriate cells at sheet I8 Demand Data of the 2013 Bluewater CA Model. However, the Line Transformer and Secondary 1NCP, 4NCP and 12NCP values (rows 57-58, 63-64, 69-70) for GS > 50 Regular, GS>50 Intermediate and Large User customer classes are not equal to the full class NCP values since not all customers in these customer classes use these facilities. The Line Transformer and Secondary 1NCP, 4NCP and 12NCP values were therefore determined from the full load data NCP values using the ratio of values in the 2006 CA Model.

3.1.4 2013 Customer Data (Bluewater-2013 Model)

The 30 year weather normalized kWh by rate class which was an input from the Hydro One file at Sheet I6 Customer Data row 27 in the 2006 CA model was replaced with the 2013 load forecast in the 2013 CA Model at Sheet I6.1 Revenue row 50.

In addition, the demand data (kW and kWh) in rows 25, 26, and 27 of Sheet I6.1 Revenue were replaced with the forecasted values. Row 27 was scaled by the percentage change in row 26.

The 2013 Distribution Revenue in row 39 was derived using the forecast demand (kW and kWh) and customer counts by rate class and the existing 2012 rates.

3.1.5 2013 Revenue to Cost Ratios

Since Bluewater is proposing to set rates that recover its full revenue requirement, the total revenue to cost ratio at proposed rates will be 100% in 2013. The 2013 total revenue to cost ratio at current rates is less than 100% by the amount of the required rate increase. The revenue to cost ratios of the classes reflect the costs allocated to the classes based on the OEB CA Model methodology and the revenues that would be generated at current rates given the forecast demand (kW and kWh) and customer counts by rate class for 2013.

4 SUMMARY OF REVENUE TO COST RATIOS

The class revenue-to-cost ratios as determined in the Bluewater cost allocation models are shown in Table 7, below.

Table 7: Revenue to Cost Ratios

Customer Class	Bluewater-2009	Bluewater-2013 Status Quo Rates	Board Target Range
Residential	103.66	92.87	85-115
GS < 50 kW	111.55	112.78	80-120
GS > 50 kW Regular	88.47	119.20	80-120
GS > 50 kW Intermediate	100.88	85.08	80-120
Large User	109.54	115.25	85-115
Street Lighting	46.73	91.02	70-120
Sentinel Light	34.66	108.34	80-120
USL	65.03	164.80	80-120
Total	100.00	100.00	

The Bluewater-2013 ratios (at current rates) reflect the impact of changes in throughput by class as well as changes in costs from 2006 through the 2013 forecast test year.

Table 8 presents the revenue responsibility (i.e., allocation of the total revenue requirement to the rate classes) in each of the models. This revenue responsibility is presented in both dollar and percentage terms.

1 **Table 8: Revenue Responsibility by Rate Class**

Customer Class	Bluewater-2009		Bluewater-2013	
	$	%	$	%
Residential	8,989,144	52.47	13,718,685	59.76
GS < 50 kW	2,768,342	16.16	2,868,271	12.49
GS > 50 kW Regular	2,690,185	15.70	2,981,166	12.99
GS > 50 kW Intermediate	729,118	4.26	1,014,089	4.42
Large User	1,075,451	6.28	1,296,326	5.65
Street Lighting	664,099	3.88	912,638	3.98
Sentinel Light	59,797	0.35	58,839	0.26
USL	157,338	0.92	106,926	0.47
Total	17,133,475	100.00	22,956,939	100.00

2

5 FIXED CHARGE RATES

The Bluewater cost allocation model produced the following customer unit cost per month values:

Table 9: 2013 Customer Unit Cost per Month

Customer Class	Avoided Cost	Directly Related	Minimum System with PLCC[4] Adjustment
Residential	5.24	12.43	23.16
GS < 50 kW	10.18	22.87	34.31
GS > 50 kW Regular	7.22	20.23	52.46
GS > 50 kW Intermediate	216.12	465.43	1,010.63
Large User	232.72	551.71	3,940.67
Street Lighting	-0.01	0.00	10.47
Sentinel Light	0.07	0.18	6.06
USL	6.89	15.95	26.69

In accordance with Board policy,[5] the following boundary values would apply for the fixed monthly service charge:

[4] PLCC: ‘Peak Load Carrying Capacity’

[5] Ontario Energy Board, *Report of the Board, Application of Cost Allocation for Electricity Distributors* (EB-2007-0667), November 28, 2007, pages 12-13

Table 10: 2013 Fixed Charge Boundary Values

Customer Class	Cost Allocation		Existing Rate	Boundary Values	
	Low	High		Minimum	Maximum
Residential	5.24	23.16	13.80	5.24	23.16
GS < 50 kW	10.18	34.31	23.71	10.18	34.31
GS > 50 kW Regular	7.22	52.46	142.00	7.22	142.00
GS > 50 kW Intermediate	216.12	1,010.63	3,121.63	216.12	3,121.63
Large User	232.72	3,940.67	24,427.60	232.72	24,427.60
Street Lighting	-0.01	10.47	2.14	-0.01	10.47
Sentinel Light	0.07	6.06	3.43	0.07	6.06
USL	6.89	26.69	15.68	6.89	26.69

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Memorandum

To: Leslie Dugas, Bluewater Power
From: Michael Roger, Elenchus
Date: October 9, 2012
Re: Large User Study

1 INTRODUCTION

At Bluewater's 2009 rate rebasing application (EB-2008-0221) Stakeholders, as part of the Settlement Agreement, agreed that Bluewater Power should undertake a study of the costs to serve customers in the Large Use customer class. The reason that Stakeholders requested the study was that Bluewater during the last rate rebasing application did not fully update its 2006 Cost Allocation Model (based on 2004 actual expenses) for the 2009 Test Year. Instead, Bluewater adjusted the Cost Allocation Model to reflect the impact of the loss of two customers. The study would assist in determining the true costs to serve Large Use customers and determine the proper balancing of rates among all rate classes in the future. The study was to be filed as evidence in Bluewater's next rebasing rate application.

2 BLUEWATER'S APPROACH TO DETERMINING LARGE USER 2013 REVENUE REQUIREMENT

In this Proceeding Bluewater has used the OEB's Cost Allocation Model version 3 to allocate assets and expenses for the 2013 test year to its customer classes, including the Large User customer class which includes three customers. Bluewater has updated the cost allocation model in this application. The OEB model has not been altered by Bluewater.

The OEB model follows the standard three steps in a cost allocation study: functionalization, categorization and allocation of assets and costs. By following these

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three steps assets and expenses can be allocated to customer classes using cost causality principles. The model used by Bluewater reflects the guidelines developed by the OEB in its cost allocation model.

3 ELENCHUS OPINION

Elenchus is of the view that by using the OEB's unaltered cost allocation model, the intent of the study of costs to serve customers in the Large User customer class as per the Settlement Agreement has been met and no separate study is required.

If a separate study would have been conducted to allocate assets and expenses to the Large User customer class, the cost causality principles that would have been used in a separate study would have been the same principles as applied in the OEB's cost allocation model. Bluewater has used its best available information in the Cost Allocation model and the same information would have been applied in a separate study for the Large User class. The same cost causality parameters: energy, demand, number of customers, used in the OEB's cost allocation model would have been used in a separate study for the Large User class.

The three Large Users served by Bluewater have no dedicated assets that are used exclusively by these three customers. The assets used by Bluewater to deliver electricity to the three Large Users are shared assets that are also used by Bluewater to serve other customer classes. Therefore, no Direct Allocation of Assets and/or expenses has been done in the Cost Allocation model to the Large User customer class.

The Large User customer class derived revenue requirement of $1,296,326 for the 2013 test year and resulting revenue to cost ratio of 115.25% as shown in Sheet O.1 of the cost allocation model in Exhibit 7, Tab 1, Schedule 1, Attachment 3 reflect the allocation of assets and expenses using cost causality principles as per the OEB's model. All customer classes served by Bluewater have been allocated assets and expenses in a fair and equitable manner and according to OEB guidelines. The revenue to cost ratio for the Large User class falls just outside the upper end of the OEB approved range of revenue to cost ratio for this customer class, (85% to 115%).

File Number:	EB-2012-0107
Exhibit:	7
Tab:	1
Schedule:	1
Page:	1
Date:	22-Oct-2012

Appendix 2-P
Cost Allocation

Please complete the following four tables.

A) Allocated Costs

Classes	**Costs Allocated from Previous Study**	**%**	**Costs Allocated in Test Year Study (Column 7A)**	**%**
Residential	$ 8,989,144	52.47%	$ 13,718,684	59.76%
GS < 50 kW	$ 2,768,342	16.16%	$ 2,868,271	12.49%
GS > 50 -999 kW	$ 2,690,185	15.70%	$ 2,981,166	12.99%
GS >1000-4999 kW	$ 729,118	4.26%	$ 1,014,089	4.42%
Large User	$ 1,075,451	6.28%	$ 1,296,326	5.65%
Street Lighting	$ 664,099	3.88%	$ 912,638	3.98%
Sentinel Lighting	$ 59,797	0.35%	$ 58,839	0.26%
Unmetered Scattered Load (USL)	$ 157,338	0.92%	$ 106,926	0.47%
		0.00%		0.00%
		0.00%		0.00%
Embedded distributor class		0.00%		0.00%
Total	$ 17,133,474	100.00%	$ 22,956,939	100.00%

Notes

1 Customer Classification - If proposed rate classes differ from those in place in the previous Cost Allocation study, modify the rate classes to match the current application as closely as possible.

2 Host Distributors - Provide information on embedded distributor(s) as a separate class, if applicable. If embedded distributor(s) are billed as customers in a General Service class, include the allocated cost and revenue of the embedded distributor(s) in the applicable class. Also complete Appendix 2-Q.

3 Class Revenue Requirements - If using the Board-issued model, in column 7A enter the results from Worksheet O-1, Revenue Requirement (row 40 in the 2013 model). This excludes costs in deferral and variance accounts. Note to Embedded Distributor(s), it also does not include Account 4750 - Low Voltage (LV) Costs.

B) Calculated Class Revenues

Classes (same as previous table)	**Column 7B** Load Forecast (LF) X current	**Column 7C** L.F. X current approved rates X	**Column 7D** LF X proposed rates	**Column 7E** Miscellaneous Revenue
Residential	$ 10,126,325	$ 12,026,197	$ 12,026,198	$ 714,812
GS < 50 kW	$ 2,625,746	$ 3,118,381	$ 3,118,381	$ 116,462
GS > 50 -999 kW	$ 2,905,671	$ 3,450,825	$ 3,450,825	$ 102,760
GS >1000-4999 kW	$ 693,814	$ 823,985	$ 871,604	$ 38,755
Large User	$ 1,213,404	$ 1,441,059	$ 1,441,059	$ 53,021
Street Lighting	$ 660,223	$ 784,092	$ 784,092	$ 46,630
Sentinel Lighting	$ 51,175	$ 60,778	$ 60,776	$ 2,970
Unmetered Scattered Load (USL)	$ 144,300	$ 171,373	$ 123,755	$ 4,839
0				
Embedded distributor class				
Total	$ 18,420,658	$ 21,876,690	$ 21,876,690	$ 1,080,249

Notes:

1 Columns 7B to 7D - LF means Load Forecast of Annual Billing Quantities (i.e. customers or connections X 12, (kWh or kW, as applicable). Revenue Quantities should be net of Transfomrer Ownership Allowance. Exclude revenue from rate adders and rate

2 Columns 7C and 7D - Column total in each column should equal the Base Revenue Requirement

3 Columns 7C - The Board cost allocation model calculates "1+d" in worksheet O-1, cell C21. "d" is defined as Revenue Deficiency/ Revenue at Current Rates.

4 Columns 7E - If using the Board-issued Cost Allocation model, enter Miscellaneous Revenue as it appears in Worksheet O-1, row 19.

C) Rebalancing Revenue-to-Cost (R/C) Ratios

Class	Previously Approved Ratios Most Recent Year: 2012 IRM	Status Quo Ratios (7C + 7E) / (7A)	Proposed Ratios (7D + 7E) / (7A)	Policy Range
	%	%	%	%
Residential	103.00	92.87	92.87	85 - 115
GS < 50 kW	105.00	112.78	112.78	80 - 120
GS > 50 -999 kW	90.00	119.20	119.20	80 - 120
GS >1000-4999 kW	101.00	85.08	89.77	80 - 120
Large User	103.00	115.25	115.25	85 - 115
Street Lighting	85.00	91.02	91.02	70 - 120
Sentinel Lighting	85.00	108.34	108.34	80 - 120
Unmetered Scattered Load (USL)	85.00	164.80	120.26	80 - 120
0				
Embedded distributor class				

Notes

1 Previously Approved Revenue-to-Cost Ratios - For most applicants, Most Recent Year would be the third year of the IRM 3 period, e.g. if the applicant rebased in 2009 with further adjustments over 2 years, the Most recent year is 2011. For applicants that have had rates adjusted only under IRM 2, the Most Recent Year is 2006, and the applicant should enter the ratios from their Informational Filing.

2 Status Quo Ratios - The Board's updated Cost Allocation Model yields the Status Quo Ratios in Worksheet O-1. Status Quo means "Before Rebalancing".

D) Proposed Revenue-to-Cost Ratios

Class	Proposed Revenue-to-Cost Ratios			Policy Range
	2013	2014	2015	
	%	%	%	%
Residential	92.87			85 - 115
GS < 50 kW	112.78			80 - 120
GS > 50 -999 kW	119.20			80 - 120
GS >1000-4999 kW	89.77			80 - 120
Large User	115.25			85 - 115
Street Lighting	91.02			70 - 120
Sentinel Lighting	108.34			80 - 120
Unmetered Scattered Load (USL)	120.26			80 - 120
0				0
				0
Embedded distributor class				

Note

1 The applicant should complete Table D if it is applying for approval of a revenue to cost ratio in 2012 that is outside the Board's policy range for any customer class. Table (d) will show the information that the distributor would likely enter in the IRM model) in 2013. In 2013 Table (d), enter the planned ratios for the classes that will be 'Change' and 'No Change' in 2013 (in the current Revenue Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision – Cost Revenue Adjustment', column d), and enter TBD for class(es) that will be entered as 'Rebalance'.

2013 Cost Allocation Model

Sheet I6.1 Revenue Worksheet - Initial Submission

Total kWhs from Load Forecast	991,128,398
Total kWs from Load Forecast	1,382,935
Deficiency from RRWF	- 3,456,032
Miscellaneous Revenue	1,080,249

	ID	Total	1 Residential	2 GS <50	3 GS>50-Regular	5 GS >50-Intermediate	6 Large Use >5MW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
Billing Data										
Forecast kWh	CEN	991,128,398	255,687,351	97,434,167	221,905,974	156,701,083	247,541,912	8,991,302	627,674	2,238,935
Forecast kW	CDEM	1,382,935			627,074	337,859	392,393	24,157	1,452	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		835,382			123,551	313,038	398,793			
Optional - Forecast kWh, included in CEN, from customers that receive a line transformation allowance on a kWh basis. In most cases this will not be applicable and will be left blank.		-								
KWh excluding KWh from Wholesale Market Participants	CEN EWMP	874,645,543	255,687,351	97,434,167	215,978,340	156,701,083	136,986,691	8,991,302	627,674	2,238,935
kWh - 30 year weather normalized amount		991,128,398	255,687,351	97,434,167	221,905,974	156,701,083	247,541,912	8,991,302	627,674	2,238,935
Existing Monthly Charge			$13.80	$23.71	$142.00	$3,121.63	$24,427.60	$2.14	$3.43	$15.68
Existing Distribution kWh Rate			$0.0188	$0.0166						$0.0426
Existing Distribution kW Rate					$3.5617	$1.2790	$1.4610	$16.5512	$22.6299	
Existing TFOA Rate					$0.60	$0.60	$0.60			
Additional Charges										
Distribution Revenue from Rates		$18,921,887	$10,126,325	$2,625,746	$2,979,801	$881,636	$1,452,680	$660,223	$51,175	$144,300
Transformer Ownership Allowance		$501,229	$0	$0	$74,131	$187,823	$239,276	$0	$0	$0
Net Class Revenue	CREV	$18,420,657	$10,126,325	$2,625,746	$2,905,671	$693,814	$1,213,404	$660,223	$51,175	$144,300
Data Mismatch Analysis										
Revenue with 30 year weather normalized kWh		18,420,657	10,126,325	2,625,746	2,905,671	693,814	1,213,404	660,223	51,175	144,300

Weather Normalized Data from Hydro One	Total	Residential	GS <50	GS>50-Regular	GS >50-Intermediate	Large Use >5MW	Street Light	Sentinel	Unmetered Scattered Load
kWh - 30 year weather normalized amount	1,022,496,067	266,451,788	101,536,145	231,248,216	161,652,837	249,249,951	9,369,836	654,099	2,333,194
Loss Factor		1.0421	1.0421	1.0421	1.0316	1.0069	1.0421	1.0421	1.0421

2013 Cost Allocation Model

Sheet I6.2 Customer Data Worksheet - Initial Submission

	ID	Total	1 Residential	2 GS <50	3 GS>50-Regular	5 GS >50-Intermediate	6 Large Use >5MW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
Billing Data										
Bad Debt 3 Year Historical Average	BDHA	$124,615	$106,317	$14,920	$3,378	$0	$0	$0	$0	$0
Late Payment 3 Year Historical Average	LPHA	$228,725	$187,467	$27,713	$13,545					
Number of Bills	CNB	223,788	192,732	21,264	5,256	144	36	84	1,152	3,120
Number of Devices								10,140	445	
Number of Connections (Unmetered)	CCON	7,922						7,217	445	260
Total Number of Customers	CCA	36,578	32,122	3,544	438	12	3	7	192	260
Bulk Customer Base	CCB	-								
Primary Customer Base	CCP	36,578	32,122	3,544	438	12	3	7	192	260
Line Transformer Customer Base	CCLT	36,547	32,122	3,544	422			7	192	260
Secondary Customer Base	CCS	36,547	32,122	3,544	422			7	192	260
Weighted - Services	CWCS	32,122	32,122	-	-	-	-	-	-	-
Weighted Meter -Capital	CWMC	3,508,624	2,298,595	978,986	106,165	94,593	30,285	-	-	-
Weighted Meter Reading	CWMR	224,304	192,732	15,264	15,768	432	108	-	-	-
Weighted Bills	CWNB	216,018	192,732	18,925	736	124	41	84	69	3,307

Bad Debt Data

		Total	Residential	GS <50	GS>50-Regular	GS >50-Intermediate	Large Use >5MW	Street Light	Sentinel	Unmetered Scattered Load
Historic Year:	2009	102,769	87,679	12,305	2,785					
Historic Year:	2010	116,537	99,425	13,953	3,159					
Historic Year:	2011	154,540	131,848	18,503	4,189					
Three-year average		**124,615**	**106,317**	**14,920**	**3,378**	**-**	**-**	**-**	**-**	**-**

2013 Cost Allocation Model

Sheet I8 Demand Data Worksheet - Initial Submission

This is an input sheet for demand allocators.

CP TEST RESULTS	12 CP
NCP TEST RESULTS	4 NCP

Co-incident Peak	Indicator
1 CP	CP 1
4 CP	CP 4
12 CP	CP 12

Non-co-incident Peak	Indicator
1 NCP	NCP 1
4 NCP	NCP 4
12 NCP	NCP 12

Customer Classes		Total	1 Residential	2 GS <50	3 GS>50-Regular	5 GS >50-Intermediate	6 Large Use >5MW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
CO-INCIDENT PEAK										
1 CP										
Transformation CP	TCP1	154,721	57,315	12,847	34,097	20,241	29,969	-	-	252
Bulk Delivery CP	BCP1	154,721	57,315	12,847	34,097	20,241	29,969	-	-	252
Total Sytem CP	DCP1	154,721	57,315	12,847	34,097	20,241	29,969	-	-	252
4 CP										
Transformation CP	TCP4	602,111	213,045	49,876	131,170	83,061	121,875	1,973	110	1,001
Bulk Delivery CP	BCP4	602,111	213,045	49,876	131,170	83,061	121,875	1,973	110	1,001
Total Sytem CP	DCP4	602,111	213,045	49,876	131,170	83,061	121,875	1,973	110	1,001
12 CP										
Transformation CP	TCP12	1,663,491	544,377	145,951	353,059	235,885	363,520	16,571	1,049	3,079
Bulk Delivery CP	BCP12	1,663,491	544,377	145,951	353,059	235,885	363,520	16,571	1,049	3,079
Total Sytem CP	DCP12	1,663,491	544,377	145,951	353,059	235,885	363,520	16,571	1,049	3,079
NON CO_INCIDENT PEAK										
1 NCP										
Classification NCP from Load Data Provider	DNCP1	172,198	61,368	16,706	35,697	22,551	32,874	2,517	203	282
Primary NCP	PNCP1	172,198	61,368	16,706	35,697	22,551	32,874	2,517	203	282
Line Transformer NCP	LTNCP1	111,396	61,368	16,706	28,664	1,657		2,517	203	282
Secondary NCP	SNCP1	111,396	61,368	16,706	28,664	1,657		2,517	203	282
4 NCP										
Classification NCP from Load Data Provider	DNCP4	657,771	222,635	64,750	140,208	89,220	129,677	9,388	779	1,114
Primary NCP	PNCP4	657,771	222,635	64,750	140,208	89,220	129,677	9,388	779	1,114
Line Transformer NCP	LTNCP4	417,803	222,635	64,750	112,583	6,555		9,388	779	1,114
Secondary NCP	SNCP4	417,803	222,635	64,750	112,583	6,555		9,388	779	1,114
12 NCP										
Classification NCP from Load Data Provider	DNCP12	1,828,877	576,037	184,354	397,406	259,371	380,981	25,610	1,885	3,233
Primary NCP	PNCP12	1,828,877	576,037	184,354	397,406	259,371	380,981	25,610	1,885	3,233
Line Transformer NCP	LTNCP12	1,143,257	585,242	189,126	319,106	19,055		25,610	1,885	3,233
Secondary NCP	SNCP12	1,143,257	585,242	189,126	319,106	19,055		25,610	1,885	3,233

2013 Cost Allocation Model

Sheet O1 Revenue to Cost Summary Worksheet - Initial Submission

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

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base Assets		Total	1 Residential	2 GS <50	3 GS>50-Regular	5 GS >50-Intermediate	6 Large Use >5MW	7 Street Light	8 Sentinel	9 Unmetered Scattered Load
crev	Distribution Revenue at Existing Rates	$18,420,657	$10,126,325	$2,625,746	$2,905,671	$693,814	$1,213,404	$660,223	$51,175	$144,300
mi	Miscellaneous Revenue (mi)	$1,080,249	$714,812	$116,462	$102,760	$38,755	$53,021	$46,630	$2,970	$4,839
			Miscellaneous Revenue Input equals Output							
	Total Revenue at Existing Rates	**$19,500,906**	**$10,841,137**	**$2,742,208**	**$3,008,431**	**$732,568**	**$1,266,425**	**$706,852**	**$54,145**	**$149,140**
	Factor required to recover deficiency (1 + D)	1.1876								
	Distribution Revenue at Status Quo Rates	$21,876,690	$12,026,198	$3,118,381	$3,450,825	$823,985	$1,441,059	$784,092	$60,776	$171,373
	Miscellaneous Revenue (mi)	$1,080,249	$714,812	$116,462	$102,760	$38,755	$53,021	$46,630	$2,970	$4,839
	Total Revenue at Status Quo Rates	**$22,956,939**	**$12,741,010**	**$3,234,843**	**$3,553,585**	**$862,740**	**$1,494,081**	**$830,721**	**$63,746**	**$176,213**
	Expenses									
di	Distribution Costs (di)	$3,173,366	$1,611,975	$363,972	$580,947	$178,979	$235,254	$180,895	$11,461	$9,882
cu	Customer Related Costs (cu)	$2,492,115	$2,105,781	$302,321	$40,170	$13,173	$4,196	$643	$529	$25,304
ad	General and Administration (ad)	$7,637,261	$4,944,485	$905,065	$861,038	$270,942	$339,535	$253,791	$16,690	$45,716
dep	Depreciation and Amortization (dep)	$5,011,624	$2,642,863	$685,540	$768,249	$280,325	$361,730	$244,178	$15,430	$13,309
INPUT	PILs (INPUT)	$586,513	$304,916	$77,237	$92,320	$34,195	$44,926	$29,452	$1,861	$1,606
INT	Interest	$1,619,166	$841,772	$213,225	$254,864	$94,400	$124,025	$81,308	$5,137	$4,435
	Total Expenses	**$20,520,045**	**$12,451,793**	**$2,547,360**	**$2,597,588**	**$872,014**	**$1,109,665**	**$790,267**	**$51,107**	**$100,251**
	Direct Allocation	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
NI	Allocated Net Income (NI)	$2,436,894	$1,266,892	$320,911	$383,578	$142,075	$186,661	$122,371	$7,732	$6,674
	Revenue Requirement (includes NI)	$22,956,939	$13,718,685	$2,868,271	$2,981,166	$1,014,089	$1,296,326	$912,638	$58,839	$106,926
		Revenue Requirement Input equals Output								
	Rate Base Calculation									
	Net Assets									
dp	Distribution Plant - Gross	$38,914,608	$20,308,942	$5,155,196	$6,105,581	$2,239,496	$2,930,063	$1,946,184	$122,972	$106,173
gp	General Plant - Gross	$22,520,170	$11,735,302	$2,957,820	$3,552,657	$1,299,611	$1,704,029	$1,136,972	$71,837	$61,941
accum dep	Accumulated Depreciation	($7,169,135)	($3,766,764)	($985,589)	($1,097,720)	($407,288)	($527,645)	($343,555)	($21,714)	($18,862)
co	Capital Contribution	($812,914)	($467,113)	($94,400)	($140,695)	($25,808)	($28,362)	($50,686)	($3,204)	($2,647)
	Total Net Plant	**$53,452,728**	**$27,810,367**	**$7,033,028**	**$8,419,824**	**$3,106,012**	**$4,078,086**	**$2,688,915**	**$169,892**	**$146,605**
	Directly Allocated Net Fixed Assets	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
COP	Cost of Power (COP)	$89,374,845	$25,756,267	$9,814,879	$21,820,809	$15,785,040	$15,003,362	$905,725	$63,228	$225,536
	OM&A Expenses	$13,302,742	$8,662,241	$1,571,358	$1,482,155	$463,094	$578,985	$435,329	$28,679	$80,902
	Directly Allocated Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Subtotal	***$102,677,587***	***$34,418,508***	***$11,386,237***	***$23,302,963***	***$16,248,134***	***$15,582,346***	***$1,341,054***	***$91,907***	***$306,437***
	Working Capital	**$13,348,086**	**$4,474,406**	**$1,480,211**	**$3,029,385**	**$2,112,257**	**$2,025,705**	**$174,337**	**$11,948**	**$39,837**
	Total Rate Base	**$66,800,814**	**$32,284,774**	**$8,513,238**	**$11,449,209**	**$5,218,269**	**$6,103,791**	**$2,863,252**	**$181,839**	**$186,442**
		Rate Base Input equals Output								
	Equity Component of Rate Base	**$26,720,326**	**$12,913,909**	**$3,405,295**	**$4,579,684**	**$2,087,308**	**$2,441,516**	**$1,145,301**	**$72,736**	**$74,577**
	Net Income on Allocated Assets	**$2,436,894**	**$289,218**	**$687,483**	**$955,996**	**($9,274)**	**$384,416**	**$40,455**	**$12,639**	**$75,962**
	Net Income on Direct Allocation Assets	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**	**$0**
	Net Income	**$2,436,894**	**$289,218**	**$687,483**	**$955,996**	**($9,274)**	**$384,416**	**$40,455**	**$12,639**	**$75,962**
	RATIOS ANALYSIS									
	REVENUE TO EXPENSES STATUS QUO%	**100.00%**	**92.87%**	**112.78%**	**119.20%**	**85.08%**	**115.25%**	**91.02%**	**108.34%**	**164.80%**
	EXISTING REVENUE MINUS ALLOCATED COSTS	**($3,456,033)**	($2,877,548)	($126,063)	$27,264	($281,520)	($29,901)	($205,785)	($4,694)	$42,214
		Deficiency Input equals Output								
	STATUS QUO REVENUE MINUS ALLOCATED COSTS	**($0)**	($977,674)	$366,572	$572,418	($151,349)	$197,755	($81,916)	$4,908	$69,287
	RETURN ON EQUITY COMPONENT OF RATE BASE	9.12%	2.24%	20.19%	20.87%	-0.44%	15.74%	3.53%	17.38%	101.86%

2013 Cost Allocation Model

Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - Initial Submission

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1	2	3	5	6	7	8	9
	Residential	**GS <50**	**GS>50-Regular**	**GS >50-Intermediate**	**Large Use >5MW**	**Street Light**	**Sentinel**	**Unmetered Scattered Load**
Customer Unit Cost per month - Avoided Cost	$5.24	$10.18	$7.22	$216.12	$232.72	-$0.01	$0.07	$6.89
Customer Unit Cost per month - Directly Related	$12.43	$22.87	$20.23	$465.43	$551.71	$0.00	$0.18	$15.95
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$23.16	$34.31	$52.46	$1,010.63	$3,940.67	$10.47	$6.06	$26.69
Existing Approved Fixed Charge	$13.80	$23.71	$142.00	$3,121.63	$24,427.60	$2.14	$3.43	$15.68