

EXHIBIT 7 - COST ALLOCATION  
EB-2014-0080

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# Cost Allocation Study Requirements

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

HPDC 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, HPDC 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. Note that the ratios for the General Service > 50 and Street Lights were phased in over several years.

**Table 7.1- Previously Approved Ratios (2010 COS)**

Customer Class Name	2010 Approved Revenue to Cost Ratio
Residential	0.98
General Service < 50 kW	1.00
General Service > 50 to 4999 kW	1.80
Intermediate	0.80
Sentinel Lights	0.70
Street Lighting	0.70

The Cost Allocation Study for 2015 allocates the 2015 test year costs (i.e., the 2015 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.

HPDC has used the updated OEB-approved Cost Allocation Model and followed the instructions and guidelines issued by the OEB to enter the 2015 data into this model.

HPDC populated the information on Sheet I3, Trial Balance Data with the 2015 forecasted data, Target Net Income, PILs, Deemed interest on long term debt, and the targeted Revenue Requirement and Rate Base.

On Sheet I4, Break-out of Assets, HPDC updated the allocation of the accounts based on 2015 values.

In Sheet I5.1, Miscellaneous data, HPDC updated the deemed equity component of rate base, kilometer of roads in the service area, working capital allowance, the proportion of pole rental revenue from secondary poles, and the monthly service charges.

As instructed by the Board, in Sheet I5.2, Weighting Factors, HPDC has used LDC specific factors rather than continue to use OEB approved default factors. The utility has applied service and billing & collecting weightings for each customer classification.

These weightings are based on a review of time and costs incurred in servicing its customer classes; they are discussed further below.

**Table 7.2 – Weighting Factors**

	Residential	General Service < 50 kW	General Service > 50 to 1499 kW	Intermediate	Sentinel Lighting	Street Lighting
Insert Weighting Factor for Services Account 1855	1.00	2.00	2.00	2.00	0.00	0.00
Insert Weighting Factor for Billing and Collecting	1.00	0.87	1.90	0.85	0.85	0.85

### **Proposed Services Weighting Factors**

**Residential:** the Services weighting factor was set to “1”, per Cost Allocation instruction sheet.

**General Service less than 50 kW, General Service greater than 50 kW, intermediate:**  
The proposed Services weighting factor of 2.0 reflects that these customers require greater capacity than do residential customers as well increased levels of engineering and planning.

**Street Lighting and Sentinel Load:** A Services weighting factor of 0 is proposed for both customer classes as the costs incurred to provide Services for either of these customer classes are the responsibility of the City of Hearst.

**Proposed Billing and Collecting Weighting Factors**

**Residential:** the Billing weighting factor is set at “1”, per Cost Allocation instruction sheet.

**General Service less than 50 kW:** the proposed Billing and Collecting weighting factor is 1.2. Versus the residential customer class, the utility HPDC has less bill to print and receive less calls than the Residential Class

**General Service greater than 50 kW:** The proposed billing and collecting weighting factor is 1.9 and the additional staff time is required to prepare and finalize the bill. The collecting costs are higher than those incurred when dealing with General Service < 50 kW customers.

**Intermediate:** The weighting factor reflects the extremely low volume of bills issued. This class does not give rise to Collecting costs.

**Street Lighting:** The proposed weighting factor is 0.85. This customer class does not give rise to Collecting activity and so no Collecting costs have been allocated. The weighting factor reflects the extremely low volume of bills issued.

**Sentinel Lights:** the proposed weighting factor is 0.85. Like Street Lighting, this class does not give rise to Collecting costs. The weighting factor reflects that relatively few bills are issued to this customer class.

In Sheet I6.1 Revenue has been populated with the 2015 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.

HPDC updated the capital cost meter information on Sheet I7.1 and the meter reading information on I7.2 to reflect its recently completed deployment of smart meters.

The data entered on sheet I8 reflects the findings of the 2004 hour by hour load data being scaled to be consistent with the 2015 load forecast and the inspection of the scaled data to identify the system peaks and class specific peaks.

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**Table 7.3 – Load Profiles from 2010 CoS**

Customer Classes		Residential	GS>50kW	Street Lighting	Sentinel Lighting	GS<50 kW	Intermediate Use
<b>CO-INCIDENT PEAK (kW)</b>							
<b>1 CP</b>							
Total Sytem CP	DCP1	5602.13	4189.79	88.25	5.20	1996.13	8784.01
<b>4 CP</b>							
Total Sytem CP	DCP4	20277.76	14949.54	413.63	24.37	7884.00	34357.18
<b>12 CP</b>							
Total Sytem CP	DCP12	45434.77	39616.17	678.81	39.91	19540.40	102551.25
<b>NON CO_INCIDENT PEAK (kW)</b>							
<b>1 NCP</b>							
Classification NCP from Load Data Provider	DNCP1	6662.00	4241.73	265.02	15.63	2265.83	9120.06
<b>4 NCP</b>							
Classification NCP from Load Data Provider	DNCP4	25897.21	16100.92	1064.66	62.74	9088.16	36169.73
<b>12 NCP</b>							
Classification NCP from Load Data Provider	DNCP12	57815.05	42285.09	3151.18	185.35	22440.97	104868.62

1 **Table 7.4 – Load Profile for 2015 Test Year (adjusted for 2015 Load Forecast)**

<b>Customer Classes</b>		<b>Total</b>	<b>Residential</b>	<b>General Service &lt; 50 kW</b>	<b>General Service &gt; 50 to 1499 kW</b>	<b>Intermediate</b>	<b>Sentinel Lighting</b>	<b>Street Lighting</b>
<b>CO-INCIDENT PEAK</b>								
<b>1 CP</b>								
Transformation CP	TCP1	14,388	5,005	1,709	4,082	3,556	2	35
Bulk Delivery CP	BCP1	14,388	5,005	1,709	4,082	3,556	2	35
Total Sytem CP	DCP1	14,388	5,005	1,709	4,082	3,556	2	35
<b>4 CP</b>								
Transformation CP	TCP4	53,982	20,365	6,621	14,981	11,880	6	129
Bulk Delivery CP	BCP4	53,982	20,365	6,621	14,981	11,880	6	129
Total Sytem CP	DCP4	53,982	20,365	6,621	14,981	11,880	6	129
<b>12 CP</b>								
Transformation CP	TCP12	138,709	44,649	16,630	38,646	38,559	9	216
Bulk Delivery CP	BCP12	138,709	44,649	16,630	38,646	38,559	9	216
Total Sytem CP	DCP12	138,709	44,649	16,630	38,646	38,559	9	216

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		Total	Residential	General Service < 50 kW	General Service > 50 to 1499 kW	Intermediate	Sentinel Lighting	Street Lighting
<b>Customer Classes</b>								
<b>NON CO_INCIDENT PEAK</b>								
<b>1 NCP</b>								
Classification NCP from Load Data Provider	DNCP1	15,825	5,952	1,940	4,133	3,692	5	104
Primary NCP	PNCP1	15,825	5,952	1,940	4,133	3,692	5	104
Line Transformer NCP	LTNCP1	15,825	5,952	1,940	4,133	3,692	5	104
Secondary NCP	SNCP1	15,825	5,952	1,940	4,133	3,692	5	104
<b>4 NCP</b>								
Classification NCP from Load Data Provider	DNCP4	61,681	23,137	7,781	15,686	14,641	18	418
Primary NCP	PNCP4	61,681	23,137	7,781	15,686	14,641	18	418
Line Transformer NCP	LTNCP4	61,681	23,137	7,781	15,686	14,641	18	418
Secondary NCP	SNCP4	61,681	23,137	7,781	15,686	14,641	18	418
<b>12 NCP</b>								
Classification NCP from Load Data Provider	DNCP12	155,801	51,652	19,214	41,196	42,449	54	1,237
Primary NCP	PNCP12	155,801	51,652	19,214	41,196	42,449	54	1,237
Line Transformer NCP	LTNCP12	155,801	51,652	19,214	41,196	42,449	54	1,237
Secondary NCP	SNCP12	155,801	51,652	19,214	41,196	42,449	54	1,237

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3 No Direct Allocations were entered on Sheet I9.

4 The revenue to cost ratios calculated on Sheet O1 of the Cost Allocation model updated for the  
5 2015 Test Year are provided at the next page.

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Sheet I-6 of the Cost Allocation Model

## 2015 Cost Allocation Model

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**Sheet I6.1 Revenue Worksheet - Run 1**

Total kWhs from Load Forecast	79,916,003
-------------------------------	------------

Total kWhs from Load Forecast	130,480
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Deficiency/sufficiency (RRWF 8. cell F51)	17,219
-------------------------------------------	--------

Miscellaneous Revenue (RRWF 5. cell F48)	229,503
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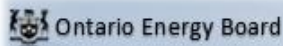
	ID	Total	1 Residential	2 General Service < 50 kW	3 General Service > 50 to 1499 kW	4 Intermediate	5 Sentinel Lighting	6 Street Lighting
<b>Billing Data</b>								
Forecast kWh	CEN	79,916,003	24,347,981	11,155,291	22,618,065	21,333,927	19,146	441,593
Forecast kW	CDEM	130,480	-	-	64,865	60,980	70	4,565
Forecast kW, included in CDEM, of customers receiving line transformer allowance		79,340			17,580	61,760		
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 EVMP	79,916,003	24,347,981	11,155,291	22,618,065	21,333,927	19,146	441,593
Existing Monthly Charge			\$9.19	\$19.76	\$54.82	\$223.01	\$7.09	\$7.88
Existing Distribution kWh Rate			\$0.0160	\$0.0067				
Existing Distribution kW Rate					\$2.3213	\$1.0215	\$3.1198	\$2.2937
Existing TOA Rate					\$0.45	\$0.45		
Additional Charges								
Distribution Revenue from Rates		\$1,169,542	\$640,565	\$182,630	\$178,200	\$67,182	\$1,324	\$99,640
Transformer Ownership Allowance		\$35,703	\$0	\$0	\$7,911	\$27,792	\$0	\$0
Net Class Revenue	CREV	\$1,133,839	\$640,565	\$182,630	\$170,289	\$39,390	\$1,324	\$99,640

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Sheet I-8 of the Cost Allocation Model



# 2015 Cost Allocation Model

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Sheet I8 Demand Data Work sheet - Run 1

This is an input sheet for demand allocators.

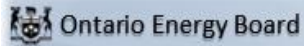
<b>CP TEST RESULTS</b>	<b>4 CP</b>
<b>NCP TEST RESULTS</b>	<b>4 NCP</b>
<b>Co-incident Peak</b>	<b>Indicator</b>
1 CP	CP 1
4 CP	CP 4
12 CP	CP 12
<b>Non-co-incident Peak</b>	<b>Indicator</b>
1 NCP	NCP 1
4 NCP	NCP 4
12 NCP	NCP 12

Customer Classes		Total	1 Residential	2 General Service < 50 kW	3 General Service > 50 to 1439 kW	4 Intermediate	5 Sentinel Lighting	6 Street Lighting
<b>CO-INCIDENT PEAK</b>								
<b>1 CP</b>								
Transformation CP	TCP1	14,388	5,005	1,709	4,082	3,556	2	35
Bulk Delivery CP	BCP1	14,388	5,005	1,709	4,082	3,556	2	35
Total Sytem CP	DCP1	14,388	5,005	1,709	4,082	3,556	2	35
<b>4 CP</b>								
Transformation CP	TCP4	53,982	20,365	6,621	14,981	11,880	6	129
Bulk Delivery CP	BCP4	53,982	20,365	6,621	14,981	11,880	6	129
Total Sytem CP	DCP4	53,982	20,365	6,621	14,981	11,880	6	129
<b>12 CP</b>								
Transformation CP	TCP12	138,709	44,649	16,630	38,646	38,559	9	216
Bulk Delivery CP	BCP12	138,709	44,649	16,630	38,646	38,559	9	216
Total Sytem CP	DCP12	138,709	44,649	16,630	38,646	38,559	9	216
<b>NON CO INCIDENT PEAK</b>								
<b>1 NCP</b>								
Classification NCP from Load Data Provider	DNCP1	15,825	5,352	1,940	4,133	3,692	5	104
Primary NCP	PNCP1	15,825	5,352	1,940	4,133	3,692	5	104
Line Transformer NCP	LTNCP1	15,825	5,352	1,940	4,133	3,692	5	104
Secondary NCP	SNCP1	15,825	5,352	1,940	4,133	3,692	5	104
<b>4 NCP</b>								
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Primary NCP	PNCP12	155,801	51,652	19,214	41,196	42,449	54	1,237
Line Transformer NCP	LTNCP12	155,801	51,652	19,214	41,196	42,449	54	1,237
Secondary NCP	SNCP12	155,801	51,652	19,214	41,196	42,449	54	1,237

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## Sheet O-1 of the Cost Allocation Model



## 2015 Cost Allocation Model

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## Sheet O1 Revenue to Cost Summary Worksheet - Run 1

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 General Service < 50 kV	3 General Service > 50 to 1499 kV	4 Intermediate	5 Sentinel Lighting	6 Street Lighting
crev	Distribution Revenue at Existing Rates	\$1,133,839	\$640,565	\$182,630	\$170,289	\$39,390	\$1,324	\$99,640
mi	Miscellaneous Revenue (mi)	\$229,503	\$144,030	\$32,859	\$18,398	\$12,138	\$457	\$21,622
	Miscellaneous Revenue Input equals Output							
	<b>Total Revenue at Existing Rates</b>	<b>\$1,363,342</b>	<b>\$784,595</b>	<b>\$215,489</b>	<b>\$188,687</b>	<b>\$51,528</b>	<b>\$1,781</b>	<b>\$121,262</b>
	Factor required to recover deficiency (1 + D)	1.0152						
	Distribution Revenue at Status Quo Rates	\$1,151,058	\$650,293	\$185,404	\$172,875	\$39,988	\$1,345	\$101,153
	Miscellaneous Revenue (mi)	\$229,503	\$144,030	\$32,859	\$18,398	\$12,138	\$457	\$21,622
	<b>Total Revenue at Status Quo Rates</b>	<b>\$1,380,561</b>	<b>\$794,323</b>	<b>\$218,262</b>	<b>\$191,273</b>	<b>\$52,126</b>	<b>\$1,801</b>	<b>\$122,775</b>
	<b>Expenses</b>							
di	Distribution Costs (di)	\$503,967	\$266,637	\$69,588	\$54,518	\$43,367	\$958	\$68,899
cu	Customer Related Costs (cu)	\$296,843	\$241,276	\$44,309	\$9,550	\$203	\$754	\$151
ad	General and Administration (ad)	\$257,214	\$163,008	\$36,976	\$20,683	\$14,070	\$540	\$21,937
dep	Depreciation and Amortization (dep)	\$135,718	\$86,399	\$24,329	\$11,785	\$7,594	\$77	\$5,534
INPUT	PILs (INPUT)	\$3,753	\$2,309	\$648	\$359	\$246	\$3	\$190
INT	Interest	\$77,933	\$47,932	\$13,449	\$7,445	\$5,116	\$55	\$3,936
	<b>Total Expenses</b>	<b>\$1,275,429</b>	<b>\$807,560</b>	<b>\$189,898</b>	<b>\$104,340</b>	<b>\$70,597</b>	<b>\$2,387</b>	<b>\$100,647</b>
	<b>Direct Allocation</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
NI	Allocated Net Income (NI)	\$105,132	\$64,660	\$18,142	\$10,044	\$6,901	\$74	\$5,310
	<b>Revenue Requirement (includes NI)</b>	<b>\$1,380,561</b>	<b>\$872,220</b>	<b>\$208,041</b>	<b>\$114,384</b>	<b>\$77,498</b>	<b>\$2,461</b>	<b>\$105,957</b>
	Revenue Requirement Input equals Output							
	<b>Rate Base Calculation</b>							
	<b>Net Assets</b>							
dp	Distribution Plant - Gross	\$3,603,172	\$1,926,726	\$521,332	\$470,662	\$373,047	\$4,286	\$307,118
gp	General Plant - Gross	\$1,445,206	\$888,857	\$249,393	\$138,068	\$94,870	\$1,021	\$72,997
ccum dep	Accumulated Depreciation	(\$3,627,531)	(\$1,941,707)	(\$525,536)	(\$472,989)	(\$374,646)	(\$4,303)	(\$308,349)
co	Capital Contribution	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	<b>Total Net Plant</b>	<b>\$1,420,848</b>	<b>\$873,876</b>	<b>\$245,190</b>	<b>\$135,741</b>	<b>\$93,271</b>	<b>\$1,003</b>	<b>\$71,767</b>
	<b>Directly Allocated Net Fixed Assets</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
COP	Cost of Power (COP)	\$9,751,834	\$2,971,088	\$1,361,236	\$2,759,993	\$2,603,295	\$2,336	\$53,886
	OM&A Expenses	\$1,058,024	\$670,921	\$151,473	\$84,751	\$57,641	\$2,252	\$90,987

Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>Subtotal</b>	<b>\$10,863,858</b>	<b>\$3,642,663</b>	<b>\$1,512,763</b>	<b>\$2,844,744</b>	<b>\$2,666,336</b>	<b>\$4,588</b>	<b>\$144,873</b>
<b>Working Capital</b>	<b>\$1,405,282</b>	<b>\$473,461</b>	<b>\$196,652</b>	<b>\$369,817</b>	<b>\$345,922</b>	<b>\$596</b>	<b>\$18,833</b>
<b>Total Rate Base</b>	<b>\$2,826,129</b>	<b>\$1,347,337</b>	<b>\$441,842</b>	<b>\$505,558</b>	<b>\$439,192</b>	<b>\$1,600</b>	<b>\$90,600</b>
	Rate Base Input equals Output						
<b>Equity Component of Rate Base</b>	<b>\$1,130,452</b>	<b>\$538,935</b>	<b>\$176,737</b>	<b>\$202,223</b>	<b>\$175,677</b>	<b>\$640</b>	<b>\$36,240</b>
<b>Net Income on Allocated Assets</b>	<b>\$105,132</b>	<b>(\$13,237)</b>	<b>\$28,364</b>	<b>\$86,933</b>	<b>(\$18,470)</b>	<b>(\$585)</b>	<b>\$22,128</b>
<b>Net Income on Direct Allocation Assets</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Net Income</b>	<b>\$105,132</b>	<b>(\$13,237)</b>	<b>\$28,364</b>	<b>\$86,933</b>	<b>(\$18,470)</b>	<b>(\$585)</b>	<b>\$22,128</b>
<b>RATIOS ANALYSIS</b>							
<b>REVENUE TO EXPENSES STATUS QUO%</b>	<b>100.00%</b>	<b>91.07%</b>	<b>104.91%</b>	<b>167.22%</b>	<b>67.26%</b>	<b>73.20%</b>	<b>115.87%</b>
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$17,219)	(\$87,625)	\$7,448	\$74,303	(\$25,970)	(\$680)	\$15,304
	Deficiency Input equals Output						
STATUS QUO REVENUE MINUS ALLOCATED COSTS	(\$0)	(\$77,897)	\$10,222	\$76,889	(\$25,372)	(\$659)	\$16,818
RETURN ON EQUITY COMPONENT OF RATE BASE	9.30%	-2.46%	16.05%	42.99%	-10.51%	-91.46%	61.06%

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

2                                   **(next page)**





# 2015 Cost Allocation Model

**EB-2014-0080**

**Sheet 02 Monthly Fixed Charge Min. & Max. Worksheet - Run 1**

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	4	5	6
Residential	General Service < 50 kW	General Service > 50 to 1499 kW	Intermediate	Sentinel Lighting	Street Lighting
\$10.79	\$11.44	\$21.38	\$7.61	\$4.56	-\$0.02
\$14.81	\$15.86	\$30.24	\$14.08	\$6.02	-\$0.01
\$26.57	\$29.58	\$46.34	\$27.16	\$15.59	\$9.29
\$9.19	\$19.76	\$54.82	\$223.01	\$7.09	\$7.88

## Class Revenue Requirements

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

The table below shows the results of the cost allocation updated 2015 study. These results are used to compare, analyze the allocation under each options and help the utility determine its 2015 proposed ratios.

**Table 7.5 – Results from Cost Allocation**

<b>Cost Allocation Results</b>	<b>REVENUE ALLOCATION (sheet O1)</b>							<b>CUSTOMER UNIT COST PER MONTH (sheet O2)</b>		
<b>Customer Class Name</b>	<b>Service Rev Req (row40)</b>		<b>Misc. Revenue (mi) (row19)</b>		<b>Base Rev Req</b>		<b>Rev2Cost Expenses % (row 75)</b>	<b>Avoided Costs (Minimum Charge)</b>	<b>Directly Related</b>	<b>Minimum System with PLCC * adjustment</b>
Residential	872,220	63.18%	144,030	62.76%	728,190	63.26%	91.07%	\$10.79	\$14.81	\$26.57
General Service < 50 kW	208,041	15.07%	32,859	14.32%	175,182	15.22%	104.91%	\$11.44	\$15.86	\$29.58
General Service > 50 to 4999 kW	114,384	8.29%	18,398	8.02%	95,986	8.34%	167.22%	\$21.38	\$30.24	\$46.34
Intermediate	77,498	5.61%	12,138	5.29%	65,360	5.68%	67.26%	\$7.61	\$14.08	\$27.16
Sentinel Lights	2,461	0.18%	457	0.20%	2,004	0.17%	73.20%	\$4.56	\$6.02	\$15.59
Street Lighting	105,957	7.67%	21,622	9.42%	84,336	7.33%	115.87%	(\$0.02)	(\$0.01)	\$9.29
<b>TOTAL</b>	<b>1,380,561</b>	<b>100.00%</b>	<b>229,503</b>	<b>100.00%</b>	<b>1,151,058</b>	<b>100.00%</b>				

The table below shows the allocation percentage and base revenue requirement allocation under existing rates, cost allocation results and proposed 2015 proposed allocation.

**Table 7.6 - Base Revenue Requirement under 3 scenarios**

<b>Base Revenue Requirement %</b>						
<b>Customer Class Name</b>	<b>Existing Rates</b>		<b>Cost Allocation Results</b>		<b>Proposed Allocation</b>	
Residential	56.35%	648,602	63.26%	728,190	58.04%	668,082
General Service < 50 kW	16.27%	187,296	15.22%	175,182	16.29%	187,472
General Service > 50 to 4999 kW	14.93%	171,892	8.34%	95,986	12.31%	141,723
Intermediate	3.51%	40,382	5.68%	65,360	4.33%	49,846
Sentinel Lights	0.13%	1,513	0.17%	2,004	0.13%	1,512
Street Lighting	8.81%	101,373	7.33%	84,336	8.90%	102,425
<b>TOTAL</b>	<b>100.00%</b>	<b>1,151,058</b>	<b>100.00%</b>	<b>1,151,058</b>	<b>100.00%</b>	<b>1,151,058</b>

Table 7.7 below shows the revenue offset allocation which resulted from Cost Allocation Study (Sheet O1)

**Table 7.7- Revenue Offset Allocation as per Cost Allocation Study**

<b>Customer Class Name</b>	<b>%</b>	<b>\$</b>
Residential	62.76%	144,030
General Service < 50 kW	14.32%	32,859
General Service > 50 to 4999 kW	8.02%	18,398
Intermediate	5.29%	12,138
Sentinel Lights	0.20%	457
Street Lighting	9.42%	21,622
<b>TOTAL</b>	<b>100.00%</b>	<b>229,503</b>

Table 7.8 shows the allocation of the service revenue requirement under the same 3 scenarios.



**Table 7.8- Service Revenue Requirement under 3 scenarios****(Including Revenue Offsets)**

<b>Customer Class Name</b>	<b>Existing Rates</b>	<b>Cost Allocation Results</b>	<b>Rate Application</b>
Residential	792,632	872,220	812,112
General Service < 50 kW	220,154	208,041	220,330
General Service > 50 to 4999 kW	190,289	114,384	160,120
Intermediate	52,520	77,498	61,984
Sentinel Lights	1,970	2,461	1,969
Street Lighting	122,995	105,957	124,046
<b>TOTAL</b>	<b>1,380,561</b>	<b>1,380,561</b>	<b>1,380,561</b>

## Revenue-to-Cost Ratios

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### **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.

# 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			\$ 872,220	63.18%
GS < 50 kW			\$ 208,041	15.07%
GS > 50 kW			\$ 114,384	8.29%
Intermediate			\$ 77,498	5.61%
Sentinel Lighting			\$ 2,461	0.18%
Street Lighting			\$ 105,957	7.67%
				0.00%
				0.00%
				0.00%
				0.00%
				0.00%
<b>Total</b>	\$ -	0.00%	\$ 1,380,561	100.00%

## Notes

- 1 Customer Classification - If proposed rate classes differ from those in place in the previous Cost Allocation study, modify the rate classes to match the current application as closely as possible.
- 2 Host Distributors - Provide information on embedded distributor(s) as a separate class, if applicable. If embedded distributor(s) are billed as customers in a General Service class, include the allocated cost and revenue of the embedded distributor(s) in the applicable class. Also complete Appendix 2-Q.
- 3 Class Revenue Requirements - If using the Board-issued model, in column 7A enter the results from Worksheet O-1, Revenue Requirement (row 40 in the 2013 model). This excludes costs in deferral and variance accounts. Note to Embedded Distributor(s), it also does not include Account 4750 - Low Voltage (LV) Costs.

## B) Calculated Class Revenues

Classes (same as previous table)	Column 7B Load Forecast (LF) X current	Column 7C L.F. X current approved rates X	Column 7D LF X proposed rates	Column 7E Miscellaneous Revenue
Residential	\$ 648,602	\$ 728,190	\$ 668,082	\$ 144,030
GS < 50 kW	\$ 187,296	\$ 175,182	\$ 187,472	\$ 32,859
GS > 50 kW	\$ 171,892	\$ 95,986	\$ 141,723	\$ 18,398
Intermediate	\$ 40,382	\$ 65,360	\$ 49,846	\$ 12,138
Sentinel Lighting	\$ 1,513	\$ 2,004	\$ 1,512	\$ 457
Street Lighting	\$ 101,373	\$ 84,336	\$ 102,425	\$ 21,622
0				
0				
0				
0				
<b>Total</b>	\$ 1,151,058	\$ 1,151,058	\$ 1,151,058	\$ 229,503

**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
- 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	Status Quo	Proposed Ratios	Policy Range
	Most Recent 2010	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	%	%	%	%
Residential	0.98	100.00	93.11	85 - 115
GS < 50 kW	1.00	100.00	105.91	80 - 120
GS > 50 kW	1.00	100.00	139.99	80 - 120
Intermediate	0.80	100.00	79.98	80 - 120
Sentinel Lighting	0.70	100.00	80.00	85 - 115
Street Lighting	0.70	100.00	117.07	70 - 120
0				80 - 120
0				80 - 120
0				
0				

**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
	2015	2016	2017	
	%	%	%	%
Residential	93.11			85 - 115
GS < 50 kW	105.91			80 - 120
GS > 50 kW	139.99	1.2		80 - 120
Intermediate	79.98	0.8		80 - 120
Sentinel Lighting	80.00			85 - 115
Street Lighting	117.07			70 - 120
0				80 - 120
0				80 - 120
0				0
				0
0				

**Note**

- 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'.

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**

Ratio Allocation				Target Range		3 Year Revenue to Cost Allignment		
Customer Class Name	Calculated R/C Ratio	Proposed R/C Ratio	Variance	Floor	Celiling	2016	2017	2018
Residential	0.91	0.93	-0.02	0.85	1.15			
General Service < 50 kW	1.05	1.06	-0.01	0.80	1.20			
General Service > 50 to 4999 kW	1.67	1.40	0.27	0.80	1.20	1.20		
Intermediate	0.67	0.80	-0.13	0.80	1.20			
Sentinel Lights	0.73	0.80	-0.07	0.80	1.20			
Street Lighting	1.16	1.17	-0.01	0.70	1.20			

5

6 \* Ratios highlighted in pink fell outside of the floor to ceiling range.

7 The proposed Revenue to Cost ratio is adjusted by changing the allocation percentage for each  
8 class. The utility reviews and assesses the bill impacts for each class before adjusting the  
9 Revenue to Cost ratios. In previous decisions, the Board expressed reluctance to move  
10 revenue-to-cost ratios to 100% for each rate class in an effort to remove cross-subsidization.  
11 The Board stated that there are data limitations inherent in cost allocation models, and noted  
12 that as a practical matter, there may be little difference between a revenue-to-cost ratio of near  
13 100% and the theoretical ideal of 100%.

14 HPDC proposes to increase the ratio for the Residential class from 91% to 93%. The General  
15 Service <50kW class is increasing from 105% to 106%. At its current rates, the General  
16 Service>50kW is over-recovering revenues in comparison to its allocated costs. Since the  
17 calculated ratio is significantly higher than the ceiling of 120%, adjusting it down to the ideal  
18 level would create an unacceptable increase in rates and high bill impacts, therefore, the utility  
19 proposed to adjust the revenue to cost ratio over the period of 2015-2016. The utility proposes  
20 to adjust it from 167% to 140% in the Test Year and further adjust it down to 120% in 2016 .

21 The utility proposes to increase both the Intermediate class and the Sentinel Lights by bringing  
22 them to the lower target of 80%. The calculated Revenue to Cost ratio for the Street Light class  
23 also fell within the range. The utility increased it by 1% from 116% to 117%.