



EXHIBIT 7 – COST ALLOCATION

2021 Cost of Service

Hearst Power Distribution Company Ltd.
EB-2020-0027

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7.2 COST ALLOCATION STUDY REQUIREMENTS

7.2.1 OVERVIEW OF COST ALLOCATION

HPDCL 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. This information is updated to reflect new parameters and inputs and then used to adjust any cross-subsidization in the proposed rates.

Previously Approved Cost Allocation Study (BA)

The Previously Board Approved ratios are presented as a point of reference to the proposed 2021 ratios. As part of its last Cost of Service Rate Application, HPDCL updated the cost allocation revenue to cost ratios with 2015 base revenue requirement information. The revenue to cost ratios from the 2015 application are presented below. HPDCL notes that there have been no changes in its class composition since 2015.

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Table 1 - Previously Approved Ratios (2015 COS)

Rate Class	2015 Settlement Cost Allocation Study	2015 Settlement Proposed Ratio after Rate Design
Residential	86.356	91.09
GS <50	100.77	100.79
GS>50	168.42	145.00
Intermediate	69.92	86.92
Street Lights	295.20	210.00
Sentinel	67.51	86.92

Table 8b: Future adjustments to Revenue-to-Cost Ratios

Class	Proposed Revenue-to-Cost Ratios				
	2015	2016	2017	2018	2019
	%	%	%	%	%
Residential	91.09	-			
GS < 50 kW	100.79	-			
GS > 50 kW	145.00	-	120.00		
Intermediate	86.92	-			
Sentinel Lighting	86.92	-			
Street Lighting	210.00	-	180.00	120.00	

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1 **Proposed Cost Allocation Study (2021)**

2 The Cost Allocation Study for 2021 allocates the 2021 test year costs (i.e., the 2021 forecast
3 revenue requirement) to the various customer classes using allocators that are based on the
4 forecast class loads (kW and kWh) by class, customer counts, etc.

5 HPDCL has used the most up to date 2021 OEB-approved Cost Allocation Model and followed
6 the instructions and guidelines issued by the OEB to enter the 2021 data into this model.

7 HPDCL populated the information on Sheet I3, Trial Balance Data with the 2021 forecasted data,
8 Target Net Income, PILs, interest on long term debt, and the targeted Revenue Requirement and
9 Rate Base.

10 On Sheet I4, Break-out of Assets, HPDCL updated the allocation of the accounts based on 2021
11 values.

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

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

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

20

Table 2 – OEB Weighting Factors

The weighting calculations for Services are shown below. In 2019.

	1	2	3	5	7	8
	Residential	GS <50	GS>50- Regular	GS >50- Intermediate	Streetlight	Sentinel
<i>Account 1855</i>	1.0	2.0	2.0	2.0	0.0	0.0
<i>Billing and Collecting</i>	1.0	1.0	1.4	8.6	-	0.8

Proposed Billing and Collecting Weighting Factors

A derivation of the billing and collecting weighting factors are shown in the table below.

Table 3 – Breakdown of Weighting Factors

	Res	GS < 50 *	GS > 50	Inter- mediate	Street Lighting	Sentinel Lighting	Total Annual Cost	Acct
2021 Projected # of Customer/Connections (load forecast)	2258	456	35	2	973	12	3736	
# bills	27096	5472	420	24	24	108	33144	
5310 - Meter Reading - Labor		217.38	16.68				1,316.66	5310
5310 - Meter Reading expenses (ERTH Holdings & Meter Sense)	12,534.45	2,531.32	194.29	11.10	11.10	49.96	15,332.22	5310
5315 - Customer Billing - Labor & overheads	85,971.98	17,361.92	1,332.60	76.15	76.15	342.67	105,161.47	5315
5315 - Customer Billing expenses (ERTH Holdings, Canada Post, IT services & Supplies)	67,882.64	13,708.81	1,052.21	60.13	60.13	270.57	83,034.48	5315
5315 - Customer Billing expenses (Utilismart - Meter reads)			1,672.80	1,672.80			3,345.60	5315
5315 - Customer Billing expenses (Utilismart - Settlements)	12,262.85	2,476.47	190.08	10.86	10.86	48.88	15,000.00	5315
5320 - Collecting - Labour	2,855.75	576.71	44.27	2.53	2.53	11.38	3,493.17	5320
5320 - Collecting - Services provided by other parties	33,464.54	6,758.12	518.72	29.64	29.64	133.38	40,934.04	5320
5330 - Credit bureau collection fees	581.19	117.37	9.01				710.91	5330
5340 - Misc. Cust Account Exp. - Communication services (24 hr emergency service)	33,464.54	6,758.12	518.72	29.64	29.64	133.38	23,360.62	5340
5315 - Customer Billing	249,017.94	50,506.21	5,549.37	1,892.85	220.05	990.23	291,689.17	
Total	110.28	110.76	158.55	946.43	0.23	82.52		
Cost Per Connection	1.00	1.00	1.44	8.58	0.00	0.75		

1 Sheet I6.2 has been updated with the required Bad Debt and Late Payment revenue data as well
2 as the number of customer/connections.

3 HPDCL updated the capital cost per meter information on Sheet I7.1 and the meter reading
4 information on I7.2 to reflect its completed deployment of smart meters.

5 It is HPDCL's understanding that in normal circumstances, a utility should update its demand
6 data (and sheet I8) to reflect the findings of the 2004 hour by hour load data being scaled to be
7 consistent with the 2021 load forecast and the inspection of the scaled data to identify the
8 system peaks and class specific peaks.

9 To update the demand data, the utility used the original demand data study calculated and
10 provided by HONI by the OEB in 2004 in advance of the 2006 EDR process. The supporting
11 spreadsheet of the updated demand data is filed along with this application.

12 The 2015 and proposed demand data are presented at the next page.

13 HPDCL has completed its cost allocation study using the OEB's methodology. A live Excel
14 version of 2021 cost allocation model has been filed along with this application. HPDCL
15 confirms that it has also populated sheets 11 and 12 of the Revenue Requirement Work Form.
16 HPDCL confirms that the inputs to the model are consistent with the test year load forecast,
17 changes to customer classes and load profiles.

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Table 4 – OEB Load Profiles from 2015 CoS

			1	2	3	5	7	8
<u>Customer Classes</u>		Total	Residential	GS <50	GS>50- Regular	GS >50- Intermediat e	Streetlig ht	Sentinel
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	14,388	5,005	1,709	4,082	3,556	35	2
Bulk Delivery CP	BCP1	14,388	5,005	1,709	4,082	3,556	35	2
Total System CP	DCP1	14,388	5,005	1,709	4,082	3,556	35	2
4 CP								
Transformation CP	TCP4	53,982	20,365	6,621	14,981	11,880	129	6
Bulk Delivery CP	BCP4	53,982	20,365	6,621	14,981	11,880	129	6
Total System CP	DCP4	53,982	20,365	6,621	14,981	11,880	129	6
12 CP								
Transformation CP	TCP12	138,709	44,649	16,630	38,646	38,559	216	9
Bulk Delivery CP	BCP12	138,709	44,649	16,630	38,646	38,559	216	9
Total System CP	DCP12	138,709	44,649	16,630	38,646	38,559	216	9
NON CO_INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	15,825	5,952	1,940	4,133	3,692	104	5
Primary NCP	PNCP1	15,825	5,952	1,940	4,133	3,692	104	5
Line Transformer NCP	LTNCP1	15,825	5,952	1,940	4,133	3,692	104	5
Secondary NCP	SNCP1	15,825	5,952	1,940	4,133	3,692	104	5
4 NCP								
Classification NCP from Load Data Provider	DNCP4	61,681	23,137	7,781	15,686	14,641	418	18
Primary NCP	PNCP4	61,681	23,137	7,781	15,686	14,641	418	18
Line Transformer NCP	LTNCP4	61,681	23,137	7,781	15,686	14,641	418	18
Secondary NCP	SNCP4	61,681	23,137	7,781	15,686	14,641	418	18
12 NCP								
Classification NCP from Load Data Provider	DNCP12	155,801	51,652	19,214	41,196	42,449	1,237	54
Primary NCP	PNCP12	155,801	51,652	19,214	41,196	42,449	1,237	54
Line Transformer NCP	LTNCP12	155,801	51,652	19,214	41,196	42,449	1,237	54
Secondary NCP	SNCP12	155,801	51,652	19,214	41,196	42,449	1,237	54

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1 **Table 5 – OEB Demand Data for 2021 Test Year (adjusted for 2021 Load Forecast)**

<u>Customer Classes</u>			1	2	3	5	7	8
			Residential	GS <50	GS>50- Regular	GS >50- Intermediate	Street Light	Sentinel
			CP Sanity Check	Check 4 CP	Pass	Pass	Pass	Pass
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	14,099	4,837	1,678	4,219	3,328	35	1
Bulk Delivery CP	BCP1	14,099	4,837	1,678	4,219	3,328	35	1
Total System CP	DCP1	14,099	4,837	1,678	4,219	3,328	35	1
4 CP								
Transformation CP	TCP4	52,926	19,684	6,502	15,485	11,120	132	3
Bulk Delivery CP	BCP4	52,926	19,684	6,502	15,485	11,120	132	3
Total System CP	DCP4	52,926	19,684	6,502	15,485	11,120	132	3
12 CP								
Transformation CP	TCP12	135,777	44,150	16,274	39,268	35,770	308	7
Bulk Delivery CP	BCP12	135,777	44,150	16,274	39,268	35,770	308	7
Total System CP	DCP12	135,777	44,150	16,274	39,268	35,770	308	7
NON CO_INCIDENT PEAK								
			NCP Sanity Check	Pass	Check 4 NCP	Pass	Pass	Check 4 NCP
1 NCP								
Classification NCP from Load Data Provider	DNCP1	15,496	5,753	1,905	4,272	3,455	107	2
Primary NCP	PNCP1	15,493	5,753	1,905	4,272	3,455	107	2
Line Transformer NCP	LTNCP1	15,493	5,753	1,905	4,272	3,455	107	2
Secondary NCP	SNCP1	15,493	5,753	1,905	4,272	3,455	107	2
4 NCP								
Classification NCP from Load Data Provider	DNCP4	60,368	22,363	7,641	16,215	13,704	429	9
Primary NCP	PNCP4	60,359	22,363	7,641	16,215	13,704	429	9
Line Transformer NCP	LTNCP4	60,359	22,363	7,641	16,215	13,704	429	9
Secondary NCP	SNCP4	60,359	22,363	7,641	16,215	13,704	429	9
12 NCP								
Classification NCP from Load Data Provider	DNCP12	152,426	49,924	18,868	42,584	39,733	1,270	27
Primary NCP	PNCP12	152,400	49,924	18,868	42,584	39,733	1,264	27
Line Transformer NCP	LTNCP12	152,400	49,924	18,868	42,584	39,733	1,264	27
Secondary NCP	SNCP12	152,400	49,924	18,868	42,584	39,733	1,264	27

- 1 No Direct Allocations were entered on Sheet I9.
- 2 The revenue to cost ratios calculated on Sheet O1 of the Cost Allocation model updated for the
- 3 2021 Test Year are provided at the next page.

4 **Table 6 – OEB Sheet I6-2 of the Cost Allocation Model**

			1	2	3	5	7	8
	ID	Total	Residential	GS <50	GS >50- Regular	GS >50- Intermediate	Street Light	Sentinel
Billing Data								
Bad Debt 3 Year Historical Average	BDHA	\$12,198	\$8,416	\$2,597	\$1,185	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$9,733	\$5,677	\$4,057	\$9,733			
Number of Bills	CNB	60,229	26,997	5,640	428	23	24.00	120.00
Number of Devices	CDEV							
Number of Connections (Unmetered)	CCON	979					967	12
Total Number of Customers	CCA	2,768	2,250	470	36	2	1	10
Bulk Customer Base	CCB	-						
Primary Customer Base	CCP	2,767	2,250	470	36	2	-	10
Line Transformer Customer Base	CCLT	2,767	2,250	470	36	2	-	10
Secondary Customer Base	CCS	2,768	2,250	470	36	2	1	10
Weighted - Services	CWCS	3,265	2,250	940	71	4	-	-
Weighted Meter -Capital	CWMC	1,040,772	681,682	359,090	-	-	-	-
Weighted Meter Reading	CWMR	4,157	1,800	376	1,981	-	-	-
Weighted Bills	CWNB	33,529	26,997	5,640	599	197	-	96

Bad Debt Data

Historic Year:	2017	13,838	5,259	8,579	13,838			
Historic Year:	2018	3,950	3,410	540	3,950			
Historic Year:	2019	11,412	8,361	3,051	11,412			
Three-year average		9,733	5,677	4,057	9,733	-	-	-

Street Lighting Adjustment Factors

NCP Test Results	4 NCP
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	Primary Asset Data		Line Transformer Asset Data	
Class	Customers/ Devices	4 NCP	Customers/ Devices	4 NCP
Residential	2,250	22,363	2,250	22,363
Street Light	-	427	-	427

Street Lighting Adjustment Factors	
Primary	
Line Transformer	

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Table 7 – OEB Sheet I6-1 of the Cost Allocation Model

Total kWhs from Load Forecast	78,474,783							
Total kW from Load Forecast	124,040							
Deficiency/sufficiency (RRWF 8. cell F51)	-160,126							
Miscellaneous Revenue (RRWF 5. cell F48)	235,382	0.9864	0.9864	0.9864	0.0009	0.4897	0.9864	
	0			0.2673				
		1	2	3	5	7	8	
	ID	Residential	GS <50	GS>50- Regular	GS >50- Intermediate	Street Light	Sentinel	
Billing Data	Total							
Forecast kWh	CEN	78,474,783	23,652,429	10,991,463	23,398,367	19,969,100	453,699	9,724
Forecast kW	CDEM	124,040			65,172	57,468	1,373	27
Forecast kW, included in CDEM, of customers receiving line transformer allowance		127,438			67,244	60,194		
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	78,350,743	23,652,429	10,991,463	23,333,195	19,911,632	452,326	9,697
Existing Monthly Charge			\$24.73	\$19.42	\$58.19	\$236.69	\$4.84	\$7.95
Existing Distribution kWh Rate			\$0.0000	\$0.0066				
Existing Distribution kW Rate					\$1.8310	\$1.2164	\$2.6811	\$8.5001
Existing TOA Rate					\$0.45	\$0.45		
Additional Charges								
Distribution Revenue from Rates		\$1,130,490	\$667,643	\$182,075	\$144,211	\$75,334	\$59,840	\$1,386
Transformer Ownership Allowance		\$57,347	\$0	\$0	\$30,260	\$27,087	\$0	\$0
Net Class Revenue	CREV	\$1,073,143	\$667,643	\$182,075	\$113,951	\$48,247	\$59,840	\$1,386

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Table 8 – OEB Sheet O-1 of the Cost Allocation Model

Distribution Revenue at Existing Rates	\$1,073,166	\$667,643	\$182,075	\$113,951	\$48,247	\$59,860	\$1,389
Miscellaneous Revenue (mi)	\$235,382	\$153,180	\$37,473	\$20,579	\$13,136	\$10,464	\$550
Miscellaneous Revenue Input equals Output							
Total Revenue at Existing Rates	\$1,308,548	\$820,823	\$219,548	\$134,530	\$61,383	\$70,324	\$1,939
Factor required to recover deficiency (1 + D)	1.1492						
Distribution Revenue at Status Quo Rates	\$1,233,292	\$767,262	\$209,243	\$130,953	\$55,446	\$68,792	\$1,597
Miscellaneous Revenue (mi)	\$235,382	\$153,180	\$37,473	\$20,579	\$13,136	\$10,464	\$550
Total Revenue at Status Quo Rates	\$1,468,674	\$920,441	\$246,716	\$151,532	\$68,582	\$79,256	\$2,147
Expenses							
Distribution Costs (di)	\$440,985	\$261,868	\$67,663	\$51,162	\$37,383	\$21,932	\$978
Customer Related Costs (cu)	\$379,820	\$286,295	\$66,144	\$14,352	\$1,768	\$10,281	\$980
General and Administration (ad)	\$386,643	\$256,895	\$63,103	\$31,560	\$19,097	\$15,076	\$912
Depreciation and Amortization (dep)	\$140,435	\$80,339	\$30,511	\$15,049	\$11,346	\$3,047	\$142
PILs (INPUT)	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest	\$40,232	\$21,268	\$6,208	\$6,498	\$4,897	\$1,301	\$60
Total Expenses	\$1,388,114	\$906,665	\$233,629	\$118,621	\$74,491	\$51,637	\$3,071
Direct Allocation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Allocated Net Income (NI)	\$80,560	\$42,587	\$12,431	\$13,011	\$9,805	\$2,606	\$120
Revenue Requirement (includes NI)	\$1,468,674	\$949,252	\$246,060	\$131,633	\$84,296	\$54,243	\$3,191
Revenue Requirement Input equals Output							
Rate Base Calculation							
Net Assets							
Distribution Plant - Gross	\$2,141,554	\$1,213,266	\$453,167	\$241,664	\$182,146	\$49,079	\$2,232
General Plant - Gross	\$925,330	\$498,891	\$157,465	\$137,016	\$103,253	\$27,440	\$1,264
Accumulated Depreciation	(\$1,220,802)	(\$715,364)	(\$294,249)	(\$107,216)	(\$80,828)	(\$22,153)	(\$992)
Capital Contribution	(\$124,955)	(\$81,843)	(\$43,112)	\$0	\$0	\$0	\$0
Total Net Plant	\$1,721,127	\$914,950	\$273,271	\$271,465	\$204,571	\$54,365	\$2,504
Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Cost of Power (COP)	\$8,042,286	\$2,437,023	\$1,128,567	\$2,389,899	\$2,039,473	\$46,331	\$993
OM&A Expenses	\$1,207,448	\$805,057	\$196,910	\$97,074	\$58,248	\$47,289	\$2,869
Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal	\$9,249,733	\$3,242,080	\$1,325,477	\$2,486,973	\$2,097,721	\$93,620	\$3,862
Working Capital	\$693,730	\$243,156	\$99,411	\$186,523	\$157,329	\$7,021	\$290
Total Rate Base	\$2,414,857	\$1,158,106	\$372,681	\$457,988	\$361,901	\$61,387	\$2,794
Rate Base Input equals Output							
Equity Component of Rate Base	\$965,943	\$463,243	\$149,073	\$183,195	\$144,760	\$24,555	\$1,118
Net Income on Allocated Assets	\$80,560	\$13,777	\$13,086	\$32,911	(\$5,908)	\$27,619	(\$925)
Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income	\$80,560	\$13,777	\$13,086	\$32,911	(\$5,908)	\$27,619	(\$925)
RATIOS ANALYSIS							
REVENUE TO EXPENSES STATUS QUO%	100.00%	96.96%	100.27%	115.12%	81.36%	146.11%	67.26%
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$160,126)	(\$128,429)	(\$26,512)	\$2,897	(\$22,912)	\$16,081	(\$1,252)
Deficiency Input equals Output							
STATUS QUO REVENUE MINUS ALLOCATED COSTS	\$0	(\$28,810)	\$656	\$19,900	(\$15,714)	\$25,013	(\$1,045)
RETURN ON EQUITY COMPONENT OF RATE BASE	8.34%	2.97%	8.78%	17.96%	-4.08%	112.48%	-82.75%

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Table 9 - Sheet O-2 of the Cost Allocation Model

<u>Summary</u>	Residential	GS <50	GS>50- Regular	GS >50- Intermediate	Street Light	Sentinel
Customer Unit Cost per month - Avoided Cost	\$10.33	\$12.34	\$29.06	\$62.35	\$0.87	\$6.17
Customer Unit Cost per month - Directly Related	\$14.98	\$17.46	\$44.82	\$97.05	\$1.29	\$9.08
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$29.55	\$34.65	\$60.95	\$121.11	\$4.53	\$21.67
Existing Approved Fixed Charge	\$24.73	\$19.42	\$58.19	\$236.69	\$4.84	\$7.95

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7.3 CLASS REVENUE REQUIREMENTS

7.3.1 CLASS REVENUE ANALYSIS

Table 10 below shows the results of the cost allocation updated 2021 study. These results are used to compare and analyze the distribution costs under each option and help the utility determine its 2021 proposed ratios.

Table 10 - Results of the Cost Allocation Study

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		Rev2Cost Expenses %	Avoided Costs (Minimum Charge)	Directly Related	Minimum System with PLCC * adjustment	Maximum Charge or Existing Rate
<i>Residential</i>	949,252	64.63%	153,180	65.08%	796,072	64.55%	96.96%	\$10.33	\$14.98	\$29.55	\$29.55
<i>General Service < 50 kW</i>	246,060	16.75%	37,473	15.92%	208,587	16.91%	100.27%	\$12.34	\$17.46	\$34.65	\$34.65
<i>General Service > 50 to 4999 kW</i>	131,633	8.96%	20,579	8.74%	111,054	9.00%	115.12%	\$29.06	\$44.82	\$60.95	\$60.95
<i>Intermediate</i>	84,296	5.74%	13,136	5.58%	71,159	5.77%	81.36%	\$62.35	\$97.05	\$121.11	\$236.69
<i>Sentinel</i>	3,191	0.22%	550	0.23%	2,642	0.21%	67.26%	\$6.17	\$9.08	\$21.67	\$21.67
<i>Street Lighting</i>	54,243	3.69%	10,464	4.45%	43,778	3.55%	146.11%	\$0.87	\$1.29	\$4.53	\$4.84
TOTAL	1,468,674	100.00%	235,382	100.00%	1,233,292	100.00%					

Table 11 below shows the allocation percentage and base revenue requirement allocation under existing rates, cost allocation results and proposed 2021 proposed allocation.

Table 11- Base Revenue Requirement Under 3 Scenarios

Customer Class Name	Proposed Base Revenue Requirement %					
	Cost Allocation Results		Existing Rates		Proposed Allocation	
<i>Residential</i>	64.55%	796,072	62.21%	767,262	63.33%	781,054
<i>General Service < 50 kW</i>	16.91%	208,587	16.97%	209,243	16.97%	209,236
<i>General Service > 50 to 4999 kW</i>	9.00%	111,054	10.62%	130,953	10.62%	130,962
<i>Intermediate</i>	5.77%	71,159	4.50%	55,446	4.50%	55,450
<i>Sentinel</i>	0.21%	2,642	0.13%	1,597	0.16%	2,000
<i>Street Lighting</i>	3.55%	43,778	5.58%	68,792	4.43%	54,589
TOTAL	100.00%	1,233,292	100.00%	1,233,292	100.00%	1,233,292

Table 12 below shows the revenue offset allocation which resulted from Cost Allocation Study (Sheet O1).

Table 12 - Revenue Offset Allocation as per Cost Allocation Study

Customer Class Name	Revenue Offsets	
	%	\$
<i>Residential</i>	65.08%	153,180
<i>General Service < 50 kW</i>	15.92%	37,473
<i>General Service > 50 to 4999 kW</i>	8.74%	20,579
<i>Intermediate</i>	5.58%	13,136
<i>Sentinel</i>	0.23%	550
<i>Street Lighting</i>	4.45%	10,464
TOTAL	100.00%	235,382

Table 13 shows the allocation of the service revenue requirement under the same three scenarios.

Table 13 - Service Revenue Requirement Under 3 Scenarios

Customer Class Name	Service Revenue Requirement \$		
	Existing Rates	Cost Allocation Results	Rate Application after Rate Design
<i>Residential</i>	920,441	949,252	934,234
<i>General Service < 50 kW</i>	246,716	246,060	246,709
<i>General Service > 50 to 4999 kW</i>	151,532	131,633	151,541
<i>Intermediate</i>	68,582	84,296	68,587
<i>Sentinel</i>	2,147	3,191	2,550
<i>Street Lighting</i>	79,256	54,243	65,054
TOTAL	1,468,674	1,468,674	1,468,674

7.4 REVENUE-TO-COST RATIOS

7.4.1 COST ALLOCATION RESULTS AND ANALYSIS

Table **16** at the next page shows Appendix 2-P of the Board Appendices while Table 14 below shows the utility's proposed ratios. 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.

Table 14 – Proposed Revenue Allocation

<i>Customer Class Name</i>	Calculated R/C Ratio	Proposed R/C Ratio	Variance	Target Range	
				Floor	Ceiling
<i>Residential</i>	0.9696	0.9842	-0.01	0.85	1.15
<i>General Service < 50 kW</i>	1.0027	1.0026	0.00	0.80	1.20
<i>General Service > 50 to 4999 kW</i>	1.1512	1.1512	-0.00	0.80	1.20
<i>Intermediate</i>	0.8136	0.8136	-0.00	0.80	1.20
<i>Sentinel</i>	0.6726	0.7991	-0.13	0.80	1.20
<i>Street Lighting</i>	1.4611	1.1993	0.26	0.80	1.20

The filing requirements dictate that that the utility must show the revenue by class that would apply if all rates were changed by a uniform percentage between classes that are eligible to move ratios. HPDCL notes that the Residential Class which yields a revenue of 934K, the Intermediate class which yields a revenue of 69K and the Sentinel which yields revenues of \$2.5K are eligible to move towards 1 (or 100%) of the revenue to cost ratio. The table below shows the resulting Revenue to Cost ratio for the Residential class if only the classes that were eligible to move uniformly. The impact on the residential class would be of approximately 14K.

1

Table 15 - Proposed Revenue Allocation and Shortfall

<i>Customer Class Name</i>	R/C Ratio from the Cost Allocation model	Proposed R/C Ratio if classes outside of the range were moved to the floor/ceiling	Shortfall Allocation at at Proposed R/C Ratio
<i>Residential</i>	0.9696	0.9842	-13,792.2
<i>General Service < 50 kW</i>	1.0027	1.0026	6.8
<i>General Service > 50 to 4999 kW</i>	1.1512	1.1512	-9.0
<i>Intermediate</i>	0.8136	0.8136	-4.5
<i>Sentinel</i>	0.6726	0.7991	-403.5
<i>Street Lighting</i>	1.4611	1.1993	14,202.4

2

3

Table 16 - OEB RRWF Tab 11. Cost Allocation

A) Allocated Costs

Classes	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%	
<i>Residential</i>	\$637,720.36	60.26%	\$949,251.62	64.63%	
<i>General Service < 50 kW</i>	\$172,086.79	16.26%	\$246,060.01	16.75%	
<i>General Service > 50 to 4999 kW</i>	\$134,089.54	12.67%	\$131,632.54	8.96%	
<i>Intermediate</i>	\$48,418.93	4.58%	\$84,295.69	5.74%	
<i>Sentinel</i>	\$1,914.47	0.18%	\$3,191.28	0.22%	
<i>Street Lighting</i>	\$63,971.01	6.05%	\$54,242.83	3.69%	
Total	\$1,058,201.10	100.00%	\$1,468,673.97	100.00%	
B) Calculated Class Revenues					
	(from CA - O1 row 18)				
	Column 7B	Column 7C	Column 7D	Column 7E	
Classes (same as previous table)	Load Forecast (LF) X current approved rates	L.F. X current approved rates X (1 + d)	LF X proposed rates	Miscellaneous Revenue	
<i>Residential</i>	\$667,643.44	\$767,261.75	\$781,053.97	\$153,179.57	
<i>General Service < 50 kW</i>	\$182,075.50	\$209,242.78	\$209,236.02	\$37,472.98	

<i>General Service > 50 to 4999 kW</i>		\$113,950.81	\$130,953.29	\$130,962.26	\$20,578.97
<i>Intermediate</i>		\$48,246.96	\$55,445.84	\$55,450.33	\$13,136.30
<i>Sentinel</i>		\$1,389.48	\$1,596.81	\$2,000.31	\$549.74
<i>Street Lighting</i>		\$59,859.89	\$68,791.52	\$54,589.08	\$10,464.44
Total		\$1,073,166.08	\$1,233,291.97	\$1,233,291.97	\$235,382.00

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

Class	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year:	(7C + 7E) / (7A)	(7D + 7E) / (7A)	
	2015			
	%	%	%	%
<i>Residential</i>	91.09	96.96	98.42	85 - 115
<i>General Service < 50 kW</i>	100.79	100.27	100.26	80 - 120
<i>General Service > 50 to 4999 kW</i>	145.00	115.12	115.12	80 - 120
<i>Intermediate</i>	86.92	81.36	81.36	80 - 120
<i>Sentinel</i>	210.00	67.26	79.91	85 - 115
<i>Street Lighting</i>	86.92	146.11	119.93	86 - 115

D) Proposed Revenue-to-Cost Ratios

Class	Proposed Revenue to Cost Ratios			Policy Range
	2017	2018	2019	
	%	%	%	%
<i>Residential</i>	98.42			85 - 115
<i>General Service < 50 kW</i>	100.26			80 - 120
<i>General Service > 50 to 4999 kW</i>	115.12			80 - 120
<i>Intermediate</i>	81.36			80 - 120
<i>Sentinel</i>	79.91			85 - 115
<i>Street Lighting</i>	119.93			86 - 115

Table 17 below shows the utility's proposed Revenue to Cost reallocation based on an analysis of the proposed results from the Cost Allocation Study vs. the Board imposed floor and ceiling ranges.

Table 17 – 2021 Allocation

Customer Class Name	Calculated R/C Ratio as per Cost Allocation Results	Proposed R/C Ratio after Rate Design
<i>Residential</i>	0.9696	0.9842
<i>General Service < 50 kW</i>	1.0027	1.0026
<i>General Service > 50 to 4999 kW</i>	1.1512	1.1512
<i>Intermediate</i>	0.8136	0.8136
<i>Sentinel</i>	0.6726	0.7991
<i>Street Lighting</i>	1.4611	1.1993

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

The proposed Revenue to Cost ratio is adjusted by changing the allocation percentage for each class. The utility reviews and assesses the bill impacts for each class before adjusting the Revenue to Cost ratios.

Both Sentinel and the Streetlights classes fell slightly outside the range therefore HPDCL brought them back to the floor and ceiling by adjusting the Residential Class.

As per Board policy, HPDCL proposes to bring the classes that fell outside of the range to either the floor or ceiling. In this case, HPDCL proposes to bring the Sentinel Class from the Cost Allocation results of 67% to 80% and the Street Lighting from 146% to 120%. Class that are within the range but above 100% are left at the Cost Allocation Results. Classes below the 100% can be moved up to 100% if deemed necessary. The proposed cost re-allocation results in the shortfall allocation shown in the table below.

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Table 18 - Table of Shortfall reallocation

Customer Class Name	Shortfall Reconciliation
<i>Residential</i>	-13,792.2
<i>General Service < 50 kW</i>	6.8
<i>General Service > 50 to 4999 kW</i>	-9.0
<i>Intermediate</i>	-4.5
<i>Sentinel</i>	-403.5
<i>Street Lighting</i>	14,202.4
<i>TOTAL</i>	

2 For further details about the class specific bill impacts, please refer to Exhibit 8. HPDCL confirms
3 that is has communicated its proposed rates and bill impacts to its Street Lighting and Sentinel
4 customers and that it did not receive any comments and feedback on the issue.

5 HPDCL is not a Host Distributor therefore evidence of consultation with embedded distributors
6 is not applicable. The utility does not have unique circumstances which justify specific MicroFit
7 rates and the utility is not seeking Standby Rates in this application.