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Cost Allocation Study Requirements

Ex.7/Tab 1/Sch.1 - Overview of Cost Allocation

ORPC has prepared and is filing a cost allocation informational filing consistent with its understanding of the Directions and Policies in the Board's reports of November 28, 2007 Application of Cost Allocation for Electricity Distributors, and March 31, 2011 Review of Electricity Distribution Cost Allocation Policy (EB-2010-0219) (the "Cost Allocation Reports") and all subsequent updates.

The main objectives of the original informational filing in 2006 were to provide information on any apparent cross-subsidization among a distributor's rate classifications and to support future rate applications. As part of its 2010 Cost of Service Rate Application, ORPC updated the cost allocation revenue to cost ratios with 2010 base revenue requirement information. The revenue to cost ratios from the 2010 application are presented below.

Table 7.1: Previously Approved Ratios (2010 COS)

	%
Residential	1.07
GS < 50 kW	0.88
GS > 50	1.03
Street Lighting	0.70
Sentinel Lights	0.70
Unmetered Scattered Load (USL)	0.80

ORPC has prepared a Cost Allocation Study for 2016 based on an allocation of the 2016 test year costs (i.e., the 2016 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.

ORPC has used the updated Board-approved Cost Allocation Model and followed the instructions and guidelines issued by the Board to enter the 2016 data into this model.

ORPC populated the information on Sheet I3, Trial Balance Data with the 2016 forecasted data, Target Net Income, PILs, Deemed interest on long term debt, and the targeted Revenue Requirement and Rate Base.

- 1 On Sheet I4, Break-out of Assets, ORPC updated the allocation of the accounts based on 2016
- 2 values.

- 3 In Sheet I5.1, Miscellaneous data, ORPC updated the deemed equity component of rate base,
- 4 km of roads where distribution lines exist, working capital allowance, the proportion of pole rent
- 5 revenue from secondary poles, and the monthly service charges.

- 6 In Sheet I5.2, Weighting Factors, ORPC has used LDC specific factors versus the use of default
- 7 factors as instructed by the Board. The utility has applied service and billing & collecting
- 8 weightings for each customer classification. These weightings are based on a review of time
- 9 and costs incurred in servicing these particular customer classes:

Table 7.2: Weighting Factors

	Residential	GS <50	GS>50- Regular	Sentinel	Street Light	USL
Insert Weighting Factor for Services Account 1855	1.00	2.00	10.00	0.30	0.30	0.30
Insert Weighting Factor for Billing and Collecting	1.00	0.89	0.83	0.83	0.83	0.83

Proposed Services Weighting Factors

- Residential: weighted for services and for billing and collecting as “1” per Cost Allocation instruction sheet.

- General Service less than 50 kW: weighted “.89” for billing & collecting. ORPC feels slightly less time, attention and costs are spent on these customers as the residential class. The weighting factor for services of “2.0” requires more planning and monitoring for general service class than the residential class.

- The Weighted factor for the General Service greater than 50 kW also resulted in .83 for billing and collecting: Similar to GS < 50, billing this particular class requires less time, effort and cost the residential class. ORPC selected a weighting factor of “10.0” for services. The reason for selecting “10.0” is that there is additional time spent on servicing this class is to ensure that the demand data is programmed and monitored appropriately.

- A Weighting factor of 0.83 is also used for the billing and collecting of the Sentinel, Unmetered Scattered Load and the Streetlighting classes. These require less time and effort to bill these classes than the residential class. Services Weighting factors is not applicable for Street Lights. Services Weighting factors is set as 0.30 for Sentinel, Street Lights and USL.

In Sheet I6.1 Revenue has been populated with the 2016 Test year forecast data as well as existing rates.

Sheet I6.2 has been updated with the required Bad Debt and Late Payment revenue data as well as customer/connection number information devices.

1 ORPC updated the capital cost meter information on Sheet I7.1 and the meter reading
2 information on I7.2 in accordance with the recent update to smart meters.

3 On sheet I8, The filing requirements state that “For any customer class for which updated load
4 profiles are not available, the load profiles provided by Hydro One for use in the Informational
5 Filing may be used, scaled to match the load forecast as it relates to the respective rate
6 classes.” . In compliance with the statement above, ORPC has updated the demand data to
7 reflect the proposed Load Forecast. The results are shown below..

8 The data entered on sheet I8 reflects the findings of the 2004 hour by hour load data being
9 scaled to be consistent with the 2016 load forecast and the inspection of the scaled data to
10 identify the system peaks and class specific peaks.

1

Table 7.3: Load Profiles from 2010 CoS

			1	2	3	7	8	9
Customer Classes			Total	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	38,419	15,927	10,586	11,855			51
Bulk Delivery CP	BCP1	38,419	15,927	10,586	11,855	-	-	51
Total Sytem CP	DCP1	38,419	15,927	10,586	11,855	-	-	51
4 CP								
Transformation CP	TCP4	145,063	63,628	36,404	42,838	1,784	210	199
Bulk Delivery CP	BCP4	145,063	63,628	36,404	42,838	1,784	210	199
Total Sytem CP	DCP4	145,063	63,628	36,404	42,838	1,784	210	199
12 CP								
Transformation CP	TCP12	374,756	146,225	98,544	126,438	2,625	293	630
Bulk Delivery CP	BCP12	374,756	146,225	98,544	126,438	2,625	293	630
Total Sytem CP	DCP12	374,756	146,225	98,544	126,438	2,625	293	630
NON CO-INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	45,200	20,917	11,052	12,515	596	66	55
Primary NCP	PNCP1	42,990	20,917	8,841	12,515	596	66	55
Line Transformer NCP	LTNCP1	42,001	20,917	8,841	11,526	596	66	55
Secondary NCP	SNCP1	29,841	20,917	8,841	-	-	28	55
4 NCP								
Classification NCP from Load Data Provider	DNCP4	172,409	78,358	42,389	48,798	2,380	266	218
Primary NCP	PNCP4	163,931	78,358	33,911	48,798	2,380	266	218
Line Transformer NCP	LTNCP4	160,028	78,358	33,911	44,894	2,380	266	218
Secondary NCP	SNCP4	112,599	78,358	33,911	-	-	111	218
12 NCP								
Classification NCP from Load Data Provider	DNCP12	432,811	179,469	107,170	137,610	7,135	797	630
Primary NCP	PNCP12	411,378	179,469	85,737	137,610	7,135	797	630
Line Transformer NCP	LTNCP12	400,369	179,469	85,737	126,602	7,135	797	630
Secondary NCP	SNCP12	266,170	179,469	85,737	-	-	335	630

1 **Table 7.4: Demand Data for 2016 Test Year (adjusted for 2016 Load Forecast)**

CP TEST RESULTS	4 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			1	2	3	4	5	6
			Residential	GS <50	GS>50- Regular	Sentinel	Street Light	USL
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	36,787	21,318	4,977	10,091	56	291	55
Bulk Delivery CP	BCP1	36,787	21,318	4,977	10,091	56	291	55
Total Sytem CP	DCP1	36,787	21,318	4,977	10,091	56	291	55
4 CP								
Transformation CP	TCP4	139,898	77,386	19,969	40,933	223	1,160	227
Bulk Delivery CP	BCP4	139,898	77,386	19,969	40,933	223	1,160	227
Total Sytem CP	DCP4	139,898	77,386	19,969	40,933	223	1,160	227
12 CP								
Transformation CP	TCP12	360,112	161,566	69,509	126,487	302	1,571	678
Bulk Delivery CP	BCP12	360,112	161,566	69,509	126,487	302	1,571	678
Total Sytem CP	DCP12	360,112	161,566	69,509	126,487	302	1,571	678
NON CO_INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	42,885	21,318	8,811	12,355	56	291	55
Primary NCP	PNCP1	43,033	21,342	8,411	12,872	62	291	55
Line Transformer NCP	LTNCP1	43,033	21,342	8,411	12,872	62	291	55
Secondary NCP	SNCP1	43,033	21,342	8,411	12,872	62	291	55
4 NCP								
Classification NCP from Load Data Provider	DNCP4	165,209	79,859	33,794	49,938	223	1,161	235
Primary NCP	PNCP4	165,209	79,859	33,794	49,938	223	1,161	235
Line Transformer NCP	LTNCP4	165,209	79,859	33,794	49,938	223	1,161	235
Secondary NCP	SNCP4	165,209	79,859	33,794	49,938	223	1,161	235
12 NCP								
Classification NCP from Load Data Provider	DNCP12	413,998	182,907	85,439	140,826	669	3,479	678
Primary NCP	PNCP12	413,998	182,907	85,439	140,826	669	3,479	678
Line Transformer NCP	LTNCP12	413,998	182,907	85,439	140,826	669	3,479	678
Secondary NCP	SNCP12	413,998	182,907	85,439	140,826	669	3,479	678

2 No Direct Allocations were entered on Sheet I9.

1 The following relevant sheets from the Cost Allocation model Year are provided at the next
2 pages.

3

4

- **Sheet I-6 of the Cost Allocation Model**

5

- **Sheet I-8 of the Cost Allocation Model**

6

- **Sheet O-1 of the Cost Allocation Model**

7

- **Sheet O-2 of the Cost Allocation Model**

2016 Cost Allocation Model

EB-2014-0105
Sheet I6.1 Revenue Worksheet -

Total kWhs from Load Forecast	186,385,189
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Total kWhs from Load Forecast	199,316
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Deficiency/sufficiency (RRWF 8. cell F51)	745,575
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Miscellaneous Revenue (RRWF 5. cell F48)	284,010
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			1	2	3	7	8	9
	ID	Total	Residential	GS <50	GS>50-Regular	Street Light	Sentinel	Unmetered Scattered Load
Billing Data								
Forecast kWh	CEN	186,385,189	81,190,920	32,329,405	70,929,970	1,250,197	240,210	444,487
Forecast kW	CDEM	199,316			195,150	3,481	685	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		37,083			37,083			
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	186,385,189	81,190,920	32,329,405	70,929,970	1,250,197	240,210	444,487
Existing Monthly Charge			\$10.99	\$22.97	\$378.72	\$2.60	\$2.22	\$6.25
Existing Distribution kWh Rate			\$0.0150	\$0.0105				\$0.0020
Existing Distribution kW Rate					\$0.6489	\$7.8817	\$12.1768	
Existing TOA Rate					\$0.60			
Additional Charges								
Distribution Revenue from Rates		\$4,080,867	\$2,451,997	\$701,925	\$794,695	\$116,325	\$13,536	\$2,389
Transformer Ownership Allowance		\$22,250	\$0	\$0	\$22,250	\$0	\$0	\$0
Net Class Revenue	CREV	\$4,058,617	\$2,451,997	\$701,925	\$772,445	\$116,325	\$13,536	\$2,389

2016 Cost Allocation Model

EB-2014-0105

Sheet I6.2 Customer Data Worksheet -

			1	2	3	7	8	9
	ID	Total	Residential	GS <50	GS>50-Regular	Street Light	Sentinel	Unmetered Scattered Load
	Billing Data							
Bad Debt 3 Year Historical Average	BDHA	\$79,529	\$70,396	\$7,087	\$2,046	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$40,997	\$26,742	\$7,822	\$6,433			
Number of Bills	CNB	74,122	56,200	15,800.00	1,750.00	60.00	72.00	240.00
Number of Devices	CDEV					2,849	195	
Number of Connections (Unmetered)	CCON	3,044				2,849	195	
Total Number of Customers	CCA	10,851	9,358	1,315	147	5	6	20
Bulk Customer Base	CCB	27	3	24				
Primary Customer Base	CCP	10,975	9,358	1,315	140	136	6	20
Line Transformer Customer Base	CCLT	10,982	9,358	1,315	147	136	6	20
Secondary Customer Base	CCS	10,843	9,358	1,315	139	5	6	20
Weighted - Services	CWCS	14,297	9,358	2,630	1,390	855	59	6
Weighted Meter -Capital	CWMC	2,224,110	1,621,460	267,250	335,400	-	-	-
Weighted Meter Reading	CWMR	11,606	9,358	1,315	933	-	-	-
Weighted Bills	CWNB	72,023	56,200	14,062	1,453	50	60	199

Bad Debt Data

Historic Year:	2012	59,366	45,626	7,603	6,137			
Historic Year:	2013	65,757	57,656	8,101	-			
Historic Year:	2014	113,464	107,907	5,558	-			
Three-year average		79,529	70,396	7,087	2,046	-	-	-

2016 Cost Allocation Model

EB-2014-0105

Sheet 01 Revenue to Cost Summary Worksheet -

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	2	3	7	8	9
		Residential	GS <50	GS>50-Regular	Street Light	Sentinel	Unmetered Scattered Load
Distribution Revenue at Existing Rates	\$4,058,617	\$2,451,997	\$701,925	\$772,445	\$116,325	\$13,536	\$2,389
Miscellaneous Revenue (mi)	\$284,010	\$180,973	\$46,245	\$38,958	\$16,197	\$1,297	\$341
Miscellaneous Revenue Input equals Output							
Total Revenue at Existing Rates	\$4,342,627	\$2,632,970	\$748,171	\$811,403	\$132,522	\$14,833	\$2,730
Factor required to recover deficiency (1 + D)	1.1637						
Distribution Revenue at Status Quo Rates	\$4,804,192	\$2,902,433	\$830,870	\$914,345	\$137,694	\$16,022	\$2,828
Miscellaneous Revenue (mi)	\$284,010	\$180,973	\$46,245	\$38,958	\$16,197	\$1,297	\$341
Total Revenue at Status Quo Rates	\$5,088,202	\$3,083,406	\$877,116	\$953,302	\$153,891	\$17,319	\$3,168
Expenses							
Distribution Costs (di)	\$1,190,589	\$689,520	\$204,566	\$242,939	\$46,484	\$5,574	\$1,506
Customer Related Costs (cu)	\$975,000	\$752,388	\$154,653	\$36,307	\$27,493	\$2,342	\$1,816
General and Administration (ad)	\$1,129,375	\$747,902	\$187,413	\$149,881	\$38,267	\$4,189	\$1,723
Depreciation and Amortization (dep)	\$749,620	\$443,372	\$123,613	\$158,379	\$19,743	\$3,546	\$968
PLTs (INPUT)	\$90,372	\$52,470	\$15,033	\$19,788	\$2,554	\$406	\$122
Interest	\$510,564	\$296,431	\$84,927	\$111,791	\$14,432	\$2,295	\$687
Total Expenses	\$4,645,520	\$2,982,083	\$770,205	\$719,085	\$148,972	\$18,352	\$6,823
Direct Allocation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Allocated Net Income (NI)	\$442,682	\$257,020	\$73,636	\$96,928	\$12,513	\$1,990	\$596
Revenue Requirement (includes NI)	\$5,088,202	\$3,239,102	\$843,840	\$816,013	\$161,485	\$20,342	\$7,419
Revenue Requirement Input equals Output							
Rate Base Calculation							
Net Assets							
Distribution Plant - Gross	\$28,768,607	\$16,613,170	\$4,882,456	\$6,334,604	\$744,513	\$152,095	\$41,769
General Plant - Gross	\$4,514,877	\$2,638,892	\$755,861	\$966,126	\$125,956	\$21,961	\$6,081
Accumulated Depreciation	(\$20,313,621)	(\$11,671,330)	(\$3,466,960)	(\$4,525,345)	(\$508,636)	(\$110,968)	(\$30,382)
Capital Contribution	(\$2,663,070)	(\$1,590,310)	(\$455,172)	(\$526,736)	(\$71,101)	(\$16,158)	(\$3,593)
Total Net Plant	\$10,306,793	\$5,990,422	\$1,716,185	\$2,248,649	\$290,731	\$46,930	\$13,876
Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cost of Power (COP)	\$23,602,740	\$10,281,547	\$4,094,008	\$8,982,160	\$158,318	\$30,419	\$56,287
OM&A Expenses	\$3,294,964	\$2,189,810	\$546,632	\$429,127	\$112,244	\$12,105	\$5,046
Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$26,897,704	\$12,471,357	\$4,640,641	\$9,411,288	\$270,561	\$42,524	\$61,333
Working Capital	\$2,017,328	\$935,352	\$348,048	\$705,847	\$20,292	\$3,189	\$4,600
Total Rate Base	\$12,324,120	\$6,925,774	\$2,064,233	\$2,954,495	\$311,024	\$50,120	\$18,476
Rate Base Input equals Output							
Equity Component of Rate Base	\$4,929,648	\$2,770,309	\$825,693	\$1,181,798	\$124,409	\$20,048	\$7,390
Net Income on Allocated Assets	\$442,682	\$101,323	\$106,911	\$234,217	\$4,918	(\$1,033)	(\$3,654)
Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income	\$442,682	\$101,323	\$106,911	\$234,217	\$4,918	(\$1,033)	(\$3,654)
RATIOS ANALYSIS							
REVENUE TO EXPENSES STATUS QUO%	100.00%	95.19%	103.94%	116.82%	95.30%	85.14%	42.71%
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$745,575)	(\$606,133)	(\$95,670)	(\$4,611)	(\$28,964)	(\$5,510)	(\$4,689)
Deficiency Input equals Output							
STATUS QUO REVENUE MINUS ALLOCATED COSTS	(\$0)	(\$155,697)	\$33,275	\$137,289	(\$7,594)	(\$3,023)	(\$4,250)
RETURN ON EQUITY COMPONENT OF RATE BASE	8.98%	3.66%	12.95%	19.82%	3.95%	-5.15%	-49.45%



Ontario Energy Board

2016 Cost Allocation Model

EB-2014-0105

Sheet 02 Monthly Fixed Charge Min. & Max. Worksheet -

Output sheet showing minimum and maximum level for
Monthly Fixed Charge

Summary

Customer Unit Cost per month - Avoided Cost
Customer Unit Cost per month - Directly Related
Customer Unit Cost per month - Minimum System
with PLCC Adjustment
Existing Approved Fixed Charge

1	2	3	7	8	9
Residential	GS <50	GS>50-Regular	Street Light	Sentinel	Unmetered Scattered Load
\$6.96	\$10.14	\$31.87	\$0.80	\$0.99	\$7.53
\$10.18	\$15.12	\$43.83	\$1.21	\$1.52	\$11.46
\$19.59	\$28.40	\$105.06	\$4.41	\$8.34	\$18.03
\$10.99	\$22.97	\$378.72	\$2.60	\$2.22	\$6.25

Class Revenue Requirements

Ex.7/Tab 2/Sch.1 - Class Revenue Analysis

ORPC has completed OEB table (2), calculated class revenues (2) and Rebalancing Revenue-to-Cost (R/C) Ratios (3) are summarized Appendix 2-P with the results of the 2016 cost allocation study and proposed adjustments. The Allocated cost at the next few pages.

Table 2: Allocated Costs

Classes	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%
Residential	\$2,338,929.28	54.10%	\$3,239,102.45	63.66%
General Service < 50 kW	\$939,982.99	21.74%	\$843,840.45	16.58%
General Service > 50 to 4999 kW	\$776,310.32	17.96%	\$816,013.24	16.04%
Sentinel Lighting	\$19,679.94	0.46%	\$20,342.27	0.40%
Streetlighting	\$239,859.49	5.55%	\$161,485.16	3.17%
Unmetered Scattered Load	\$8,489.39	0.20%	\$7,418.56	0.15%
Total	\$4,323,251.42	100.00%	\$5,088,202.13	100.00%

Table 3: Class Revenues

Classes (same as previous table)	Column 7B Load Forecast (LF) X current approved rates	Column 7C L.F. X current approved rates X (1 + d)	Column 7D LF X proposed rates	Column 7E Miscellaneous Revenue
Residential	\$3,058,129.68	\$2,910,750.14	\$2,957,740.84	\$180,972.99
General Service < 50 kW	\$797,595.10	\$827,057.88	\$830,790.59	\$46,245.40
General Service > 50 to 4999 kW	\$777,055.71	\$910,307.48	\$858,657.04	\$38,957.58
Sentinel Lighting	\$19,045.49	\$13,772.12	\$16,010.05	\$1,296.78
Streetlighting	\$145,288.56	\$139,472.85	\$136,883.44	\$16,196.61
Unmetered Scattered Load	\$7,077.92	\$2,832.01	\$4,110.50	\$340.64
Total	\$4,804,192.46	\$4,804,192.46	\$4,804,192.46	\$284,010.00

1

Table 4: Rebalancing Revenue to Cost Ratios

Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	2010			
	%	%	%	%
Residential	107.00	95.45	96.90	85 - 115
General Service < 50 kW	88.00	103.49	103.93	80 - 120
General Service > 50 to 4999 kW	103.00	116.33	110.00	80 - 120
Sentinel Lighting	70.00	74.08	85.08	80 - 120
Streetlighting	70.00	96.40	94.80	85 - 115
Unmetered Scattered Load	80.00	42.77	60.00	70 - 120

2

3 Table 5 below provides a breakdown of the proposed revenue allocation based on the
4 results of the updated Cost Allocation Study (Sheet O2). The first column shows the allocated
5 costs of the proposed service revenue requirement while the second column shows the per class
6 allocation (%) of the proposed service revenue requirement. The third and fourth column show
7 the breakdown of the revenue offsets as calculated in the cost allocation model. Columns 7-8-9-
8 10 show the results of the cost allocation model and the last column calculates the maximum
9 charge per class.
10

Cost Allocation Results		REVENUE ALLOCATION (sheet O1)						CUSTOMER UNIT COST PER MONTH (sheet O2)			
Customer Class Name	Service Rev Req (row40)		Misc. Revenue (mi) (row19)		Base Rev Req (row80)		Rev2Cost Expense s %	Avoided Costs (Minimum Charge)	Directly Related	Minimum System with PLCC * adjustment	Maximum Charge
Residential	3,239,102	63.66%	180,973	63.72%	3,058,129	63.66%	95.19%	\$6.96	\$10.18	\$19.59	\$19.59
General Service < 50 kW	843,840	16.58%	46,245	16.28%	797,595	16.60%	103.94%	\$10.14	\$15.12	\$28.40	\$28.40
General Service > 50 to 4999 kW	816,013	16.04%	38,958	13.72%	777,056	16.17%	116.82%	\$31.87	\$43.83	\$105.06	\$378.72
Sentinel Ligthing	20,342	0.40%	1,297	0.46%	19,045	0.40%	85.14%	\$0.99	\$1.52	\$8.34	\$8.34
Streetlights	161,485	3.17%	16,197	5.70%	145,289	3.02%	95.30%	\$0.80	\$1.21	\$4.41	\$4.41
Unmetered Scattered Load	7,419	0.15%	341	0.12%	7,078	0.15%	42.71%	\$7.53	\$11.46	\$18.03	\$18.03
TOTAL	5,088,202	100.00 %	284,010	100.00 %	4,804,192	100.00 %					

Table 5: Base Revenue Requirement under various scenarios

Revenue Reallocation - Service Revenue Requirement						
	Proposed Base Revenue Requirement %					
Customer Class Name	Cost Allocation Results		Existing Rates		Proposed Allocation	
Residential	63.66%	3,058,130	60.59%	2,910,750	61.57%	2,957,741
General Service < 50 kW	16.60%	797,595	17.22%	827,058	17.29%	830,791
General Service > 50 to 4999 kW	16.17%	777,056	18.95%	910,307	17.87%	858,657
Sentinel Ligthing	0.40%	19,045	0.29%	13,772	0.33%	16,010
Streetlights	3.02%	145,289	2.90%	139,473	2.85%	136,883
Unmetered Scattered Load	0.15%	7,078	0.06%	2,832	0.09%	4,110
other classes						
other classes						
other classes						
TOTAL	100.00%	4,804,192	100.00%	4,804,192	100.00%	4,804,192

Table 6: Service Revenue Requirement under various scenarios

Customer Class Name	Revenue Offsets		Service Revenue Requirement \$		
	%	\$	Existing Rates	Cost Allocation	Rate Application
Residential	63.72%	180,973	3,091,723	3,239,103	3,138,714
General Service < 50 kW	16.28%	46,245	873,303	843,841	877,036
General Service > 50 to 4999 kW	13.72%	38,958	949,265	816,013	897,615
Sentinel Ligthing	0.46%	1,297	15,069	20,342	17,307
Streetlights	5.70%	16,197	155,669	161,485	153,080
Unmetered Scattered Load	0.12%	341	3,173	7,419	4,451
other classes					
other classes					
other classes					
TOTAL	100.00%	284,010	5,088,202	5,088,202	5,088,202

The reason for the significant difference in the calculated ratios and proposed ratios, especially where the Sentinel and Street Lights are concerned, is due to the utility specific weighting factors. The default factors used in the previous cost allocation did not accurately reflect the actual billing,

- 1 collecting and services at ORPC. How the proposed revenues to cost ratios are used to determine
- 2 rates is discussed in detail at Exhibit 8.
- 3

Revenue-to-Cost Ratios

Ex.7/Tab 3/Sch.1 - Cost Allocation Results and Analysis

The table at the next page shows Appendix 2-P of the Board Appendices. The Appendix provides information on previously approved ratios and proposed ratios. The section following Appendix 2-P addresses the method and logic used to update the ratios from the Cost Allocation study to the proposed ratios.

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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	\$2,338,929.28	54.10%	\$3,239,102.45	63.66%
General Service < 50 kW	\$939,982.99	21.74%	\$843,840.45	16.58%
General Service > 50 to 4999 kW	\$776,310.32	17.96%	\$816,013.24	16.04%
Sentinel Lighting	\$19,679.94	0.46%	\$20,342.27	0.40%
Streetlighting	\$239,859.49	5.55%	\$161,485.16	3.17%
Unmetered Scattered Load	\$8,489.39	0.20%	\$7,418.56	0.15%
other		0.00%		0.00%
other		0.00%		0.00%
		0.00%		0.00%
		0.00%		0.00%
		0.00%		0.00%
Total	\$4,323,251.42	100.00%	\$5,088,202.13	100.00%

Notes

- 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.
- 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.
- 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	\$3,058,129.68	\$2,910,750.14	\$2,957,740.84	\$180,972.99
General Service < 50 kW	\$797,595.10	\$827,057.88	\$830,790.59	\$46,245.40
General Service > 50 to 4999 kW	\$777,055.71	\$910,307.48	\$858,657.04	\$38,957.58
Sentinel Lighting	\$19,045.49	\$13,772.12	\$16,010.05	\$1,296.78
Streetlighting	\$145,288.56	\$139,472.85	\$136,883.44	\$16,196.61
Unmetered Scattered Load	\$7,077.92	\$2,832.01	\$4,110.50	\$340.64
other				
other				

Total	\$4,804,192.46	\$4,804,192.46	\$4,804,192.46	\$284,010.00

Notes:

- 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 Transformer Ownership Allowance. Exclude revenue from rate adders and rate riders.
- Columns 7C and 7D - Column total in each column should equal the Base Revenue Requirement
- 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.
- 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: 2010	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	%	%	%	%
Residential	107.00	95.45	96.90	85 - 115
General Service < 50 kW	88.00	103.49	103.93	80 - 120
General Service > 50 to 4999 kW	103.00	116.33	110.00	80 - 120
Sentinel Lighting	70.00	74.08	85.08	80 - 120
Streetlighting	70.00	96.40	94.80	85 - 115
Unmetered Scattered Load	80.00	42.77	60.00	70 - 120
other				80 - 120
other				80 - 120

Notes

- 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.
- 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
	2016	2017	2018	
	%	%	%	
Residential	96.90			85 - 115
General Service < 50 kW	103.93			80 - 120
General Service > 50 to 4999 kW	110.00			80 - 120
Sentinel Lighting	85.08			80 - 120
Streetlighting	94.80			85 - 115
Unmetered Scattered Load	60.00	70	80	70 - 120
other				80 - 120
other				80 - 120

				0
				0

Note

1 The applicant should complete Table D if it is applying for approval of a revenue to cost ratio in 2014 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 2014. In 2015 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'.

1 The table below shows the utility's proposed Revenue to Cost reallocation based on an analysis
2 of the proposed results from the Cost Allocation Study vs the Board imposed floor and ceiling
3 ranges.

4 **Table 7.9: Proposed Allocation**

Revenue to Cost Ratio Allocation

				Target Range		Revenue to Cost Adjustment			Bill Impacts
Customer Class Name	Calculated R/C Ratio	Proposed R/C Ratio	Variance	Floor	Ceiling	2017	2018	2019.00%	
Residential	0.95	0.97	-0.02	0.85	1.15				5.47%
General Service < 50 kW	1.04	1.04	0.00	0.80	1.20				5.27%
General Service > 50 to 4999 kW	1.17	1.10	0.07	0.80	1.20				10.58%
Sentinel Ligthing	0.85	0.85	0.00	0.80	1.20				16.58%
Streetlights	0.95	0.95	0.01	0.80	1.20				5.45%
Unmetered Scattered Load	0.43	0.60	-0.17	0.80	1.20	0.60	0.70	0.80	0.70%

5

6 The proposed Revenue to Cost ratio is adjusted by changing the allocation percentage for each
7 class. An important factor of Rate Design is its effect on the bill impacts. The utility has spent a
8 considerable amount of time testing, reviewing and assessing the bill impacts for each class
9 while determining the best fit.

10 When adjusting the revenue to cost ratios, the utility first focused on any class which fell outside
11 of the approved range. In this case it was only Unmetered Scattered Load. The utility proposes
12 to increase this to .60 from the calculated .43

13 General Service>50kW was calculated at with a revenue to cost ratio of 1.17. To mitigate rate
14 impact ORPC lowered this to1.10.

15 Lastly, the Residential class was set a 97% to balance out.