HORIZON UTILITIES CORPORATION
EB-2014-0002
VECC CROSS EXAMINATION COMPENDIUM

TAB 1	Exhibit 7/Tab 1/Schedule 1, pages 2-4
TAB 2	7.0-VECC-49
TAB 3	7.0-VECC-51
TAB 4	City of Hamilton #7 – Attachment 1, pages 3-4
TAB 5	8.0-Staff-33
TAB 6	7.0-VECC-56
TAB 7	7.0-VECC-89TC
TAB 8	7.0-Energy Probe-48
TAB 9	Settlement Proposal – Appendix J
TAB 10	Settlement Proposal – Appendix F – Cost Allocation O1 and O2 Sheets: 2015-2019
TAB 11	7.0-VECC-84TC
TAB 12	Settlement Agreement – Appendix H
TAB 13	Exhibit 8/Tab 1/Schedule 2, pages 1-7
TAB 14	Settlement Proposal – Appendix K

TAB 1

This review identified two significant areas of concern with respect to allocating costs consistent with the principle of cost causality. First, it was determined that the largest customers in Horizon Utilities' Large Use customer class are served exclusively with dedicated facilities, and maintaining these customers in the current Large Use class results in them being allocated costs for pooled distribution facilities that they do not use. Second, it was determined that certain accounts defined as "primary assets" in the 2011 Horizon Model included both secondary and primary assets when examined on a sub-account basis. Consequently, Horizon Utilities is proposing the introduction of a new customer class and changes to the allocation of sub-accounts to customer classes, to conform more consistently to the principle of cost causality. The proposed changes are further described below.

New Customer Class

In order to appropriately address cost causation, and the uniqueness of some of its customers, Horizon Utilities is proposing a new Large Use 2 ("LU (2)") customer class, for customers with demand over 15 MW, who also are served by dedicated assets.

Presently, Horizon Utilities serves 4 customers that meet the criteria of the proposed LU (2) class. These customers are served by dedicated feeders, and do not participate in the use of the pooled assets, because of their size. Customers who meet the criteria of the proposed LU (2) class are presently allocated costs for distribution facilities that they do not use, and that are used by the other customers in the Large Use class and customers in other rate classes.

Horizon Utilities has identified the costs associated with the customers who meet the criteria of the LU (2) class. Consistent with the configuration of Horizon Utilities' distribution system, the feeders used by the LU (2) rate class are allocated by means of direct allocation in the OEB's Cost Allocation Model (Worksheet I9 – Direct Allocation), and correspondingly this rate class does not attract allocation of the shared primary or secondary asset pools.

Table 7-1 compares the Test Year revenues proposed to be collected from the LU (2) class to the revenues that would be collected from this group of customers if the new rate class were not created. The introduction of the LU (2) customer class and the removal of costs related to assets that these customers do not use reduces the costs allocated to these customers by

nearly $4 Million per year. Appendix 2P further illustrates the difference between maintaining these customers in the Large Use class and moving them to the proposed LU (2) class.

Table 7-1: LU (2) Revenues at Proposed Rates vs. LU (2) Revenues at LU (1) Rates

	Revenue Requirement as LU (1) Customers A	Revenue Requirement as LU (2) Customers B	Revenue Difference as LU (1) Customers A-B
2015	$4,085,475	$480,086	$3,605,389
2016	$4,332,153	$580,573	$3,751,579
2017	$4,496,349	$782,837	$3,713,512
2018	$4,616,370	$804,863	$3,811,507
2019	$4,808,926	$838,452	$3,970,474

The introduction of this class results in a rate structure that better addresses the cost causality of each customer class. In addition, there is concern that, absent the proposed rate class, some of these customers may choose to make related investments to directly connect to Hydro One, leaving Horizon Utilities with stranded assets, and significantly less volume throughput. Retention of these customers will reduce the risk of a larger burden of costs on the remaining customer classes.

Presently, all customers that qualify for the LU (2) rate class have demands over 20 MW, while the largest of the remaining Large Use customers' demands is less than 10 MW. It is expected that customers under the threshold are unlikely to cross over, and those above are unlikely to cross under. Unlike the members of the proposed LU (2) customer class, pooled assets are used to distribute power to the remaining Large Use customer class ("LU (1)").

Allocation of Sub-Accounts

Elenchus determined that certain accounts that are treated as primary assets included sub-accounts that, when examined on a disaggregated basis, were in fact secondary assets. Consequently, it was determined that the allocation of costs to Horizon Utilities' customer classes would be of greater adherence with the principle of cost causality if the sub-accounts that comprised primary and secondary costs were separated as inputs in the cost allocation model and allocated appropriately to Horizon Utilities' customer classes. Horizon Utilities agrees with the recommendation made by Elenchus and has refelected these changes in the 2015 – 2019 CA Models.

Updates to Horizon Utilities' Cost Allocation Model

Elenchus determined updated demand allocators for each year, providing advice on the methodology for preparing a cost allocation study, and performing a final review of the completed models. In addressing these matters, Elenchus and Horizon Utilities were guided by the Filing Requirements and the Cost Allocation Review which set out the Board's policies in relation to specific cost allocation matters for electricity distributors.[1]

Load and Customer Information

The Horizon Utilities 2015-2019 CA Models have been prepared using the following load and load profile information:

Annual Loads (kW and kWh, as appropriate) and customer counts: The 2015-2019 load forecast and customer counts by class provided in Exhibit 3, Tab 2, Schedule 1 were also used for the 2015-2019 CA Models.

Street Lighting Connections: The 2015-2019 connections (unmetered) for the Street Lighting class are calculated using a ratio of 1.3141 Devices : 1 Connection. This ratio is based on the results of a 2013 audit of the number of daisy chained devices in the City of Hamilton. The scope of this audit included a physical count of the number of daisy chained devices in the City of Hamilton. In addition, a review of GIS records in the City of St. Catharines was completed to inform the calculation of this ratio. Table 7-2 provides the derivation of ratio of 1.3141 Devices : 1 Connection.

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

TAB 2

7.0-VECC-49

Reference: E7/T1/S1, pg. 2 and pg. 6

a) For each of the customers in the proposed LU(2) class please describe the supply arrangements (i.e. how supply is obtained from Hydro One and the Horizon facilities used to deliver the power to the customer), including those circumstance where there is a unplanned or maintenance outage on their main supply facilities. In each case, please indicate whether any of the facilities used also provide (or can provide in the case other equipment outages) power to customers not in the LU(2) class.

b) Page 6 states that 100% of the customers in this rate class (LU(2)) are served "almost exclusively by dedicated conduit". Please indicate what the exceptions are. If some assets are "shared" with other classes, what are they and how is this treated in the cost allocation?

c) Do the LU(2) customers also have dedicated back-up "conduit" to ensure supply in cases of either an unplanned or maintenance outage of their main supply facilities?
- **If yes, is this also directly allocated?**
- **If not, how are they supplied during such outages? If supply is made from non-dedicated facilities, how is this addressed in the cost allocation?**

Response:

a) Horizon Utilities supplies all of the customers in the proposed LU (2) class via three Transformer Stations ("TSs") owned by Hydro One Networks Inc. ("Hydro One"), including breakers also owned by Hydro One. Horizon Utilities owns the Low Voltage ("LV") cables to the Hydro One breaker; the cable demarcation varies by customer. There are multiple feeders and breakers per customer within this customer class providing each customer with multiple redundancies. The available redundancies provide the ability to withstand unplanned outages due to a single cable fault, since these customers are served by multiple cables. These feeders are dedicated to the customers within the LU (2) class and cannot provide power to customers that are not in the LU(2) class.

b) Horizon Utilities wishes to clarify that several conduits make up a ductbank. Ductbanks pass through utility chambers and vaults, all of which would be classified as civil assets. The reference on page 6 should read "almost exclusively by civil assets". The electrical assets are dedicated to this customer class as well as the conduit in which the electrical assets reside. In certain circumstances, the remaining civil assets such as the utility chambers, vaults and any

unutilized conduits are considered shared assets. Horizon Utilities has identified that the shared civil assets are fully depreciated and not material to the cost allocation process.

c) Horizon Utilities confirms that as provided in response to a) and b), these customers have multiple feeders servicing the site and the feeders are in conduits. Both the conduits and feeders are dedicated to the LU(2) class. This provides multiple redundancies to protect against an unplanned outage or maintenance.

TAB 3

7.0-VECC-51

Reference: E7/T1/S1/pg.6

a) With respect to Footnote 2, please confirm that for the new allocators described with the suffix "SU" the suffix should be LU2. If not please reconcile this footnote with page 9 of the Elenchus Report on Cost Allocation.

b) Why are there no wholesale meter costs (Acct. 1820-3) assigned/allocated to the LU(2) class (i.e. use of CENexLU2)?

Response:

a) Horizon Utilities confirms that the new allocators described with the suffix "SU" should be "LU (2)".

b) The engineering review of assets used to serve the customers in the LU (2) class determined that the feeders used to provide service to 2 of the customers are wholesale registered; these customers have paid for their own meters. Of the two remaining customers, one customer is supplied by wholesale meters at a Hydro One transformer station ("TS"). This entire TS along with the metering is at end of life and is being replaced over the term of this Application as discussed in 8-Staff-33. The cost for this project including the metering has been allocated to the LU2 class. The remaining LU (2) customer has older retail interval metering equipment and its net book value is approximately zero. This equipment is planned for replacement within the next two years; those costs will be allocated to the LU (2) customer class.

TAB 4

C of H 7_Attch 1_City of Hamilton Streetlight Audit Report

This page intentionally left blank

Horizon Utilities

City of Hamilton Street Light Audit Report

Prepared by: Utility Solutions Corporation

November 6, 2013

Contents

Executive Summary

Project Background

The Street Lighting System in the City of Hamilton that is energized from Horizon Utilities' distribution system is either connected to Horizon's distribution house lighting bus or dedicated street lighting lines owned and operated by the City of Hamilton. The division of street lights connected to Horizon's bus vs. those connected to dedicated street lighting lines has been approximated over the years. Since the operational cost for each of these two connection types is different, both the City and Horizon agreed to have a street lighting audit performed to much more precisely determine the division between connection types. Utility Solutions Corporation, under its current resource contract with Horizon Utilities, was requested to perform the street lighting audit and report its findings.

Project Approach

Utility Solutions was requested to perform a field audit of all street streetlights within Horizon Utilities' service territory. This number was estimated to be 40,000. The street lighting types can be broadly categorized as follows:

- Overhead residential
- Overhead arterial/commercial
- Overhead rural
- Underground subdivision
- Underground decorative
- Alleyway (small quantity)

The field audit involved deploying trained technicians to each accessible street light location. With the exception of underground subdivisions and high-speed roadways, technicians performed the audit on an individual basis by foot patrol. Underground supplied subdivisions and high-speed roadways were performed by two person crews using a vehicle.

Technician staff gathered and/or confirmed the following data at each street light location:

- Pole number verification
- Overhead or underground supply type
- Pole ownership
- Connection type for overhead lines (house lighting or dedicated street lighting bus)
- Lamp wattage (if shown)
- Presence of primary lines (Y/N)
- Presence of shared use (i.e., telecommunication/cable)

All field data was submitted to office technician staff for further processing. In the case of underground supplied street lights, office staff identified the connection type using Horizon's GIS based record system, Legend. Office staff also performed quality control and assembled the data for delivery to the client.

Audit Findings

Using both Horizon Utilities and the City of Hamilton data sources, Utility Solutions identified a total of 39,340 street lights as being in scope for this project. These street light locations were inspected over a 2 ½ month period. The table below summarizes the audit results. More detailed findings can be found in the body of this report.

Audit Item	Count	Comments
Total Light Locations	39,340	From client databases
Total Lights in Service	37,934	Identified in Field
Total D1s	21,796	D1 = Supplied from House Lighting Bus
Total D2s	12,109	D2 = Supplied from dedicated street light bus connection
Undefined Connections	3,802	Primarily UG supplied lights not shown in Legend
No Access	227	No Access to Pole/Light

Project Methodology

Utility Solutions implemented a three stage approach to complete this project as outlined below:

1. Data Organization and Route Mapping
2. Field Data Collection
3. Post Processing and Data Assembly

Data Organization and Route Mapping

This stage of the project involved reviewing all of the street lighting data supplied by Horizon and the City of Hamilton to enable USC to assemble a full project scope map in terms of volume of street lights and geography. Utility Solutions assembled this data and created a personal geo-database in Shapefile format. The combined number of streetlights identified amongst the various sources was 39,340. All individual streetlights were subsequently mapped and provided to both Horizon and the City for scope verification.

The composite street lighting GIS file created by USC was used extensively throughout the project. From this file, USC created approximately 240 smaller route maps to facilitate the field collection work flow. Each route map contained street centreline information along with street light pole locations. In addition to the route map, a data collection form was created in Excel format. The collection form was used by USC field technicians to enter field data for all lights identified on the route map.

Where possible, maps were categorized to allow USC to adopt various field approaches for data collection. These categories included:

- Underground subdivision
- Overhead residential
- Arterial/Commercial
- High-speed roadways
- Rural
- Alleyways

TAB 5

8-Staff-33 Bill Impacts

Reference:

1. Exhibit 8 Tab 4 Schedule 1
2. Exhibit 2 Appendix 2-4 Appendix A Innovative Customer Consultation Report
3. Report of the Board Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach October 18, 2012

Preamble:

Board staff has reviewed the rate impacts for 2015 – 2019 found in Reference 1. For prescribed Residential and General Service <50 KW the impacts are as indicated in the following table developed by Board staff.

Rate Impacts

	2015		2016		2017		2018		2019	
	$	%	$	%	$	%	$	%	$	%
Distribution Only (Subtotal A)										
Residential @ 800 kWh	1.08	3.8	1.38	4.7	0.60	2.0	0.41	1.3	0.91	3.8
GS<50 kW @ 2,000 kWh	10.96	20.1	0.83	1.3	1.62	2.5	1.03	1.5	1.89	20.1

Board staff also developed the following table for the two new Large User Classes in Reference 1.

Rate Impacts

	2015		2016		2017		2018		2019	
	$	%	$	%	$	%	$	%	$	%
Distribution Only										
LU(1) @12.5 MW	- 9,817	-24.2%	1,707	5.6%	672	2.1%	473	1.4%	963	2.9%
LU(2) @ 15 MW	- 38,407	-87.4%	1,237	22.3%	2,236	33.0%	135	1.5%	262	2.9%
LU(2) @ 20 MW	- 44,422	-87.4%	1,455	22.8%	2,585	33.0%	156	1.5%	303	2.9%

In Reference 2, some of Horizon's key account customers (3 of the 9 surveyed) preferred no rate increases and believed the rate change is unreasonable and opposed it.

In Reference 3, the Board wants distributors to appropriately pace its investments.

a. Given the impacts for the remaining years why is Horizon not proposing mitigation measures for GS<50 20.1% in 2015?

b. After large decreases in 2015, the Large User class has significant increases. Why has Horizon not proposed rate mitigation, particularly in light of some of its Key Account customer comments?

c. What capital investments or OM&A programs could be deferred or reduced or spread out that would assist in keeping the increases in the early years down?

Response:

a. When evaluating the need for rate mitigation strategies, Horizon Utilities has considered the rate increases on a total bill basis, consistent with the Board's Chapter 2 Filing Requirements section 2.11.12.1. For the GS < 50 kW class specifically, as shown in Table 8-43 of Exhibit 8, Tab 4, Schedule 1, the total bill increase in 2015 is 5.88% which is well below levels that would warrant rate mitigation according to Board policies and practices. Horizon Utilities did not propose rate mitigation, as a result.

b. The increases in 2016 and 2017 for the Large Use class are the result of capital work to be completed on a transformer station that is a dedicated asset that is directly allocated to the LU (2) class. The LU (2) customers are aware that because they are served using dedicated assets that are directly allocated to them, all costs associated with those dedicated assets (such as the work stated above), will be fully incorporated into their distribution rates.

Furthermore, while the proposed increases to LU (2) rates in 2016 and 2017 are large as compared to the prior year's rates as filed, compared to the existing 2014 rates this class still experiences a rate decrease. Table 1 below provides the distribution bill impacts for the LU (2) class comparing each subsequent rate year to the 2014 existing Large Use rates.

Table 1: LU (2) Distribution Rate Bill Impacts Compared to 2014 Existing Rates

	LU (2) @ 20 MW	LU (2) @ 15 MW
2015 DX Revenues at Existing 2014 Rates	$ 50,960	$ 44,064
2015 DX Revenues at Proposed 2015 Rates	$ 6,574	$ 5,684
2015 DX Bill increase (%)	-87.10%	-87.10%
2016 DX Revenues at Existing 2014 Rates	$ 50,960	$ 44,064
2016 DX Revenues at Proposed 2016 Rates	$ 7,845	$ 6,783
2016 DX Bill increase (%)	-84.61%	-84.61%
2017 DX Revenues at Existing 2014 Rates	$ 50,960	$ 44,064
2017 DX Revenues at Proposed 2017 Rates	$ 10,431	$ 9,154
2017 DX Bill increase (%)	-79.53%	-79.23%
2018 DX Revenues at Existing 2014 Rates	$ 50,960	$ 44,064
2018 DX Revenues at Proposed 2018 Rates	$ 10,586	$ 9,154
2018 DX Bill increase (%)	-79.23%	-79.23%
2019 DX Revenues at Existing 2014 Rates	$ 50,960	$ 44,064
2019 DX Revenues at Proposed 2019 Rates	$ 10,890	$ 9,416
2019 DX Bill increase (%)	-78.63%	-78.63%

c. Horizon Utilities has submitted a comprehensive capital plan that outlines the needs of the business to best safely and reliably serve its customer base. As summarized in Exhibit 1, Tab 2, Schedule 6, Page 9:

The major drivers of Horizon Utilities' Distribution System Plan are the necessary renewal investments in: the distribution system; buildings and related underlying systems and processes; and the Smart Meter implementation. A significant portion of Horizon Utilities' asset infrastructure is now largely due for renewal. Horizon Utilities has been able to extend the life of this equipment through careful management and prudent investments focused on the long term stewardship of these assets. However, the health of a significant portion of these assets is degrading and must be replaced along a carefully managed timeframe in a manner that balances distribution system risks and customer rate impacts. Building infrastructure systems are at or nearing end of life, resulting in: poor equipment performance; increased risk of system failure; poor work environments for employees; and increased health and safety risks.

Horizon Utilities has paced its capital program, as identified in Exhibit 2 Appendix 2-4 Section 3.1 Summary of Capital Expenditure Plan, compared to the recommendation provided by Kinectrics in its ACA.

Regarding OM&A expenditures, in Exhibit 1, Tab 2, Schedule 6, page 27, Horizon Utilities notes:

There is urgency to step up OM&A in 2014 and 2015 to address the non-controllable, regulatory, and managed cost drivers that will affect Horizon Utilities in those years and thereafter. The rationale and justification for such managed growth is articulated in the Application and corresponds to themes such as: support for urgent and rising distribution renewal investment and ongoing medium-term growth in maintenance programs; delivery of customer value through information technology investments to enhance distribution system management and monitoring and timely customer access and response; and to provide functional and sustainable office and operating centre work environments.

Overall, the Application already incorporates pacing of capital expenditures and OM&A to best serve the immediate and long-term needs of its customers. Additionally, the Application articulates a sequencing of expenditure with respect to certain programs. Consequently, Horizon Utilities does not recommend any further deferral or reduction of expenditures as rate mitigation.

TAB 6

7.0-VECC-56

Reference: E7/T1/Appendix 7-1
Cost Allocation Model, Tabs I9 and O5

a) With respect to Appendix 7-1, page 7, how many years of smart meter data does Horizon currently have and how many years' data are needed in order for the information to be used to establish load profiles for cost allocation?

b) With respect to Tabs I9 and O5, please confirm that the LU(2) class has been directly assigned assets in accounts 1840 and 1845 but has not been assigned or allocated any O&M costs associated with these assets.

c) If part (b) is confirmed, please revise the allocators for the O&M costs to include directly assigned assets and provide a revised Cost Allocation.

d) Tab I9 does not appear to attribute any depreciation to the assets directly assigned to the LU(2) class. Please indicate if this is done elsewhere in the cost allocation model and, if so where and what is the depreciation cost associated with these assets?

e) If not, please indicate what the associated depreciation cost would be and re-do the cost allocation with this cost also directly assigned to the LU(2) class.

Response:

a) Horizon Utilities believes that a minimum of four years of Smart Meter data after Smart Meters have been fully deployed is necessary in order to determine weather-sensitivity of load with weather normalization based on 30 years of historic weather data. As of June 2014, Horizon Utilities has 3 years of hourly Smart Meter data (beginning May 2011).

b) Horizon Utilities confirms that no O&M costs have been directly allocated to the LU(2) class. The LU (2) class is served with dedicated assets and essentially no O&M is required to maintain these dedicated assets (estimated at $7,000 every 3 years). Horizon Utilities plans to replace some of the dedicated assets and the capital costs associated with that project are directly allocated to the LU(2) class.

c) Per the answer in part b), no O&M costs are to be allocated to these assets.

d) Depreciation on the directly allocated assets is computed directly within cells J36 and J37 for each year's respective Cost Allocation model.

e) As stated in response to part d), the net fixed asset amounts are provided in the direct allocation tab and therefore include the impact of depreciation.

TAB 7

7.0 –VECC -89TC

Reference: 7-VECC-56 d) & e)

a) Please confirm that the value reported in the referenced cells J36 and J37 are Gross Book values and not depreciation.

b) Please confirm that the $47,118 in depreciation allocated to LU(2) in 2015 (per Sheet O1) consists of:

i. $11,893 for Buildings

ii. $18,530 for Meters

iii. $16,694 for General Plant

Note: This can be seen from Sheet O7.

c) If part (b) is confirmed, please provide a response to VECC-56, part (e).

Response:

a) The values reported in J36 and J37 are the Net Book value, not depreciation.
b) Horizon Utilities confirms these amounts.
c) Horizon Utilities has reviewed the Cost Allocation model again and has directly allocated the following depreciation amounts to the LU (2) class for 2015 through 2019 by year: 2015: $10,111, 2016: $70,024, 2017-2019: $129,937 (per year).

TAB 8

7-Energy Probe-48

Ref: Exhibit 7, Tab 1, Schedule 1

a) For each year shown in Table 7-1 please show the re-allocation of the revenue difference to the other rate classes. For example, in 2015, the proposed LU (2) class reduces the allocation of costs to these customers by $3,605,389, so these costs are re-allocated to other rate classes. Please show this re-allocation.

b) Did Horizon consider phasing in the reduction to the Large Use (2) revenue to cost ratio over a number of years, given the significant increase in cost allocated to other rate classes? If not, why not?

c) Are there other customers that are served directly off of the primary system, but are included in rate classes that are also allocated secondary system costs? If yes, please explain why Horizon is not proposing a separate rate class for those customers.

Response:

a) Horizon Utilities provides the reallocation of the revenue impact of the introduction of the LU (2) class in Tables 1 – 5 below. Column C in each of the tables below provides the reallocation of costs as a result of the introduction of the LU (2) class.

Table 1: 2015 Reallocation of Distribution Revenue

	Distribution Revenue (Per Application)		Distribution Revenue (No LU (2) Class)		Impact of LU (2) Rate Class on Distribution Revenues
		A		B	C = A-B
Residential	$	69,461,355	$	69,459,466	$ 1,889
GS < 50 kW	$	15,412,682	$	13,613,607	$ 1,799,075
GS >50 to 4999 kW	$	21,400,734	$	19,049,999	$ 2,350,735
Standby	$	739,292	$	667,851	$ 71,441
Large Use (1)	$	2,157,451	$	3,104,537	$ (947,085)
Large Use (2)	$	480,086	$	4,085,475	$ (3,605,389)
Sentinel Lights	$	46,725	$	41,271	$ 5,454
Street Lighting	$	2,740,679	$	2,420,768	$ 319,911
Unmetered and Scattered	$	517,021	$	513,052	$ 3,969
Total	$	112,956,026	$	112,956,026	$ 0

Table 2: 2016 Reallocation of Distribution Revenue

	Distribution Revenue (Per Application)		Distribution Revenue (No LU (2) Class)		Impact of LU (2) Rate Class on Distribution Revenues	
		A		B		C = A-B
Residential	$	72,903,466	$	72,909,930	$	(6,464)
GS < 50 kW	$	16,160,545	$	14,301,876	$	1,858,669
GS >50 to 4999 kW	$	22,482,464	$	20,006,611	$	2,475,853
Standby	$	794,058	$	716,552	$	77,507
Large Use (1)	$	2,269,990	$	3,267,203.70	$	(997,214)
Large Use (2)	$	580,573	$	4,332,153	$	(3,751,579)
Sentinel Lights	$	47,588	$	42,024	$	5,565
Street Lighting	$	2,867,294	$	2,532,025	$	335,269
Unmetered and Scattered	$	522,521	$	520,127	$	2,394
Total	$	118,628,501	$	118,628,501	$	(0)

Table 3: 2017 Reallocation of Distribution Revenue

	Distribution Revenue (Per Application)		Distribution Revenue (No LU (2) Class)		Impact of LU (2) Rate Class on Distribution Revenues	
		A		B		C = A-B
Residential	$	74,595,365	$	74,793,631	$	(198,266)
GS < 50 kW	$	16,549,987	$	14,620,477	$	1,929,510
GS >50 to 4999 kW	$	23,137,026	$	20,555,299	$	2,581,728
Standby	$	836,832	$	753,560	$	83,272
Large Use (1)	$	2,331,533	$	3,364,652	$	(1,033,118)
Large Use (2)	$	782,837	$	4,496,349	$	(3,713,512)
Sentinel Lights	$	47,446	$	41,892	$	5,554
Street Lighting	$	2,933,368	$	2,590,010	$	343,359
Unmetered and Scattered	$	529,049	$	527,574	$	1,474
Total	$	121,743,444	$	121,743,444	$	0

Table 4: 2018 Reallocation of Distribution Revenue

	Distribution Revenue (Per Application)	Distribution Revenue (No LU (2) Class)	Impact of LU (2) Rate Class on Distribution Revenues
	A	B	C = A-B
Residential	$ 75,944,135	$ 76,171,481	$ (227,346)
GS < 50 kW	$ 16,829,093	$ 14,821,535	$ 2,007,558
GS >50 to 4999 kW	$ 23,538,584	$ 20,902,040	$ 2,636,544
Standby	$ 872,552	$ 785,169	$ 87,383
Large Use (1)	$ 2,378,306	$ 3,429,970	$ (1,051,663)
Large Use (2)	$ 804,863	$ 4,616,370	$ (3,811,507)
Sentinel Lights	$ 46,828	$ 41,293	$ 5,535
Street Lighting	$ 2,975,756	$ 2,624,069	$ 351,687
Unmetered and Scattered	$ 530,200	$ 528,389	$ 1,810
Total	$ 123,920,317	$ 123,920,317	$ (0)

Table 5: 2019 Reallocation of Distribution Revenue

	Distribution Revenue (Per Application)	Distribution Revenue (No LU (2) Class)	Impact of LU (2) Rate Class on Distribution Revenues
	A	B	C = A-B
Residential	$ 78,365,794	$ 78,606,271	$ (240,476)
GS < 50 kW	$ 17,351,714	$ 15,240,423	$ 2,111,291
GS >50 to 4999 kW	$ 24,297,713	$ 21,572,114	$ 2,725,599
Standby	$ 920,444	$ 828,051	$ 92,393
Large Use (1)	$ 2,460,571	$ 3,548,214	$ (1,087,643)
Large Use (2)	$ 838,452	$ 4,808,926	$ (3,970,474)
Sentinel Lights	$ 46,806	$ 41,269	$ 5,537
Street Lighting	$ 3,059,543	$ 2,697,671	$ 361,872
Unmetered and Scattered	$ 540,863	$ 538,962	$ 1,901
Total	$ 127,881,899	$ 127,881,899	$ 0

b) When evaluating the need for rate mitigation strategies, Horizon Utilities has considered the rate increases on a total bill basis, consistent with the Chapter 2 Filing Requirements section 2.11.12.2. Horizon Utilities has been mindful of customer bill impacts and has applied for total bill impacts for each customer class that are below the 10% threshold set out by the Board in the Chapter 2 Filing requirements.

c) All customers in both the existing Large Use class (i.e., all LU(1) and LU(2) customers) are served directly off of the primary distribution system. Therefore they are not allocated a portion of the costs associated with secondary distribution assets.

There are also some General Service > 50 kW customers that are served directly off of the primary distribution system. Those customers own their own transformation and are provided a transformation allowance based on their monthly kW billed demand as compensation for the reduced cost of service. Nevertheless, since some customers in the General Service > 50 kW class are served off of the secondary system, the class is allocated a share of the secondary system costs.

TAB 9

Appendix J: Revenue to Cost Ratios

Appendix 2-P

Please complete the following four tables.

A) Allocated Costs

Classes	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%
Residential	$ 57,738,673	56.41%	$ 68,263,922	59.65%
GS < 50 kW	$ 11,823,974	11.55%	$ 15,617,872	13.65%
GS > 50 kW	$ 19,773,789	19.32%	$ 22,962,722	20.07%
Large Use (1)	$ 2,257,890	2.21%	$ 1,919,882	1.68%
Large Use (2)	$ 6,577,075	6.43%	$ 440,080	0.38%
Street Lighting	$ 2,963,902	2.90%	$ 3,342,981	2.92%
Sentinel Lighting	$ 57,144	0.06%	$ 44,722	0.04%
Unmetered Scattered Load (USL)	$ 533,639	0.52%	$ 393,301	0.34%
Standby	$ 620,650	0.61%	$ 1,452,849	1.27%
Total	$ 102,346,736	100.00%	$ 114,438,330	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	Column 7C	Column 7D	Column 7E
	Load Forecast (LF) X current approved rates	L.F. X current approved rates X (1 + d)	LF X proposed rates	Miscellaneous Revenue
Residential	$ 63,449,250	$ 66,931,078	$ 66,927,936	$ 3,422,663
GS < 50 kW	$ 12,412,754	$ 13,093,913	$ 14,825,036	$ 730,378
GS > 50 kW	$ 17,197,714	$ 18,141,452	$ 20,614,214	$ 1,118,691
Large Use (1)	$ 2,827,619	$ 2,982,787	$ 2,067,358	$ 140,506
Large Use (2)	$ 3,721,203	$ 3,925,407	$ 487,871	$ 18,221
Street Lighting	$ 2,202,026	$ 2,322,864	$ 2,629,966	$ 140,036
Sentinel Lighting	$ 37,542	$ 39,602	$ 44,838	$ 2,100
Unmetered Scattered Load (USL)	$ 509,223	$ 537,167	$ 448,163	$ 23,798
Standby	$ 745,248	$ 786,144	$ 715,033	$ 81,522
Total	$ 103,102,579	$ 108,760,414	$ 108,760,414	$ 5,677,916

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 riders.

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	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year: 2011	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	%	%	%	%
Residential	111.76%	103.06	103.06	85 - 115
GS < 50 kW	104.52%	88.52	99.60	80 - 120
GS > 50 kW	85.35%	83.88	94.64	80 - 120
Large Use (1)	93.73%	162.68	115.00	85 - 115
Large Use (2)	45.74%	896.12	115.00	85 - 115
Street Lighting	75.01%	73.67	82.86	70 - 120
Sentinel Lighting	61.98%	93.25	104.96	80 - 120
Unmetered Scattered Load (USL)	131.61%	142.63	120.00	80 - 120
Standby	79.83%	59.72	54.83	Undefined
0				

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 whose most recent rebasing year is 2006, 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
	2015	2016	2017	2018	2019	
	%	%	%	%	%	%
Residential	103.06	103.59	103.16	104.09	102.93	85 - 115
GS < 50 kW	99.60	99.37	99.66	101.37	99.09	80 - 120
GS > 50 kW	94.64	94.30	95.48	91.76	96.29	80 - 120
Large Use (1)	115.00	112.73	112.21	111.35	110.37	85 - 115
Large Use (2)	115.00	85.00	85.00	90.67	95.43	85 - 115
Street Lighting	82.86	82.08	83.08	83.18	83.00	70 - 120
Sentinel Lighting	104.96	105.17	103.11	101.85	100.24	80 - 120
Unmetered Scattered Load (USL)	120.00	119.80	119.43	120.00	119.69	80 - 120
Standby	54.83	54.47	54.02	54.22	54.15	Undefined
						0
0						

Note

1 The applicant should complete Table D if it is applying for approval of a revenue to cost ratio in 2013 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 2014 Table (d), enter the planned ratios for the classes that will be 'Change' and 'No Change' in 2014 (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'.

TAB 10

Appendix F
2015 - 2019 Cost Allocation Model

2015 Cost Allocation Model

2014 Cost Allocation Model

EB-2014-0002

Sheet O1 Revenue to Cost Summary Worksheet - 2015 Cost Allocation

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 Large Use (1)	6 Large Use (2)	7 Street Light	8 Sentinel	9 Unmetered Scattered Load	11 Back-up/Standby Power
crev	Distribution Revenue at Existing Rates	$103,102,579	$63,449,250	$12,412,754	$17,197,714	$2,827,619	$3,721,203	$2,202,026	$37,542	$509,223	$745,248
mi	Miscellaneous Revenue (mi)	$5,677,916	$3,422,663	$730,378	$1,118,691	$140,506	$18,221	$140,036	$2,100	$23,798	$81,522
	Miscellaneous Revenue Input equals Output										
	Total Revenue at Existing Rates	$108,780,495	$66,871,913	$13,143,131	$18,316,404	$2,968,125	$3,739,425	$2,342,062	$39,642	$533,021	$826,770
	Factor required to recover deficiency (1 + D)	1.0549									
	Distribution Revenue at Status Quo Rates	$108,760,414	$66,931,078	$13,093,913	$18,141,452	$2,982,787	$3,925,407	$2,322,864	$39,602	$537,167	$786,144
	Miscellaneous Revenue (mi)	$5,677,916	$3,422,663	$730,378	$1,118,691	$140,506	$18,221	$140,036	$2,100	$23,798	$81,522
	Total Revenue at Status Quo Rates	$114,438,330	$70,353,741	$13,824,291	$19,260,143	$3,123,293	$3,943,629	$2,462,900	$41,702	$560,965	$867,666
	Expenses										
di	Distribution Costs (di)	$26,228,649	$13,678,366	$3,850,728	$6,494,434	$588,467	$164,554	$892,300	$9,021	$85,914	$464,865
cu	Customer Related Costs (cu)	$15,622,045	$12,466,303	$1,578,733	$1,254,515	$80,387	$67,115	$89,798	$8,660	$64,929	$11,605
ad	General and Administration (ad)	$18,102,558	$11,279,151	$2,354,374	$3,368,670	$290,903	$98,249	$430,396	$7,621	$65,113	$208,080
dep	Depreciation and Amortization (dep)	$23,941,184	$13,800,425	$3,477,563	$5,050,834	$364,174	$41,645	$835,513	$8,404	$76,695	$285,931
INPUT	PILs (INPUT)	$3,367,502	$1,881,342	$480,996	$750,152	$65,799	$2,732	$120,895	$1,216	$11,113	$53,258
INT	Interest	$9,534,110	$5,326,476	$1,361,801	$2,123,838	$186,290	$7,735	$342,281	$3,443	$31,462	$150,784
	Total Expenses	$96,796,048	$58,432,061	$13,104,195	$19,042,442	$1,576,019	$382,030	$2,711,184	$38,366	$335,226	$1,174,524
	Direct Allocation	$43,772	$0	$0	$0	$0	$43,772	$0	$0	$0	$0
NI	Allocated Net Income (NI)	$17,598,510	$9,831,860	$2,513,677	$3,920,280	$343,863	$14,278	$631,798	$6,356	$58,074	$278,325
	Revenue Requirement (includes NI)	$114,438,330	$68,263,922	$15,617,872	$22,962,722	$1,919,882	$440,080	$3,342,981	$44,722	$393,301	$1,452,849
	Revenue Requirement Input equals Output										
	Rate Base Calculation										
	Net Assets										
dp	Distribution Plant - Gross	$427,142,075	$240,547,763	$61,252,147	$93,897,268	$7,895,958	$410,672	$15,234,987	$153,254	$1,399,421	$6,350,604
gp	General Plant - Gross	$72,899,540	$40,634,515	$10,408,041	$16,248,940	$1,423,142	$135,870	$2,628,251	$26,439	$241,520	$1,152,822
accum dep	Accumulated Depreciation	($85,200,284)	($49,864,127)	($12,356,305)	($17,513,885)	($1,212,023)	($176,880)	($2,852,946)	($28,697)	($261,780)	($933,640)
co	Capital Contribution	($14,506,035)	($7,714,744)	($2,124,791)	($3,447,151)	($285,540)	$0	($631,504)	($6,352)	($57,511)	($238,442)
	Total Net Plant	$400,335,296	$223,603,407	$57,179,092	$89,185,172	$7,821,538	$369,662	$14,378,788	$144,643	$1,321,649	$6,331,344
	($0)										
	Directly Allocated Net Fixed Assets	$394,345	$0	$0	$0	$0	$394,345	$0	$0	$0	$0
COP	Cost of Power (COP)	$522,003,461	$180,882,066	$64,929,757	$204,328,180	$29,663,772	$36,195,741	$4,676,075	$51,225	$1,276,643	$0
	OM&A Expenses	$59,953,252	$37,423,819	$7,783,835	$11,117,619	$959,757	$329,918	$1,412,495	$25,302	$215,956	$684,550
	Directly Allocated Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Subtotal	*$581,956,713*	*$218,305,886*	*$72,713,592*	*$215,445,798*	*$30,623,529*	*$36,525,659*	*$6,088,570*	*$76,528*	*$1,492,600*	*$684,550*
	Working Capital	$69,834,806	$26,196,706	$8,725,631	$25,853,496	$3,674,824	$4,383,079	$730,628	$9,183	$179,112	$82,146
	Total Rate Base	$470,564,447	$249,800,114	$65,904,723	$115,038,668	$11,496,362	$5,147,086	$15,109,416	$153,826	$1,500,761	$6,413,490
	Rate Base Input equals Output										
	Equity Component of Rate Base	$188,225,779	$99,920,045	$26,361,889	$46,015,467	$4,598,545	$2,058,835	$6,043,767	$61,530	$600,304	$2,565,396
	Net Income on Allocated Assets	$17,598,510	$11,921,680	$720,096	$217,701	$1,547,274	$3,517,826	($248,284)	$3,336	$225,739	($306,858)
	Net Income on Direct Allocation Assets	$19,422	$0	$0	$0	$0	$19,422	$0	$0	$0	$0
	Net Income	$17,617,933	$11,921,680	$720,096	$217,701	$1,547,274	$3,537,249	($248,284)	$3,336	$225,739	($306,858)
	RATIOS ANALYSIS										
	REVENUE TO EXPENSES STATUS QUO%	100.00%	103.06%	88.52%	83.88%	162.68%	896.12%	73.67%	93.25%	142.63%	59.72%
	EXISTING REVENUE MINUS ALLOCATED COSTS	($5,657,836)	($1,392,009)	($2,474,740)	($4,646,317)	$1,048,243	$3,299,345	($1,000,920)	($5,079)	$139,721	($626,079)
	Deficiency Input equals Output										
	STATUS QUO REVENUE MINUS ALLOCATED COSTS	$0	$2,089,819	($1,793,580)	($3,702,579)	$1,203,411	$3,503,549	($880,082)	($3,019)	$167,665	($585,183)
	RETURN ON EQUITY COMPONENT OF RATE BASE	9.36%	11.93%	2.73%	0.47%	33.65%	171.81%	-4.11%	5.42%	37.60%	-11.96%

2014 Cost Allocation Model

EB-2014-0002

Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - 2015 Cost Allocation

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1	2	3	5	6	7	8	9	11
	Residential	GS <50	GS>50-Regular	Large Use (1)	Large Use (2)	Street Light	Sentinel	Unmetered Scattered Load	Back-up/Standby Power
Customer Unit Cost per month - Avoided Cost	$2.49	$5.25	$38.04	$307.18	$804.01	$0.14	$0.12	-$0.05	0
Customer Unit Cost per month - Directly Related	$3.46	$7.29	$53.54	$598.39	$1,115.46	$0.22	$0.21	$0.04	0
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$13.21	$18.29	$81.90	$1,093.47	$2,181.43	$6.83	$9.02	$6.15	0
Existing Approved Fixed Charge	$14.92	$33.21	$302.77	$23,376.17	$23,376.17	$2.39	$4.57	$9.40	$0.00

2016 Cost Allocation Model

2014 Cost Allocation Model

EB-2014-0002

Sheet O1 Revenue to Cost Summary Worksheet - 2016 Cost Allocation

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 Large Use (1)	6 Large Use (2)	7 Street Light	8 Sentinel	9 Unmetered Scattered Load	11 Back-up/Standby Power
crev	Distribution Revenue at Existing Rates	$109,399,701	$67,364,042	$14,897,347	$20,710,505	$2,079,658	$494,457	$2,628,585	$43,626	$443,923	$737,558
mi	Miscellaneous Revenue (mi)	$5,716,509	$3,736,039	$671,596	$959,714	$126,426	$17,801	$106,520	$2,788	$28,218	$67,406
		Miscellaneous Revenue Input equals Output									
	Total Revenue at Existing Rates	$115,116,210	$71,100,081	$15,568,944	$21,670,219	$2,206,084	$512,258	$2,735,105	$46,414	$472,141	$804,964
	Factor required to recover deficiency (1 + D)	1.0373									
	Distribution Revenue at Status Quo Rates	$113,484,693	$69,879,420	$15,453,615	$21,483,837	$2,157,313	$512,920	$2,726,736	$45,255	$460,499	$765,098
	Miscellaneous Revenue (mi)	$5,716,509	$3,736,039	$671,596	$959,714	$126,426	$17,801	$106,520	$2,788	$28,218	$67,406
	Total Revenue at Status Quo Rates	$119,201,202	$73,615,459	$16,125,212	$22,443,551	$2,283,739	$530,721	$2,833,256	$48,043	$488,717	$832,505
	Expenses										
di	Distribution Costs (di)	$26,082,588	$13,584,228	$3,834,201	$6,456,373	$598,389	$169,405	$870,226	$8,678	$83,118	$477,970
cu	Customer Related Costs (cu)	$16,053,226	$12,813,775	$1,618,903	$1,302,471	$82,245	$68,582	$92,326	$8,807	$66,116	$0
ad	General and Administration (ad)	$18,698,937	$11,683,596	$2,425,899	$3,460,151	$303,703	$104,468	$433,028	$7,732	$66,096	$214,263
dep	Depreciation and Amortization (dep)	$25,353,876	$14,586,946	$3,679,524	$5,326,781	$389,443	$93,641	$885,346	$8,780	$80,421	$302,993
INPUT	PILs (INPUT)	$4,731,379	$2,645,686	$675,653	$1,049,926	$93,884	$3,478	$169,417	$1,680	$15,412	$76,242
INT	Interest	$9,826,327	$5,494,673	$1,403,225	$2,180,531	$194,983	$7,223	$351,852	$3,490	$32,008	$158,344
	Total Expenses	$100,746,333	$60,808,905	$13,637,405	$19,776,234	$1,662,648	$446,797	$2,802,195	$39,168	$343,170	$1,229,812
	Direct Allocation	$316,970	$0	$0	$0	$0	$316,970	$0	$0	$0	$0
NI	Allocated Net Income (NI)	$18,137,899	$10,142,326	$2,590,138	$4,024,927	$359,909	$13,332	$649,465	$6,441	$59,081	$292,278
	Revenue Requirement (includes NI)	$119,201,202	$70,951,231	$16,227,543	$23,801,161	$2,022,557	$777,099	$3,451,660	$45,610	$402,252	$1,522,090
		Revenue Requirement Input equals Output									
	Rate Base Calculation										
	Net Assets										
dp	Distribution Plant - Gross	$452,296,836	$255,034,729	$64,905,988	$98,999,488	$8,430,904	$408,580	$16,113,450	$159,808	$1,464,944	$6,778,944
gp	General Plant - Gross	$80,263,958	$44,510,911	$11,384,862	$17,705,410	$1,581,034	$642,122	$2,865,555	$28,420	$260,620	$1,285,025
accum dep	Accumulated Depreciation	($105,446,451)	($61,287,119)	($15,281,577)	($21,771,217)	($1,543,081)	($444,785)	($3,581,275)	($35,516)	($325,374)	($1,176,507)
co	Capital Contribution	($14,506,035)	($7,729,287)	($2,127,736)	($3,427,864)	($287,536)	$0	($627,827)	($6,227)	($56,613)	($242,945)
	Total Net Plant	$412,608,308	$230,529,234	$58,881,537	$91,505,817	$8,181,320	$605,917	$14,769,903	$146,485	$1,343,578	$6,644,517
	Directly Allocated Net Fixed Assets	$2,780,762	$0	$0	$0	$0	$2,780,762	$0	$0	$0	$0
COP	Cost of Power (COP)	$545,184,981	$188,961,782	$67,805,926	$212,389,663	$31,453,412	$38,379,460	$4,842,278	$51,021	$1,301,437	$0
	OM&A Expenses	$60,834,751	$38,081,600	$7,879,003	$11,218,996	$984,337	$342,456	$1,395,579	$25,218	$215,330	$692,233
	Directly Allocated Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Subtotal	***$606,019,731***	***$227,043,382***	***$75,684,929***	***$223,608,659***	***$32,437,750***	***$38,721,916***	***$6,237,857***	***$76,239***	***$1,516,767***	***$692,233***
	Working Capital	$72,722,368	$27,245,206	$9,082,192	$26,833,039	$3,892,530	$4,646,630	$748,543	$9,149	$182,012	$83,068
	Total Rate Base	$488,111,438	$257,774,440	$67,963,728	$118,338,856	$12,073,850	$8,033,308	$15,518,446	$155,634	$1,525,590	$6,727,585
		Rate Base Input equals Output									
	Equity Component of Rate Base	$195,244,575	$103,109,776	$27,185,491	$47,335,543	$4,829,540	$3,213,323	$6,207,378	$62,254	$610,236	$2,691,034
	Net Income on Allocated Assets	$18,137,899	$12,806,554	$2,487,807	$2,667,317	$621,091	($233,045)	$31,062	$8,874	$145,546	($397,307)
	Net Income on Direct Allocation Assets	$136,993	$0	$0	$0	$0	$136,993	$0	$0	$0	$0
	Net Income	$18,274,892	$12,806,554	$2,487,807	$2,667,317	$621,091	($96,052)	$31,062	$8,874	$145,546	($397,307)
	RATIOS ANALYSIS										
	REVENUE TO EXPENSES STATUS QUO%	100.00%	103.76%	99.37%	94.30%	112.91%	68.30%	82.08%	105.33%	121.50%	54.69%
	EXISTING REVENUE MINUS ALLOCATED COSTS	($4,084,992)	$148,850	($658,599)	($2,130,942)	$183,527	($264,841)	($716,555)	$804	$69,889	($717,126)
		Deficiency Input equals Output									
	STATUS QUO REVENUE MINUS ALLOCATED COSTS	$0	$2,664,228	($102,331)	($1,357,610)	$261,182	($246,378)	($618,403)	$2,433	$86,465	($689,585)
	RETURN ON EQUITY COMPONENT OF RATE BASE	9.36%	12.42%	9.15%	5.63%	12.86%	-2.99%	0.50%	14.26%	23.85%	-14.76%

2014 Cost Allocation Model

EB-2014-0002

Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - 2016 Cost Allocation

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1	2	3	5	6	7	8	9	11
	Residential	GS <50	GS>50-Regular	Large Use (1)	Large Use (2)	Street Light	Sentinel	Unmetered Scattered Load	Back-up/Standby Power
Customer Unit Cost per month - Avoided Cost	$2.55	$5.38	$39.11	$328.78	$743.05	$0.14	$0.12	-$0.04	0
Customer Unit Cost per month - Directly Related	$3.54	$7.45	$54.88	$625.09	$1,055.47	$0.23	$0.22	$0.06	0
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$13.94	$19.68	$94.24	$1,410.93	$2,320.00	$7.14	$9.47	$6.45	0
Existing Approved Fixed Charge	$15.74	$39.66	$362.92	$17,091.03	$3,064.75	$2.85	$5.46	$8.27	$0.00

2017 Cost Allocation Model

2014 Cost Allocation Model

EB-2014-0002

Sheet O1 Revenue to Cost Summary Worksheet - 2017 Cost Allocation

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 Large Use (1)	6 Large Use (2)	7 Street Light	8 Sentinel	9 Unmetered Scattered Load	11 Back-up/Standby Power
crev	Distribution Revenue at Existing Rates	$114,149,591	$70,231,194	$15,499,886	$21,595,163	$2,167,126	$651,788	$2,725,290	$44,005	$450,138	$785,001
mi	Miscellaneous Revenue (mi)	$5,755,938	$3,762,476	$674,927	$963,972	$128,735	$18,104	$106,296	$2,770	$28,103	$70,554
		Miscellaneous Revenue Input equals Output									
	Total Revenue at Existing Rates	$119,905,529	$73,993,670	$16,174,813	$22,559,136	$2,295,861	$669,891	$2,831,585	$46,776	$478,242	$855,555
	Factor required to recover deficiency (1 + D)	1.0124									
	Distribution Revenue at Status Quo Rates	$115,560,239	$71,099,104	$15,691,432	$21,862,034	$2,193,907	$659,842	$2,758,969	$44,549	$455,701	$794,702
	Miscellaneous Revenue (mi)	$5,755,938	$3,762,476	$674,927	$963,972	$128,735	$18,104	$106,296	$2,770	$28,103	$70,554
	Total Revenue at Status Quo Rates	$121,316,177	$74,861,580	$16,366,359	$22,826,006	$2,322,642	$677,946	$2,865,264	$47,319	$483,804	$865,256
	Expenses										
di	Distribution Costs (di)	$25,806,607	$13,453,633	$3,796,833	$6,359,389	$602,199	$174,945	$845,795	$8,320	$80,130	$485,362
cu	Customer Related Costs (cu)	$16,767,576	$13,385,568	$1,677,823	$1,362,065	$85,130	$71,255	$94,936	$9,238	$69,428	$12,132
ad	General and Administration (ad)	$19,154,311	$12,041,496	$2,469,275	$3,491,588	$311,058	$110,308	$429,430	$7,870	$67,144	$226,143
dep	Depreciation and Amortization (dep)	$25,142,215	$14,497,385	$3,647,121	$5,223,876	$381,094	$127,293	$871,109	$8,516	$78,363	$307,458
INPUT	PILs (INPUT)	$4,901,076	$2,744,256	$699,053	$1,081,118	$98,974	$3,214	$174,729	$1,708	$15,738	$82,285
INT	Interest	$10,179,369	$5,699,728	$1,451,910	$2,245,446	$205,565	$6,675	$362,906	$3,548	$32,688	$170,903
	Total Expenses	$101,951,155	$61,822,065	$13,742,016	$19,763,483	$1,684,018	$493,691	$2,778,905	$39,200	$343,493	$1,284,283
	Direct Allocation	$575,461	$0	$0	$0	$0	$575,461	$0	$0	$0	$0
NI	Allocated Net Income (NI)	$18,789,561	$10,520,826	$2,680,005	$4,144,751	$379,441	$12,322	$669,869	$6,549	$60,337	$315,461
	Revenue Requirement (includes NI)	$121,316,177	$72,342,892	$16,422,021	$23,908,234	$2,063,460	$1,081,474	$3,448,774	$45,749	$403,830	$1,599,744
		Revenue Requirement Input equals Output									
	Rate Base Calculation										
	Net Assets										
dp	Distribution Plant - Gross	$484,548,814	$273,890,218	$69,495,393	$105,258,533	$9,114,484	$414,121	$17,145,249	$167,610	$1,543,534	$7,519,671
gp	General Plant - Gross	$85,710,943	$47,350,059	$12,076,980	$18,688,832	$1,708,867	$1,135,122	$3,027,489	$29,597	$272,652	$1,421,346
accum dep	Accumulated Depreciation	($127,827,157)	($74,184,809)	($18,473,565)	($26,241,017)	($1,900,681)	($775,616)	($4,305,771)	($42,091)	($387,477)	($1,516,132)
co	Capital Contribution	($14,506,035)	($7,740,198)	($2,130,229)	($3,410,502)	($291,064)	$0	($623,788)	($6,098)	($55,723)	($248,433)
	Total Net Plant	$427,926,564	$239,315,270	$60,968,580	$94,295,845	$8,631,606	$773,627	$15,243,179	$149,018	$1,372,987	$7,176,452
	Directly Allocated Net Fixed Assets	$5,047,352	$0	$0	$0	$0	$5,047,352	$0	$0	$0	$0
COP	Cost of Power (COP)	$567,316,799	$196,576,389	$70,482,576	$219,826,551	$33,343,920	$40,686,258	$5,025,527	$50,666	$1,324,912	$0
	OM&A Expenses	$61,728,494	$38,880,696	$7,943,932	$11,213,042	$998,386	$356,508	$1,370,161	$25,428	$216,703	$723,637
	Directly Allocated Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Subtotal	*$629,045,293*	*$235,457,085*	*$78,426,508*	*$231,039,593*	*$34,342,306*	*$41,042,766*	*$6,395,688*	*$76,094*	*$1,541,615*	*$723,637*
	Working Capital	$75,485,435	$28,254,850	$9,411,181	$27,724,751	$4,121,077	$4,925,132	$767,483	$9,131	$184,994	$86,836
	Total Rate Base	$508,459,352	$267,570,121	$70,379,761	$122,020,597	$12,752,683	$10,746,111	$16,010,661	$158,149	$1,557,981	$7,263,288
		Rate Base Input equals Output									
	Equity Component of Rate Base	$203,383,741	$107,028,048	$28,151,904	$48,808,239	$5,101,073	$4,298,445	$6,404,265	$63,260	$623,192	$2,905,315
	Net Income on Allocated Assets	$18,789,561	$13,039,514	$2,624,343	$3,062,524	$638,624	($391,206)	$86,359	$8,119	$140,312	($419,027)
	Net Income on Direct Allocation Assets	$247,157	$0	$0	$0	$0	$247,157	$0	$0	$0	$0
	Net Income	$19,036,718	$13,039,514	$2,624,343	$3,062,524	$638,624	($144,049)	$86,359	$8,119	$140,312	($419,027)
	RATIOS ANALYSIS										
	REVENUE TO EXPENSES STATUS QUO%	100.00%	103.48%	99.66%	95.47%	112.56%	62.69%	83.08%	103.43%	119.80%	54.09%
	EXISTING REVENUE MINUS ALLOCATED COSTS	($1,410,648)	$1,650,778	($247,208)	($1,349,098)	$232,402	($411,582)	($617,189)	$1,027	$74,411	($744,189)
		Deficiency Input equals Output									
	STATUS QUO REVENUE MINUS ALLOCATED COSTS	($0)	$2,518,688	($55,662)	($1,082,227)	$259,183	($403,528)	($583,510)	$1,571	$79,974	($734,488)
	RETURN ON EQUITY COMPONENT OF RATE BASE	9.36%	12.18%	9.32%	6.27%	12.52%	-3.35%	1.35%	12.84%	22.51%	-14.42%

2014 Cost Allocation Model

EB-2014-0002

Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - 2017 Cost Allocation

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1	2	3	5	6	7	8	9	11
	Residential	GS <50	GS>50-Regular	Large Use (1)	Large Use (2)	Street Light	Sentinel	Unmetered Scattered Load	Back-up/Standby Power
Customer Unit Cost per month - Avoided Cost	$2.55	$5.37	$39.17	$325.19	$740.17	$0.15	$0.13	-$0.04	0
Customer Unit Cost per month - Directly Related	$3.52	$7.39	$54.46	$612.52	$1,047.29	$0.24	$0.23	$0.07	0
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$14.22	$20.03	$95.74	$1,441.59	$2,388.59	$7.13	$9.64	$6.55	0
Existing Approved Fixed Charge	$16.30	$41.14	$376.48	$17,699.54	$3,983.80	$2.96	$5.65	$8.46	$0.00

2018 Cost Allocation Model

2014 Cost Allocation Model

EB-2014-0002

Sheet O1 Revenue to Cost Summary Worksheet - 2018 Cost Allocation

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 Large Use (1)	6 Large Use (2)	7 Street Light	8 Sentinel	9 Unmetered Scattered Load	11 Back-up/Standby Power
crev	Distribution Revenue at Existing Rates	$116,147,017	$71,284,661	$15,722,872	$21,959,444	$2,199,161	$912,695	$2,757,592	$43,178	$450,214	$817,201
mi	Miscellaneous Revenue (mi)	$5,866,199	$3,819,992	$685,057	$996,453	$132,323	$18,658	$108,478	$2,768	$28,134	$74,335
		Miscellaneous Revenue Input equals Output									
	Total Revenue at Existing Rates	$122,013,216	$75,104,653	$16,407,928	$22,955,897	$2,331,484	$931,353	$2,866,070	$45,946	$478,348	$891,536
	Factor required to recover deficiency (1 + D)	0.9999									
	Distribution Revenue at Status Quo Rates	$116,130,744	$71,274,673	$15,720,669	$21,956,367	$2,198,853	$912,567	$2,757,206	$43,172	$450,151	$817,087
	Miscellaneous Revenue (mi)	$5,866,199	$3,819,992	$685,057	$996,453	$132,323	$18,658	$108,478	$2,768	$28,134	$74,335
	Total Revenue at Status Quo Rates	$121,996,943	$75,094,665	$16,405,725	$22,952,820	$2,331,176	$931,225	$2,865,684	$45,940	$478,285	$891,422
	Expenses										
di	Distribution Costs (di)	$26,070,243	$13,438,954	$3,760,066	$6,643,798	$616,041	$180,078	$842,468	$8,169	$78,673	$501,996
cu	Customer Related Costs (cu)	$16,897,132	$13,481,355	$1,688,548	$1,383,172	$85,221	$71,075	$97,601	$9,124	$68,667	$12,369
ad	General and Administration (ad)	$19,669,082	$12,288,626	$2,500,053	$3,693,372	$322,945	$114,292	$436,668	$7,888	$67,317	$237,921
dep	Depreciation and Amortization (dep)	$24,537,520	$13,920,916	$3,441,131	$5,481,117	$365,568	$97,616	$849,377	$8,183	$75,063	$298,548
INPUT	PILs (INPUT)	$3,440,386	$1,908,008	$481,198	$784,625	$70,644	$1,987	$122,329	$1,179	$10,866	$59,551
INT	Interest	$11,149,143	$6,183,218	$1,559,403	$2,542,708	$228,933	$6,439	$396,427	$3,819	$35,212	$192,984
	Total Expenses	$101,763,506	$61,221,077	$13,430,400	$20,528,791	$1,689,352	$471,488	$2,744,870	$38,361	$335,798	$1,303,369
	Direct Allocation	$544,233	$0	$0	$0	$0	$544,233	$0	$0	$0	$0
NI	Allocated Net Income (NI)	$19,689,203	$10,919,460	$2,753,881	$4,490,380	$404,292	$11,372	$700,084	$6,745	$62,183	$340,807
	Revenue Requirement (includes NI)	$121,996,943	$72,140,537	$16,184,280	$25,019,171	$2,093,644	$1,027,094	$3,444,954	$45,106	$397,981	$1,644,175
		Revenue Requirement Input equals Output									
	Rate Base Calculation										
	Net Assets										
dp	Distribution Plant - Gross	$522,776,419	$292,193,515	$73,202,084	$118,535,002	$9,921,945	$419,166	$18,403,029	$177,294	$1,632,265	$8,292,119
gp	General Plant - Gross	$90,829,843	$49,754,306	$12,559,316	$20,494,094	$1,843,059	$1,110,273	$3,199,710	$30,827	$284,170	$1,554,090
accum dep	Accumulated Depreciation	($150,106,770)	($85,573,254)	($20,948,193)	($33,136,127)	($2,260,236)	($836,750)	($5,030,919)	($48,465)	($444,979)	($1,827,845)
co	Capital Contribution	($14,506,035)	($7,620,354)	($2,072,927)	($3,584,620)	($294,291)	$0	($619,327)	($5,967)	($54,531)	($254,017)
	Total Net Plant	$448,993,458	$248,754,212	$62,740,279	$102,308,349	$9,210,477	$692,689	$15,952,492	$153,689	$1,416,924	$7,764,346
	Directly Allocated Net Fixed Assets	$4,917,414	$0	$0	$0	$0	$4,917,414	$0	$0	$0	$0
COP	Cost of Power (COP)	$590,129,284	$204,533,941	$73,273,386	$227,550,079	$35,235,787	$42,994,715	$5,149,058	$49,650	$1,342,667	$0
	OM&A Expenses	$62,636,457	$39,208,934	$7,948,667	$11,720,341	$1,024,207	$365,446	$1,376,737	$25,181	$214,658	$752,286
	Directly Allocated Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Subtotal	***$652,765,741***	***$243,742,876***	***$81,222,053***	***$239,270,421***	***$36,259,994***	***$43,360,160***	***$6,525,795***	***$74,830***	***$1,557,325***	***$752,286***
	Working Capital	$78,331,889	$29,249,145	$9,746,646	$28,712,450	$4,351,199	$5,203,219	$783,095	$8,980	$186,879	$90,274
	Total Rate Base	$532,242,761	$278,003,357	$72,486,926	$131,020,799	$13,561,677	$10,813,322	$16,735,588	$162,669	$1,603,803	$7,854,621
		Rate Base Input equals Output									
	Equity Component of Rate Base	$212,897,104	$111,201,343	$28,994,770	$52,408,320	$5,424,671	$4,325,329	$6,694,235	$65,067	$641,521	$3,141,848
	Net Income on Allocated Assets	$19,689,203	$13,873,589	$2,975,325	$2,424,029	$641,824	($84,497)	$120,814	$7,579	$142,487	($411,947)
	Net Income on Direct Allocation Assets	$237,966	$0	$0	$0	$0	$237,966	$0	$0	$0	$0
	Net Income	$19,927,169	$13,873,589	$2,975,325	$2,424,029	$641,824	$153,469	$120,814	$7,579	$142,487	($411,947)
	RATIOS ANALYSIS										
	REVENUE TO EXPENSES STATUS QUO%	100.00%	104.09%	101.37%	91.74%	111.35%	90.67%	83.18%	101.85%	120.18%	54.22%
	EXISTING REVENUE MINUS ALLOCATED COSTS	$16,273	$2,964,116	$223,648	($2,063,275)	$237,840	($95,741)	($578,884)	$840	$80,367	($752,639)
		Deficiency Input equals Output									
	STATUS QUO REVENUE MINUS ALLOCATED COSTS	($0)	$2,954,128	$221,445	($2,066,351)	$237,532	($95,869)	($579,270)	$834	$80,304	($752,753)
	RETURN ON EQUITY COMPONENT OF RATE BASE	9.36%	12.48%	10.26%	4.63%	11.83%	3.55%	1.80%	11.65%	22.21%	-13.11%

2014 Cost Allocation Model

EB-2014-0002

Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - 2018 Cost Allocation

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1	2	3	5	6	7	8	9	11
	Residential	**GS <50**	**GS>50-Regular**	**Large Use (1)**	**Large Use (2)**	**Street Light**	**Sentinel**	**Unmetered Scattered Load**	**Back-up/Standby Power**
Customer Unit Cost per month - Avoided Cost	$2.54	$5.32	$38.57	$312.66	$746.86	$0.16	$0.13	-$0.03	0
Customer Unit Cost per month - Directly Related	$3.47	$7.28	$53.37	$590.68	$1,047.06	$0.25	$0.24	$0.08	0
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$14.27	$20.03	$94.40	$1,413.26	$2,373.93	$7.13	$9.65	$6.56	0
Existing Approved Fixed Charge	$16.45	$41.65	$381.16	$17,859.65	$5,507.93	$3.00	$5.70	$8.53	$0.00

2019 Cost Allocation Model

2014 Cost Allocation Model

EB-2014-0002

Sheet O1 Revenue to Cost Summary Worksheet - 2019 Cost Allocation

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 Large Use (1)	6 Large Use (2)	7 Street Light	8 Sentinel	9 Unmetered Scattered Load	11 Back-up/Standby Power
crev	Distribution Revenue at Existing Rates	$116,786,630	$71,734,356	$15,768,828	$22,063,488	$2,211,427	$924,293	$2,755,753	$41,947	$445,893	$840,645
mi	Miscellaneous Revenue (mi)	$5,953,899	$3,879,931	$698,907	$1,000,837	$135,877	$18,987	$110,255	$2,766	$28,180	$78,159
		Miscellaneous Revenue Input equals Output									
	Total Revenue at Existing Rates	$122,740,528	$75,614,287	$16,467,735	$23,064,325	$2,347,304	$943,280	$2,866,008	$44,713	$474,073	$918,804
	Factor required to recover deficiency (1 + D)	1.0229									
	Distribution Revenue at Status Quo Rates	$119,465,632	$73,379,891	$16,130,554	$22,569,609	$2,262,155	$945,496	$2,818,968	$42,909	$456,122	$859,929
	Miscellaneous Revenue (mi)	$5,953,899	$3,879,931	$698,907	$1,000,837	$135,877	$18,987	$110,255	$2,766	$28,180	$78,159
	Total Revenue at Status Quo Rates	$125,419,531	$77,259,822	$16,829,460	$23,570,446	$2,398,033	$964,483	$2,929,223	$45,675	$484,301	$938,088
	Expenses										
di	Distribution Costs (di)	$26,163,980	$13,687,036	$3,854,252	$6,375,461	$626,234	$185,259	$834,860	$7,976	$77,449	$515,452
cu	Customer Related Costs (cu)	$17,194,604	$13,717,562	$1,712,206	$1,415,846	$86,078	$71,661	$100,252	$9,191	$69,271	$12,537
ad	General and Administration (ad)	$20,198,810	$12,732,025	$2,599,581	$3,647,539	$333,902	$118,793	$442,166	$7,969	$68,225	$248,610
dep	Depreciation and Amortization (dep)	$25,148,495	$14,621,006	$3,664,703	$5,146,295	$371,463	$84,837	$868,431	$8,243	$76,493	$307,023
INPUT	PILs (INPUT)	$3,438,584	$1,929,707	$489,728	$750,472	$71,752	$1,750	$121,986	$1,158	$10,758	$61,273
INT	Interest	$12,093,607	$6,786,839	$1,722,388	$2,639,433	$252,354	$6,155	$429,030	$4,072	$37,838	$215,497
	Total Expenses	$104,238,079	$63,474,175	$14,042,859	$19,975,046	$1,741,783	$468,455	$2,796,725	$38,610	$340,034	$1,360,392
	Direct Allocation	$531,656	$0	$0	$0	$0	$531,656	$0	$0	$0	$0
NI	Allocated Net Income (NI)	$20,649,796	$11,588,506	$2,940,973	$4,506,825	$430,893	$10,510	$732,567	$6,954	$64,608	$367,961
	Revenue Requirement (includes NI)	$125,419,531	$75,062,681	$16,983,831	$24,481,871	$2,172,676	$1,010,620	$3,529,292	$45,564	$404,642	$1,728,353
		Revenue Requirement Input equals Output									
	Rate Base Calculation										
	Net Assets										
dp	Distribution Plant - Gross	$562,982,534	$319,636,082	$80,705,201	$120,664,568	$10,779,017	$424,111	$19,728,461	$187,261	$1,739,336	$9,118,495
gp	General Plant - Gross	$95,103,243	$52,777,317	$13,402,142	$20,542,898	$1,962,835	$1,072,579	$3,342,536	$31,728	$294,773	$1,676,435
accum dep	Accumulated Depreciation	($171,650,632)	($100,025,653)	($24,814,731)	($34,918,003)	($2,605,062)	($869,416)	($5,725,624)	($54,344)	($504,741)	($2,133,058)
co	Capital Contribution	($14,506,035)	($7,769,232)	($2,133,704)	($3,371,443)	($297,368)	$0	($615,177)	($5,840)	($53,869)	($259,402)
	Total Net Plant	$471,929,110	$264,618,513	$67,158,909	$102,918,020	$9,839,423	$627,274	$16,730,197	$158,805	$1,475,499	$8,402,470
	Directly Allocated Net Fixed Assets	$4,787,476	$0	$0	$0	$0	$4,787,476	$0	$0	$0	$0
COP	Cost of Power (COP)	$611,032,162	$211,091,719	$75,928,374	$235,077,153	$37,153,230	$45,334,378	$5,059,196	$46,457	$1,341,655	$0
	OM&A Expenses	$63,557,394	$40,136,624	$8,166,039	$11,438,846	$1,046,214	$375,713	$1,377,278	$25,137	$214,945	$776,599
	Directly Allocated Expenses	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	Subtotal	***$674,589,556***	***$251,228,342***	***$84,094,414***	***$246,515,998***	***$38,199,444***	***$45,710,091***	***$6,436,474***	***$71,594***	***$1,556,600***	***$776,599***
	Working Capital	$80,950,747	$30,147,401	$10,091,330	$29,581,920	$4,583,933	$5,485,211	$772,377	$8,591	$186,792	$93,192
	Total Rate Base	$557,667,333	$294,765,915	$77,250,238	$132,499,939	$14,423,356	$10,899,962	$17,502,573	$167,397	$1,662,291	$8,495,662
		Rate Base Input equals Output									
	Equity Component of Rate Base	$223,066,933	$117,906,366	$30,900,095	$52,999,976	$5,769,342	$4,359,985	$7,001,029	$66,959	$664,916	$3,398,265
	Net Income on Allocated Assets	$20,649,796	$13,785,646	$2,786,602	$3,595,400	$656,250	($35,627)	$132,498	$7,065	$144,267	($422,304)
	Net Income on Direct Allocation Assets	$229,269	$0	$0	$0	$0	$229,269	$0	$0	$0	$0
	Net Income	$20,879,065	$13,785,646	$2,786,602	$3,595,400	$656,250	$193,642	$132,498	$7,065	$144,267	($422,304)
	RATIOS ANALYSIS										
	REVENUE TO EXPENSES STATUS QUO%	100.00%	102.93%	99.09%	96.28%	110.37%	95.43%	83.00%	100.24%	119.69%	54.28%
	EXISTING REVENUE MINUS ALLOCATED COSTS	($2,679,002)	$551,606	($516,097)	($1,417,545)	$174,628	($67,340)	($663,284)	($851)	$69,430	($809,549)
		Deficiency Input equals Output									
	STATUS QUO REVENUE MINUS ALLOCATED COSTS	$0	$2,197,141	($154,371)	($911,425)	$225,357	($46,138)	($600,069)	$111	$79,659	($790,265)
	RETURN ON EQUITY COMPONENT OF RATE BASE	9.36%	11.69%	9.02%	6.78%	11.37%	4.44%	1.89%	10.55%	21.70%	-12.43%

2014 Cost Allocation Model

EB-2014-0002

Sheet O2 Monthly Fixed Charge Min. & Max. Worksheet - 2019 Cost Allocation

Output sheet showing minimum and maximum level for Monthly Fixed Charge

Summary

	1	2	3	5	6	7	8	9	11
	Residential	**GS <50**	**GS>50-Regular**	**Large Use (1)**	**Large Use (2)**	**Street Light**	**Sentinel**	**Unmetered Scattered Load**	**Back-up/Standby Power**
Customer Unit Cost per month - Avoided Cost	$2.54	$5.33	$38.98	$311.16	$756.97	$0.16	$0.14	-$0.02	0
Customer Unit Cost per month - Directly Related	$3.48	$7.28	$53.70	$587.82	$1,057.69	$0.26	$0.26	$0.09	0
Customer Unit Cost per month - Minimum System with PLCC Adjustment	$14.45	$20.27	$95.23	$1,421.17	$2,397.98	$7.31	$9.90	$6.59	0
Existing Approved Fixed Charge	$16.45	$41.64	$381.17	$17,857.15	$5,507.16	$3.00	$5.70	$8.52	$0.00

TAB 11

7.0 – VECC –84TC

Reference: 8-Staff-33

a) Please confirm that a major reason for the decrease in bills for the LU(2) class in 2015 is the proposed reduction in the class' revenue to cost ratio from 949.12% to 115%.

b) Please confirm that status quo ratio for the LU(2) class falls to 74.86% in 2016, primarily due to capital work in that year on the transformer dedicated to the serving this class.

c) Please confirm that increasing the LU(2) class' 2016 revenue to cost to 85% is one of the main reasons for the rate impacts reported for the class in 2016.

d) What revenue to cost ratio for 2015 would lead to a 2016 status quo LU(2) revenue to cost ratio of 85%?

e) What revenue to cost ratio for 2015 would lead to a 2016 status quo LU(2) revenue to cost ratio of 115%?

f) Assuming the rates for 2016 were set based on a revenue to cost ratio of 115% - what would be the resulting 2017 status quo LU(2) class revenue to cost ratio?

Response:

a) Yes – reducing the LU(2) ratio to within the Board Approved Range does decrease the bill impacts for the LU (2) class.
b) Yes – the revenue to cost ratio decreases in 2016 for the LU (2) class due directly allocated capital work.
c) Yes – increasing the Revenue to cost ratio for the LU (2) class to 85% is one of the main reasons for the rate impacts reported for the LU (2) class.
d) A revenue to cost ratio of 130.61% in 2015 leads to a status quo revenue to cost ratio of 85% in 2016 for the LU (2) class.
e) A revenue to cost ratio of 176.90% in 2015 leads to a status quo revenue to cost ratio of 115% in 2016 for the LU (2) class.

f) Assuming the rates for 2016 were based on a revenue to cost ratio of 115%, with no change to the 2015 rates, the resulting status quo 2017 ratio would be 88.96%. Assuming the rates for 2016 were based on a revenue to cost ratio of 115%, and assuming that 2015 revenues were set using the criteria stipulated in part e, the resulting status quo 2017 ratio would be 65.85%.

TAB 12

Appendix H – Bill Impacts

Distribution Bill Impacts $$$

Rate Class	kWh	kW	Distribution $ (2015 vs 2014)	Distribution $ (2016 vs 2015)	Distribution $ (2017 vs 2016)	Distribution $ (2018 vs 2017)	Distribution $ (2019 vs 2018)
Residential (on TOU)	100		$0.90	$0.62	$0.16	$0.00	$0.42
Residential (on TOU)	200		$0.98	$0.68	$0.17	$0.00	$0.46
Residential (on TOU)	500		$1.22	$0.86	$0.20	$0.00	$0.58
Residential (on TOU)	800		$1.46	$1.04	$0.23	$0.00	$0.70
Residential (on TOU)	1,000		$1.62	$1.16	$0.25	$0.00	$0.78
Residential (on TOU)	1,500		$2.02	$1.46	$0.30	$0.00	$0.98
Residential (on TOU)	2,000		$2.42	$1.76	$0.35	$0.00	$1.18
GS < 50 kW (On TOU)	1,000		$8.15	$1.88	$0.61	($0.01)	$1.16
GS < 50 kW (On TOU)	2,000		$9.85	$2.28	$0.71	($0.01)	$1.36
GS < 50 kW (On TOU)	5,000		$14.95	$3.48	$1.01	($0.01)	$1.96
GS < 50 kW (On TOU)	10,000		$23.45	$5.48	$1.51	($0.01)	$2.96
GS < 50 kW (On TOU)	15,000		$31.95	$7.48	$2.01	($0.01)	$3.96
GS > 50 kW (On RPP)	44,000	100	$95.92	$21.62	$7.46	$0.02	$14.00
GS > 50 kW (On RPP)	110,000	250	$149.58	$33.71	$11.63	$0.04	$21.83
GS > 50 kW (On RPP)	154,000	350	$185.35	$41.77	$14.41	$0.05	$27.05
GS > 50 kW (On RPP)	880,000	2,000	$775.55	$174.76	$60.28	$0.21	$113.18
GS > 50 kW (On RPP)	1,760,000	4,000	$1,490.95	$335.96	$115.88	$0.41	$217.58
Large Use (1) (On RPP)	3,321,500	6,500	($8,695.34)	$841.86	$221.21	($3.15)	$566.93
Large Use (1) (On RPP)	3,832,500	7,500	($9,066.14)	$877.76	$230.61	($3.25)	$591.13
Large Use (1) (On RPP)	5,110,000	10,000	($9,993.14)	$967.51	$254.11	($3.50)	$651.63
Large Use (1) (On RPP)	6,387,500	12,500	($10,920.14)	$1,057.26	$277.61	($3.75)	$712.13
Large Use (2) (On RPP)	7,665,000	15,000	($38,287.42)	$1,732.05	$2,872.63	($0.77)	$238.83
Large Use (2) (On RPP)	10,220,000	20,000	($44,279.42)	$2,003.05	$3,322.13	($0.77)	$276.33
USL (On RPP)	250		($1.58)	$0.26	$0.10	($0.01)	$0.27
USL (On RPP)	500		($2.03)	$0.33	$0.13	($0.01)	$0.35
Sentinel (721 Connections)	97,008	216	$1,166.43	$255.22	$67.13	($1.05)	$171.81
Street Lighting (36,000 Devices)	2,400,000	6,800	$25,126.80	$5,766.08	$1,984.88	($21.88)	$3,721.20

Distribution Bill Impacts %

Rate Class	kWh	kW	Distribution % (2015 vs 2014)	Distribution % (2016 vs 2015)	Distribution % (2017 vs 2016)	Distribution % (2018 vs 2017)	Distribution % (2019 vs 2018)
Residential (on TOU)	100		5.49%	3.59%	0.89%	0.00%	2.32%
Residential (on TOU)	200		5.49%	3.61%	0.87%	0.00%	2.34%
Residential (on TOU)	500		5.48%	3.66%	0.82%	0.00%	2.36%
Residential (on TOU)	800		5.47%	3.70%	0.79%	0.00%	2.38%
Residential (on TOU)	1,000		5.47%	3.71%	0.77%	0.00%	2.39%
Residential (on TOU)	1,500		5.46%	3.74%	0.74%	0.00%	2.40%
Residential (on TOU)	2,000		5.46%	3.77%	0.72%	0.00%	2.42%
GS < 50 kW (On TOU)	1,000		19.49%	3.76%	1.18%	-0.02%	2.21%
GS < 50 kW (On TOU)	2,000		19.54%	3.78%	1.14%	-0.02%	2.15%
GS < 50 kW (On TOU)	5,000		19.62%	3.82%	1.07%	-0.01%	2.05%
GS < 50 kW (On TOU)	10,000		19.67%	3.84%	1.02%	-0.01%	1.98%
GS < 50 kW (On TOU)	15,000		19.70%	3.85%	1.00%	0.00%	1.94%
GS > 50 kW (On RPP)	44,000	100	18.71%	3.55%	1.18%	0.00%	2.20%
GS > 50 kW (On RPP)	110,000	250	18.07%	3.45%	1.15%	0.00%	2.13%
GS > 50 kW (On RPP)	154,000	350	17.86%	3.41%	1.14%	0.00%	2.11%
GS > 50 kW (On RPP)	880,000	2,000	17.22%	3.31%	1.11%	0.00%	2.05%
GS > 50 kW (On RPP)	1,760,000	4,000	17.13%	3.30%	1.10%	0.00%	2.04%
Large Use (1) (On RPP)	3,321,500	6,500	(26.89%)	3.56%	0.90%	-0.01%	2.29%
Large Use (1) (On RPP)	3,832,500	7,500	(26.89%)	3.56%	0.90%	-0.01%	2.29%
Large Use (1) (On RPP)	5,110,000	10,000	(26.89%)	3.56%	0.90%	-0.01%	2.30%
Large Use (1) (On RPP)	6,387,500	12,500	(26.89%)	3.56%	0.90%	-0.01%	2.30%
Large Use (2) (On RPP)	7,665,000	15,000	(86.89%)	29.98%	38.26%	-0.01%	2.30%
Large Use (2) (On RPP)	10,220,000	20,000	(86.89%)	29.98%	38.26%	-0.01%	2.30%
USL (On RPP)	250		(12.09%)	2.24%	0.87%	-0.12%	2.29%
USL (On RPP)	500		(12.14%)	2.26%	0.84%	-0.10%	2.28%
Sentinel (721 Connections)	97,008	216	19.43%	3.56%	0.90%	-0.01%	2.29%
Street Lighting (36,000 Devices)	2,400,000	6,800	19.43%	3.73%	1.24%	-0.01%	2.29%

Total Bill Impacts $$$

Rate Class	kWh	kW	Total Bill $ (2015 vs 2014)	Total Bill $ (2016 vs 2015)	Total Bill $ (2017 vs 2016)	Total Bill $ (2018 vs 2017)	Total Bill $ (2019 vs 2018)
Residential (on TOU)	100		$0.52	$0.60	$0.20	($0.75)	($0.34)
Residential (on TOU)	200		$0.93	$0.65	$0.25	($0.70)	($0.27)
Residential (on TOU)	500		$2.14	$0.81	$0.41	($0.54)	($0.05)
Residential (on TOU)	800		$3.36	$0.96	$0.56	($0.38)	$0.16
Residential (on TOU)	1,000		$4.16	$1.07	$0.67	($0.28)	$0.30
Residential (on TOU)	1,500		$6.19	$1.32	$0.92	($0.02)	$0.66
Residential (on TOU)	2,000		$8.21	$1.58	$1.18	$0.24	$1.01
GS < 50 kW (On TOU)	1,000		$12.07	($0.30)	$0.92	($2.03)	$0.68
GS < 50 kW (On TOU)	2,000		$16.61	$0.21	$1.33	($1.62)	$1.19
GS < 50 kW (On TOU)	5,000		$30.24	$1.76	$2.57	($0.37)	$2.73
GS < 50 kW (On TOU)	10,000		$52.95	$4.33	$4.62	$1.70	$5.29
GS < 50 kW (On TOU)	15,000		$75.67	$6.91	$6.68	$3.78	$7.84
GS > 50 kW (On RPP)	44,000	100	$234.98	$25.67	$20.33	$9.31	$26.87
GS > 50 kW (On RPP)	110,000	250	$500.04	$43.83	$43.81	$28.61	$54.00
GS > 50 kW (On RPP)	154,000	350	$676.74	$55.93	$59.46	$41.49	$72.09
GS > 50 kW (On RPP)	880,000	2,000	$3,592.35	$255.70	$317.68	$253.84	$370.58
GS > 50 kW (On RPP)	1,760,000	4,000	$7,126.42	$497.83	$630.68	$511.24	$732.38
Large Use (1) (On RPP)	3,321,500	6,500	($1,828.64)	$1,134.40	$1,178.01	$954.30	$1,523.73
Large Use (1) (On RPP)	3,832,500	7,500	($1,143.01)	$1,215.31	$1,334.61	$1,101.50	$1,695.13
Large Use (1) (On RPP)	5,110,000	10,000	$571.04	$1,417.58	$1,726.11	$1,469.50	$2,123.63
Large Use (1) (On RPP)	6,387,500	12,500	$2,285.10	$1,619.84	$2,117.61	$1,837.50	$2,552.13
Large Use (2) (On RPP)	7,665,000	15,000	($22,240.13)	$2,206.15	$5,080.63	$2,208.73	$2,446.83
Large Use (2) (On RPP)	10,220,000	20,000	($25,045.02)	$4,797.18	$6,266.13	$2,945.23	$3,220.33
USL (On RPP)	250		($0.86)	$0.21	$0.18	$0.09	$0.35
USL (On RPP)	500		($0.56)	$0.24	$0.28	$0.19	$0.50
Sentinel (721 Connections)	97,008	216	$1,406.16	$205.23	$89.98	$21.82	$194.66
Street Lighting (36,000 Devices)	2,400,000	6,800	$31,979.51	$8,579.79	$2,673.04	$666.28	$4,408.00

Total Bill Impacts %

Rate Class	kWh	kW	Total Bill % (2015 vs 2014)	Total Bill % (2016 vs 2015)	Total Bill % (2017 vs 2016)	Total Bill % (2018 vs 2017)	Total Bill % (2019 vs 2018)
Residential (on TOU)	100		1.72%	1.94%	0.64%	-2.35%	(1.09%)
Residential (on TOU)	200		2.13%	1.47%	0.56%	-1.53%	(0.60%)
Residential (on TOU)	500		2.58%	0.95%	0.47%	-0.63%	-0.06%
Residential (on TOU)	800		2.75%	0.77%	0.44%	-0.30%	0.13%
Residential (on TOU)	1,000		2.81%	0.70%	0.43%	-0.18%	0.20%
Residential (on TOU)	1,500		2.89%	0.60%	0.42%	-0.01%	0.30%
Residential (on TOU)	2,000		2.94%	0.55%	0.41%	0.08%	0.35%
GS < 50 kW (On TOU)	1,000		7.49%	-0.18%	0.53%	-1.17%	0.40%
GS < 50 kW (On TOU)	2,000		5.84%	0.07%	0.44%	-0.54%	0.40%
GS < 50 kW (On TOU)	5,000		4.62%	0.26%	0.37%	-0.05%	0.40%
GS < 50 kW (On TOU)	10,000		4.17%	0.33%	0.35%	0.13%	0.40%
GS < 50 kW (On TOU)	15,000		4.01%	0.35%	0.34%	0.19%	0.40%
GS > 50 kW (On RPP)	44,000	100	4.03%	0.42%	0.33%	0.15%	0.44%
GS > 50 kW (On RPP)	110,000	250	3.53%	0.30%	0.30%	0.19%	0.37%
GS > 50 kW (On RPP)	154,000	350	3.44%	0.27%	0.29%	0.20%	0.35%
GS > 50 kW (On RPP)	880,000	2,000	3.23%	0.22%	0.28%	0.22%	0.32%
GS > 50 kW (On RPP)	1,760,000	4,000	3.21%	0.22%	0.27%	0.22%	0.32%
Large Use (1) (On RPP)	3,321,500	6,500	(0.43%)	0.27%	0.28%	0.22%	0.36%
Large Use (1) (On RPP)	3,832,500	7,500	(0.23%)	0.25%	0.27%	0.22%	0.34%
Large Use (1) (On RPP)	5,110,000	10,000	0.09%	0.22%	0.27%	0.23%	0.33%
Large Use (1) (On RPP)	6,387,500	12,500	0.29%	0.20%	0.26%	0.23%	0.32%
Large Use (2) (On RPP)	7,665,000	15,000	(2.33%)	0.24%	0.54%	0.23%	0.26%
Large Use (2) (On RPP)	10,220,000	20,000	(1.98%)	0.39%	0.50%	0.24%	0.26%
USL (On RPP)	250		(2.14%)	0.53%	0.45%	0.22%	0.87%
USL (On RPP)	500		(0.79%)	0.34%	0.40%	0.27%	0.70%
Sentinel (721 Connections)	97,008	216	7.91%	1.07%	0.46%	0.11%	1.00%
Street Lighting (36,000 Devices)	2,400,000	6,800	7.69%	1.92%	0.59%	0.15%	0.96%

TAB 13

FIXED/VARIABLE PROPORTION

Current Fixed/Variable Portion

The current fixed/variable split in distribution revenue was approved in Horizon Utilities' CoS Application (EB-2010-0131) and was calculated based on forecasted customer, device[1], and connection counts, consumption, and approved rates.

Horizon Utilities has proposed a new customer class (described in detail in Exhibit 7, Tab 1, Schedule 1) and, as a result, has reviewed and assessed the fixed/variable split in its distribution revenues for each customer class. Horizon Utilities is not proposing a substantial adjustment to the existing fixed/variable split by rate class, except in the case of the LU (1) and LU (2) classes. The proposed fixed/variable split for the LU (1) and LU (2) classes is the direct result of the introduction of the LU (2) class and reflects the existing split of fixed and variable revenue that is collected from the customers assigned to the LU (1) and LU (2) classes.

Currently, the monthly fixed charges are applied to the forecast of customers, connections, and devices to determine the fixed component of total distribution revenue. Next, the volumetric charge, excluding the transformer allowance and LV charge, is applied to the forecasted volumetric billing determinants to determine the variable component of total distribution revenue. Table 8-3 below provides the 2011 Board-approved split between fixed and variable distribution revenue.

[1] Consistent with common practice in the Ontario electricity distribution sector Horizon Utilities has previously used the term connection to refer to the number of devices that the customer is billed on. Within the OEB cost allocation model, the term connection has been used in recent years to refer to either to a single device or as a group of daisy chained devices. In order to provide more transparency, and to align with the terminology currently used in the Board's Cost Allocation model, Horizon Utilities has clarified its language using devices to refer to the number of lights the customer is billed on, and connection to refer to a group of daisy chained lights as well as lights that are connected at a one to one ratio.

Table 8-3 – Current Fixed and Variable Split

	2011 Board Approved	
Customer Class	**Fixed %**	**Variable %**
Residential	62.92%	37.08%
GS < 50 kW	60.40%	39.60%
GS >50 to 4999 kW	50.02%	49.98%
Standby	0.00%	100.00%
LU (1)	49.40%	50.60%
LU (2)	N/A	N/A
Sentinel Lights	60.66%	39.34%
Street Lighting	67.91%	32.09%
Unmetered and Scattered	66.68%	33.32%

Proposed Fixed/Variable Portion

Table 8-4 identifies the proposed 2015 – 2019 Fixed Variable Split.

Table 8-4 - Proposed Fixed and Variable Split

	2015		2016		2017		2018		2019	
Customer Class	**Fixed %**	**Variable %**	**Fixed %**	**Variable %**	**Fixed %**	**Variable %**	**Fixed %**	**Variable %**	**Fixed %**	**Variable %**
Residential	62.41%	37.59%	62.68%	37.32%	63.03%	36.97%	63.34%	36.66%	63.65%	36.35%
GS < 50 kW	59.30%	40.70%	59.41%	40.59%	59.61%	40.39%	59.69%	40.31%	59.78%	40.22%
GS >50 to 4999 kW	46.45%	53.55%	46.97%	53.03%	47.37%	52.63%	47.83%	52.17%	48.30%	51.70%
Standby	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%
LU (1)	69.44%	30.56%	69.03%	30.97%	68.61%	31.39%	68.22%	31.78%	67.83%	32.17%
LU (2)	30.15%	69.85%	29.75%	70.25%	29.34%	70.66%	28.96%	71.04%	28.60%	71.40%
Sentinel Lights	58.58%	41.42%	59.33%	40.67%	60.01%	39.99%	60.78%	39.22%	61.60%	38.40%
Street Lighting	68.23%	31.77%	68.23%	31.77%	68.23%	31.77%	68.23%	31.77%	68.23%	31.77%
Unmetered and Scattered	67.32%	32.68%	67.73%	32.27%	68.10%	31.90%	68.50%	31.50%	68.85%	31.15%

The 50/50 split embedded in Horizon Utilities' existing Large Use rates considers the aggregate billing for all 11 existing Large Use customers. In implementing the LU (2) class, the 4 customers with demand greater than 15MW are isolated into this separate class. While the aggregate revenues and costs for the proposed LU (1) and LU (2) classes result in a similar weighted average fixed/variable split to that embedded within the existing rates, the LU (2) class attracts a lower fixed percentage due to their comparatively higher demand. Conversely, the LU (1) class attracts a higher fixed percentage due to its comparatively lower level of demand. Table 8-5 below breaks out the 2011 Board Approved amounts to the proposed LU (1) and LU

(2) classes, illustrating that the proposed splits in 2015 through 2019 are consistent with what was approved in the 2011 Cost of Service Application.

Table 8-5: 2011 Board Approved Fixed and Variable Revenues Restated at LU (1) and LU (2)

	2011 Board Approved			
Customer Class	**Fixed $**	**Variable $**	**Fixed %**	**Variable %**
Restated at LU (1)	$ 2,074,840	$ 833,208	71.35%	28.65%
Restated at LU (2)	$ 1,185,623	$ 2,506,456	32.11%	67.89%
Total (Large Use)	$ 3,260,462	$ 3,339,664	49.40%	50.60%

Proposed Fixed Charge

The fixed distribution charge is calculated by dividing the fixed distribution portion of the base revenue requirement by the appropriate year's customers, devices, or connections, as the class charge determinant. Table 8-6 below provides Horizon Utilities' proposed fixed distribution charges for each of the years 2015 through 2019. Tables 8-7 through 8-11 below provide the calculation of the proposed fixed distribution charges.

The supporting discussion on the inputs used to determine the proposed fixed charges below can be found as follows:

- Base Revenue Requirement: Exhibit 6, Tab 1, Schedule 1
- Annualized Customers, Connections, and Devices: Exhibit 3, Tab 2, Schedule1
- Annualized kWh and KW: Exhibit 3, Tab 2, Schedule 1

Table 8-6 Summary of Proposed Fixed Distribution Charges

	2015		2016		2017		2018		2019	
Customer Class	**Connection/ Device**	**Customer**	**Connection/ Device**	**Customer**	**Connection/ Device**	**Customer**	**Connection/ Device**	**Customer**	**Connection/ Device**	**Customer**
Residential		$ 16.38		$ 17.13		$ 17.49		$ 17.74		$ 18.25
GS < 50 kW		$ 41.33		$ 43.26		$ 44.28		$ 44.91		$ 46.20
GS >50 to 4999 kW		$ 376.90		$ 394.61		$ 404.56		$ 410.35		$ 422.19
Standby										
LU (1)		$ 17,835.83		$ 18,655.46		$ 19,042.30		$ 19,314.38		$ 19,868.86
LU (2)		$ 3,015.85		$ 3,598.73		$ 4,784.55		$ 4,856.33		$ 4,995.75
Sentinel Lights	$ 5.69		$ 5.95		$ 6.09		$ 6.19		$ 6.36	
Street Lighting	$ 2.97		$ 3.11		$ 3.19		$ 3.23		$ 3.33	
Unmetered and Scattered	$ 9.54		$ 9.73		$ 9.93		$ 10.04		$ 10.32	

Table 8-7 2015 Proposed Fixed Distribution Charge Calculation

Rate Class	Base Revenue Requirement	Fixed Revenue Proportion	Fixed Revenue Amount	2015 Annualized Customers/Connections/Devices	Proposed Fixed Distribution Rates
	A	B	C=A*B	D	E=C/D
Residential	$ 69,461,355	62.41%	$ 43,353,997	2,646,774	$ 16.38
GS < 50 kW	$ 15,412,682	59.30%	$ 9,140,279	221,134	$ 41.33
GS >50 to 4999 kW	$ 21,400,734	46.45%	$ 9,940,157	26,374	$ 376.90
Standby	$ 739,292	0.00%	$ -	0	$ -
LU (1)	$ 2,157,451	69.44%	$ 1,498,210	84	$ 17,835.83
LU (2)	$ 480,086	30.15%	$ 144,761	48	$ 3,015.85
Sentinel Lights	$ 46,725	58.58%	$ 27,370	4,812	$ 5.69
Street Lighting	$ 2,740,679	68.23%	$ 1,869,880	628,608	$ 2.97
Unmetered and Scattere	$ 517,021	67.32%	$ 348,067	36,470	$ 9.54
TOTAL	**$ 112,956,026**		**$ 66,322,721**		

Table 8-8 2016 Proposed Fixed Distribution Charge Calculation

Rate Class	Base Revenue Requirement	Fixed Revenue Proportion	Fixed Revenue Amount	2016 Annualized Customers/Connections/Devices	Proposed Fixed Distribution Rates
	A	B	C=A*B	D	E=C/D
Residential	$ 72,903,466	62.68%	$ 45,697,495	2,667,263	$ 17.13
GS < 50 kW	$ 16,160,545	59.41%	$ 9,601,068	221,925	$ 43.26
GS >50 to 4999 kW	$ 22,482,464	46.97%	$ 10,559,346	26,759	$ 394.61
Standby	$ 794,058	0.00%	$ -	0	$ -
LU (1)	$ 2,269,990	69.03%	$ 1,567,059	84	$ 18,655.46
LU (2)	$ 580,573	29.75%	$ 172,739	48	$ 3,598.73
Sentinel Lights	$ 47,588	59.33%	$ 28,232	4,742	$ 5.95
Street Lighting	$ 2,867,294	68.23%	$ 1,956,258	628,274	$ 3.11
Unmetered and Scattere	$ 522,521	67.73%	$ 353,907	36,371	$ 9.73
TOTAL	**$ 118,628,501**		**$ 69,936,103**		

Table 8-9 2017 Proposed Fixed Distribution Charge Calculation

Rate Class	Base Revenue Requirement	Fixed Revenue Proportion	Fixed Revenue Amount	2017 Annualized Customers/Connections/Devices	Proposed Fixed Distribution Rates
	A	B	C=A*B	D	E=C/D
Residential	$ 74,595,365	63.03%	$ 47,018,768	2,689,059	$ 17.49
GS < 50 kW	$ 16,549,987	59.61%	$ 9,864,732	222,779	$ 44.28
GS >50 to 4999 kW	$ 23,137,026	47.37%	$ 10,961,011	27,093	$ 404.56
Standby	$ 836,832	0.00%	$ -	0	$ -
LU (1)	$ 2,331,533	68.61%	$ 1,599,553	84	$ 19,042.30
LU (2)	$ 782,837	29.34%	$ 229,659	48	$ 4,784.55
Sentinel Lights	$ 47,446	60.01%	$ 28,470	4,672	$ 6.09
Street Lighting	$ 2,933,368	68.23%	$ 2,001,335	627,940	$ 3.19
Unmetered and Scattere	$ 529,049	68.10%	$ 360,259	36,272	$ 9.93
TOTAL	**$ 121,743,444**		**$ 72,063,789**		

Table 8-10 2018 Proposed Fixed Distribution Charge Calculation

Rate Class	Base Revenue Requirement	Fixed Revenue Proportion	Fixed Revenue Amount	2018 Annualized Customers/Connections/Devices	Proposed Fixed Distribution Rates
	A	B	C=A*B	D	E=C/D
Residential	$ 75,944,135	63.34%	$ 48,106,636	2,711,776	$ 17.74
GS < 50 kW	$ 16,829,093	59.69%	$ 10,045,611	223,670	$ 44.91
GS >50 to 4999 kW	$ 23,538,584	47.83%	$ 11,258,490	27,436	$ 410.35
Standby	$ 872,552	0.00%	$ -	0	$ -
LU (1)	$ 2,378,306	68.22%	$ 1,622,408	84	$ 19,314.38
LU (2)	$ 804,863	28.96%	$ 233,104	48	$ 4,856.33
Sentinel Lights	$ 46,828	60.78%	$ 28,463	4,601	$ 6.19
Street Lighting	$ 2,975,756	68.23%	$ 2,030,250	627,606	$ 3.23
Unmetered and Scattere	$ 530,200	68.50%	$ 363,192	36,172	$ 10.04
TOTAL	**$ 123,920,317**		**$ 73,688,154**		

Table 8-11 2019 Proposed Fixed Distribution Charge Calculation

Rate Class	Base Revenue Requirement	Fixed Revenue Proportion	Fixed Revenue Amount	2019 Annualized Customers/Connections/Devices	Proposed Fixed Distribution Rates
	A	B	C=A*B	D	E=C/D
Residential	$ 78,365,794	63.65%	$ 49,878,004	2,733,149	$ 18.25
GS < 50 kW	$ 17,351,714	59.78%	$ 10,372,116	224,508	$ 46.20
GS >50 to 4999 kW	$ 24,297,713	48.30%	$ 11,735,634	27,797	$ 422.19
Standby	$ 920,444	0.00%	$ -	0	$ -
LU (1)	$ 2,460,571	67.83%	$ 1,668,984	84	$ 19,868.86
LU (2)	$ 838,452	28.60%	$ 239,796	48	$ 4,995.75
Sentinel Lights	$ 46,806	61.60%	$ 28,834	4,531	$ 6.36
Street Lighting	$ 3,059,543	68.23%	$ 2,087,415	627,272	$ 3.33
Unmetered and Scattere	$ 540,863	68.85%	$ 372,385	36,073	$ 10.32
TOTAL	**$ 127,881,899**		**$ 76,383,168**		

Table 8-12 below compares the proposed Fixed Charge to the floor and ceiling determined in the Cost Allocation study. The proposed fixed charge for the: Residential, GS < 50 kW, GS > 50 kW, LU (1), LU (2), and USL classes are above the ceiling as calculated in the cost allocation study. Horizon Utilities is proposing to proceed with these proposed charges as they are in line with the fixed/variable splits approved in the last Cost of Service Application (EB-2010-0131). Decreasing the monthly fixed charge to this level will increase the variable portion of Horizon Utilities' revenues which would create a large impact on customers with higher consumption/demand levels, as well as alter Horizon Utilities' risk profile resulting from consumption variability.

Table 8-12: Fixed Charge Compared to Floor and Ceiling from Cost Allocation Study

	2014	2015	2015	2015	2016	2017	2018	2019
	Existing Rates	Floor per CA	Ceiling per CA	Proposed	Proposed	Proposed	Proposed	Proposed
Residential	$ 14.92	$ 2.94	$ 13.69	$ 16.38	$ 17.13	$ 17.49	$ 17.74	$ 18.25
GS < 50 kW	$ 33.21	$ 6.23	$ 19.28	$ 41.33	$ 43.26	$ 44.28	$ 44.91	$ 46.20
GS >50 to 4999 kW	$ 302.77	$ 45.60	$ 88.24	$ 376.90	$ 394.61	$ 404.56	$ 410.35	$ 422.19
Standby	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
LU (1)	$ 23,376.17	$ 476.05	$ 1,229.24	$17,835.83	$18,655.46	$19,042.30	$19,314.38	$19,868.86
LU (2)	$ 23,376.17	$ 946.84	$ 2,299.20	$ 3,015.85	$ 3,598.73	$ 4,784.55	$ 4,856.33	$ 4,995.75
Sentinel Lights	$ 4.57	$ 0.12	$ 10.48	$ 5.69	$ 5.95	$ 6.09	$ 6.19	$ 6.36
Street Lighting	$ 2.39	$ 0.14	$ 7.01	$ 2.97	$ 3.11	$ 3.19	$ 3.23	$ 3.33
Unmetered and Scattered	$ 9.40	$ 9.40	$ 9.40	$ 9.54	$ 9.73	$ 9.93	$ 10.04	$ 10.32

TAB 14

Appendix K: Fixed Variable Splits

	2011 Board Approved	
Customer Class	**Fixed %**	**Variable %**
Residential	62.92%	37.08%
GS < 50 kW	60.40%	39.60%
GS >50 to 4999 kW	50.02%	49.98%
Standby	0.00%	100.00%
LU (1)	49.40%	50.60%
LU (2)	N/A	N/A
Sentinel Lights	60.66%	39.34%
Street Lighting	67.91%	32.09%
Unmetered and Scattered	66.68%	33.32%

	2015		2016		2017		2018		2019	
Customer Class	**Fixed %**	**Variable %**	**Fixed %**	**Variable %**	**Fixed %**	**Variable %**	**Fixed %**	**Variable %**	**Fixed %**	**Variable %**
Residential	62.24%	37.76%	62.32%	37.68%	62.41%	37.59%	62.58%	37.42%	62.68%	37.32%
GS < 50 kW	59.16%	40.84%	59.08%	40.92%	59.13%	40.87%	59.25%	40.75%	59.28%	40.72%
GS >50 to 4999 kW	46.43%	53.57%	46.89%	53.11%	47.23%	52.77%	47.62%	52.38%	48.02%	51.98%
Standby	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%	0.00%	100.00%
LU (1)	69.44%	30.56%	69.03%	30.97%	68.61%	31.39%	68.22%	31.78%	67.83%	32.17%
LU (2)	30.15%	69.85%	29.75%	70.25%	29.34%	70.66%	28.97%	71.03%	28.60%	71.40%
Sentinel Lights	58.58%	41.42%	59.33%	40.67%	60.01%	39.99%	60.78%	39.22%	61.60%	38.40%
Street Lighting	68.23%	31.77%	68.23%	31.77%	68.23%	31.77%	68.23%	31.77%	68.23%	31.77%
Unmetered and Scattered	67.32%	32.68%	67.78%	32.22%	68.13%	31.87%	68.55%	31.45%	68.90%	31.10%