Renfrew Hydro Inc.



EB-2016-0166 - 2017 Cost of Service

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1 Cost Allocation Study Requirements

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

3 RHI has prepared and is filing a cost allocation informational filing consistent with its

- 4 understanding of the Directions and Policies in the Board's reports of November 28, 2007
- 5 Application of Cost Allocation for Electricity Distributors, and March 31, 2011 Review of
- 6 Electricity Distribution Cost Allocation Policy (EB-2010-0219) (the "Cost Allocation Reports") and
- 7 all subsequent updates. RHI has used the OEB's Cost Allocation model for the purpose of the
- 8 study.
- 9 The main objectives of the original informational filing in 2006 were to provide information on
- 10 any apparent cross-subsidization among a distributor's rate classifications and to support future
- 11 rate applications. As part of its 2010 Cost of Service Rate Application, RHI updated the cost
- 12 allocation revenue to cost ratios with 2010 base revenue requirement information. The revenue
- 13 to cost ratios from the 2010 application are presented below. Note that the ratios for the General
- 14 Service > 50 and Street Lights were phased in over several years.
- 15

Table 7.1: Previously Approved Ratios (2010 COS)

	2010 Approved
Customer Class Name	Revenue to
	Cost Ratio
Residential	1.17
General Service < 50 kW	1.00
General Service > 50 to 4999 kW	0.80
USL	0.64
Street Lighting	0.39

- 17 The Cost Allocation Study allocates the 2017 test year costs (i.e., the 2017 forecast revenue
- 18 requirement) to the various customer classes using allocators that are based on the forecast
- 19 class loads (kW and kWh) by class, customer counts, etc.
- 20 RHI has used the updated OEB-approved Cost Allocation Model and followed the instructions
- and guidelines issued by the OEB to enter the 2017 data into this model.

- 1 RHI populated the information on Sheet I3, Trial Balance Data with the 2017 forecasted data,
- 2 Target Net Income, PILs, Deemed interest on long term debt, and the targeted Revenue
- 3 Requirement and Rate Base.

On Sheet I4, Break-out of Assets, RHI updated the allocation of the accounts based on 2017
 values.

- 6 In Sheet I5.1, Miscellaneous data, RHI updated the deemed equity component of rate base,
- 7 kilometer of roads in the service area, working capital allowance, the proportion of pole rental
- 8 revenue from secondary poles, and the monthly service charges.
- 9 As instructed by the Board, in Sheet I5.2, Weighting Factors, RHI has used LDC specific factors
- 10 rather than continue to use OEB approved default factors. The utility has applied service and
- billing & collecting weightings for each customer classification.
- 12 The utility notes that it is not requesting Standby rates. The utility is not proposing to eliminate or
- 13 introduce any new class nor is it proposing any changes to the composition of its classes. RHI
- also notes that it is not a host distributor therefore the related filing requirements in that regard
- 15 do not apply in this case.

16 These weightings are based on a review of time and costs incurred in servicing its customer

- 17 classes; they are discussed further below:
- 18

Table 7.2: Weighting Factors

	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load
Insert Weighting Factor for Services Account 1855	1.00	1.50	5.00	0.00	0.00
Insert Weighting Factor for Billing and Collecting	1.00	1.50	4.00	1.00	1.00

19

20 Proposed <u>Services</u> Weighting Factors

21 **Residential**: the Services weighting factor was set to "1", per Cost Allocation instruction

sheet.

General Service less than 50 kW: The proposed Services weighting factor of 1.50 reflects
 that these customers require greater capacity than do residential customers as well as
 increased levels of engineering and planning. Furthermore, this class typically is more
 complex than Residential servicing as it may include the creation of a unique work order and
 may require after hour attendance to mitigate against interruptions during normal business
 hours.

General Service greater than 50 kW: The proposed Services weighting factor of 5.00
 reflects that these customers require a greater capacity than residential or GS<50
 customers as well increased levels of engineering and planning. This class generally
 requires more servicing requirements from a design and construction perspective than the
 GS<50 customers.

Street Lighting and USL: A Services weighting factor of 0 is proposed for both customer classes as the costs incurred to provide Services for Street Lighting are the responsibility of the Town of Renfrew, and Services for Unmetered Scattered Load are the responsibility of the customer.

16 Proposed <u>Billing and Collecting</u> Weighting Factors

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

General Service less than 50 kW: The billing and collecting weighting factor of "1.5" is
 proposed because these customers are periodically monitored to assess if their kVA
 demand qualifies them to move into the GS>50kW class. Consequently, the LDC is reading
 both kVA demand data as well as kWh data for these customers. However, RHI prints less
 bills and receives fewer calls when compared to the Residential Class.

- General Service greater than 50 kW: The proposed billing and collecting weighting factor
 is 4.00 as there is additional staff time required to prepare and finalize the bill. The collecting
 costs are higher than those incurred when dealing with General Service < 50 kW customers.
- 26 **Street Lighting:** The proposed weighting factor is 1.00. This customer class does not give 27 rise to Collecting activity and so no Collecting costs have been allocated.

- USL: The proposed weighting factor is 1.00. Like Street Lighting, this class does not give
 rise to Collecting costs.
- In Sheet I6.1 Revenue has been populated with the 2017 Test Year forecast data as well as
 existing rates.
- 5 Sheet I6.2 has been updated with the required Bad Debt and Late Payment revenue data as 6 well as customer/connection number information devices.
- 7 RHI updated the capital cost meter information on Sheet I7.1 and the meter reading information
- 8 on I7.2 to reflect its recently completed deployment of smart meters.
- 9 The data entered on sheet I8 reflects the findings of the 2004 hour by hour load data being
- scaled to be consistent with the 2017 load forecast and the inspection of the scaled data to
- 11 identify the system peaks and class specific peaks.

Customer Classes	Total	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load	
							2000
CO-INCIDENT PI	EAK						
1 CP							
Transformation CP	TCP1	18,509	5,990	3,069	9,433		17
Bulk Delivery CP	BCP1	18,509	5,990	3,069	9,433	-	17
Total Sytem CP	DCP1	18,509	5,990	3,069	9,433	-	17
•				•			
4 CP							
Transformation CP	TCP4	71,493	23,664	10,446	37,029	284	70
Bulk Delivery CP	BCP4	71,493	23,664	10,446	37,029	284	70
Total Sytem CP	DCP4	71,493	23,664	10,446	37,029	284	70
12 CP							
Transformation CP	TCP12	194,710	61,368	28,115	104,458	567	202
Bulk Delivery CP	BCP12	194,710	61,368	28,115	104,458	567	202
Total Sytem CP	DCP12	194,710	61,368	28,115	104,458	567	202
,			,	,	, , , , , , , , , , , , , , , , , , ,		
NON CO_INCIDENT	PEAK						
1 NCP							
Classification NCP							
from	DNCP1	22,252	8,186	3,568	10,189	284	25
Load Data Provider							
Primary NCP	PNCP1	22,252	8,186	3,568	10,189	284	25
Line Transformer NCP	LTNCP1	17,561	8,186	3,568	5,498	284	25
Secondary NCP	SNCP1	17,561	8,186	3,568	5,498	284	25
4 NCP							
Classification NCP							
from	DNCP4	85,325	31,668	13,421	39,006	1,135	
Load Data Provider							
Primary NCP	PNCP4	85,325	31,668	13,421	39,006	1,135	95
Line Transformer NCP	LTNCP4	70,922	31,668	13,421	24,603	1,135	95
Secondary NCP	SNCP4	70,922	31,668	13,421	24,603	1,135	95
12 NCP							
Classification NCP							
from	DNCP12	225,971	79,335	33,618	109,354	3,404	260
Load Data Provider							
Primary NCP	PNCP12	225,971	79,335	33,618	109,354	3,404	260
Line Transformer NCP	LTNCP12	176,172	79,335	33,618	59,555	3,404	260
Secondary NCP	SNCP12	176,172	79,335	33,618	59,555	3,404	260

Table 7.3: Load Profiles from 2010 CoS

			1	2	3	7	9
Customer Classes		Total	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load
CO-INCIDENT P	EAK				-		
4.00							
	TOD4	45.450	5.005	0.070	7.000		00
	TCP1	15,453	5,095	2,678	7,660	-	20
Bulk Delivery CP	BCP1	15,453	5,095	2,678	7,660	-	20
Total Sytem CP	DCP1	15,453	5,095	2,678	7,660	-	20
4.05							
4 CP	7054	50.047	00.400	0.440	00.074	054	
Transformation CP	ICP4	59,647	20,129	9,113	30,071	251	83
Bulk Delivery CP	BCP4	59,647	20,129	9,113	30,071	251	83
Total Sytem CP	DCP4	59,647	20,129	9,113	30,071	251	83
12 CP	707/0	100.000					
Iransformation CP	ICP12	162,296	52,201	24,528	84,828	503	237
Bulk Delivery CP	BCP12	162,296	52,201	24,528	84,828	503	237
Total Sytem CP	DCP12	162,296	52,201	24,528	84,828	503	237
NON CO_INCIDENT PE	AK						
from		17.056	6 724	3 1 1 3	7 8/2	251	25
Load Data Provider	DNCIT	17,950	0,724	5,115	7,042	201	20
Primary NCP	PNCP1	17 956	6 724	3 113	7 842	251	25
		17,956	6 724	3 113	7,042	251	25
Secondary NCP	SNCD1	17,956	6 724	3 113	7,042	251	25
Secondary NCI	SNOLL	17,950	0,724	5,115	7,042	201	25
4 NCP							
Classification NCP							
from	DNCP4	71.439	26.937	11.708	31.676	1.005	111
Load Data Provider		,		,	- ,	.,	
Primary NCP	PNCP4	71,439	26.937	11.708	31.676	1.005	111
Line Transformer NCP	LTNCP4	71,439	26.937	11.708	31.676	1.005	111
Secondary NCP	SNCP4	71,439	26.937	11.708	31.676	1.005	111
						.,	
12 NCP							
Classification NCP		İ					
from	DNCP12	188,937	67,484	29,329	88,804	3,015	305
Load Data Provider		,	. ,	_ ,		-,	
Primary NCP	PNCP12	188.937	67.484	29,329	88,804	3.015	305
Line Transformer NCP	LTNCP12	188.937	67.484	29,329	88,804	3.015	305
Secondary NCP	SNCP12	188.937	67,484	29,329	88.804	3,015	305
			. ,	-,-=-		,	

Table 7.4: Demand Data for 2017 Test Year (adjusted for 2017 Load Forecast)

1

1

Sheet I-6 of the Cost Allocation Model

2 No Direct Allocations were entered on Sheet I9.

Total kWhs from Load Forecast	85,344,276

Total kWs from Load Forecast 121,031

Deficiency/sufficiency (RRWF
8. cell F51)-290,308

Miscellaneous Revenue (RRWF	107 550
5. cell F48)	107,550

			1	2	3	7	9
	ID	Total	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load
Billing Data							
Forecast kWh	CEN	85,344,276	28,929,066	11,749,297	43,433,994	1,082,279	149,640
Forecast kW	CDEM	121,031			118,024	3,007	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		69,011			69,011		
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	85,344,276	28,929,066	11,749,297	43,433,994	1,082,279	149,640
Existing Monthly Charge			\$13.97	\$31.25	\$189.27	\$2.95	\$43.63
Existing Distribution kWh Rate			\$0.0145	\$0.0137	\$2.5331	\$7.2483	\$0.0099
Existing Distribution KW Rate					* 2.22		
Existing IOA Rate		-			\$0.60		
Additional Charges							
Distribution Devenue from Dates		¢1 000 c17	£1.060.260	¢216.091	¢407 510	\$64 DE4	£10.401
Transformer Ownership Allowance		\$1,099,017 \$41,407	\$1,002,309 \$0	\$310,061 \$0	\$437,512 \$41,407	- φ04,234 \$0	φ19,401 ¢0
	CREV	\$1,407 \$1,858,210	φυ \$1.062.360	φ0 \$316.081	\$306 106	φ0 \$64.254	φυ \$10.401
		ψ1,000,210	ψ1,002,009	ψ510,001	ψ000,100	ψ04,204	ψ10, 4 01

3

				Exh	ibit 7 – Co Filed: Jι	st Allocation Ine 14, 2010
Sh	eet I-8 of	the Cost Alle	ocation M	odel		
		1	2	3	7	9
	Total	Residential	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load
P1	15.453	5.095	2.678	7.660	-	20
P1	15,453	5,095	2,678	7,660	-	20
P1	15,453	5,095	2,678	7,660	_	20
P4	59,647	20,129	9,113	30,071	251	83
	50 647	20 120	0 1 1 2	20.071	251	02

CO-INCIDENT P	EAK						
1.05							
	TODA	45.450	5 005	0.070	7 000		
Iransformation CP	TCP1	15,453	5,095	2,678	7,660	-	20
Bulk Delivery CP	BCP1	15,453	5,095	2,678	7,660	-	20
Total Sytem CP	DCP1	15,453	5,095	2,678	7,660	-	20
4.00							
	TODA	50.047	00.400	0.110	20.074	054	0.0
		59,647	20,129	9,113	30,071	251	83
Bulk Delivery CP	BCP4	59,647	20,129	9,113	30,071	251	83
Total Sytem CP	DCP4	59,647	20,129	9,113	30,071	251	83
40.CD							
	TOD40	400.000	50.004	04.500	04.000	500	007
Transformation CP	TCP12	162,296	52,201	24,528	84,828	503	237
Bulk Delivery CP	BCP12	162,296	52,201	24,528	84,828	503	237
Total Sytem CP	DCP12	162,296	52,201	24,528	84,828	503	237
NON CO_INCIDEN	PEAK						
1 NCP							
Classification NCP							
from	DNCP1	17,956	6,724	3,113	7,842	251	25
Load Data Provider							
Primary NCP	PNCP1	17,956	6,724	3,113	7,842	251	25
Line Transformer NCP	LTNCP1	17,956	6,724	3,113	7,842	251	25
Secondary NCP	SNCP1	17,956	6,724	3,113	7,842	251	25
4 NCP							
Classification NCP							
from	DNCP4	71,439	26,937	11,708	31,676	1,005	111
Load Data Provider							
Primary NCP	PNCP4	71,439	26,937	11,708	31,676	1,005	111
Line Transformer NCP	LTNCP4	71,439	26,937	11,708	31,676	1,005	111
Secondary NCP	SNCP4	71,439	26,937	11,708	31,676	1,005	111
12 NCP							
Classification NCP							
from	DNCP12	188,937	67,484	29,329	88,804	3,015	305
Load Data Provider							
Primary NCP	PNCP12	188,937	67,484	29,329	88,804	3,015	305
Line Transformer NCP	LTNCP12	188,937	67,484	29,329	88,804	3,015	305
Secondary NCP	SNCP12	188,937	67,484	29,329	88,804	3,015	305

2 The revenue to cost ratios calculated on Sheet O1 of the Cost Allocation model updated for the

3 2017 Test Year are provided below.

1

Customer Classes

Sheet O-1 of the Cost Allocation Model

Bate Base Assets Total Residential G S - 50 G S - 50-Regular Stret Light S min Macelaneous Revenue (m) 51,852,210 51,022,307 53,16,061 53,067,109 55,086 1 Total Macelaneous Revenue (m) Miscelaneous Revenue (m) 51,057,00 51,212,213 53,06,21 53,06,21 53,06,21 53,06,21 53,06,21 53,06,21 54,04,00 54,04,22 53,06,21 54,04,00 54,04,00 55,04,00 54,12,27,3 53,06,21 54,04,00 55,04,00 54,12,27,3 53,14,40 55,12,00 54,12,24 54,79,00 55,14,45 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,56 51,02,02 51,14,50 51,04,56 51,04,56 51,04,56 51,04,56 51,04,57 51,04,57 51,04,57 <			C	1	2	3	7	9
Green mil Distribution Revenue at Existing Rates \$1,658,240 (scalaneous Revenue (m) \$21,692 (scalaneous Revenue (m) \$39,6100 (scalaneous Revenue (m) \$446,607 (scalaneous Revenue (m) \$5,660 (scalaneous Revenue (m) \$5,74,252 (scalaneous Revenue Revenue (m) \$5,74,252 (scalaneous Revenue	ate Base Assets		Total	Residential	GS <50	GS>50-Regular	Street Light	Unmetered Scattered Loa
Mixeclaneous Revenue (m) \$107,550 \$96,907 \$14,440 \$23,194 \$5,800 Total Revenue Existing Rates \$1,965,760 \$11,27,275 \$330,621 \$446,099 \$70,114 Total Revenue at Status Guo Rates \$2,748,568 \$12,223,345 \$305,462 \$477,960 \$57,422 Macediances Revenue at Status Guo Rates \$2,289,665 \$12,223,345 \$305,462 \$479,963 \$30,962 Call Revenue at Status Guo Rates \$2,290,665 \$12,223,455 \$305,462 \$479,963 \$30,962 Call Revenue at Status Guo Rates \$2,290,665 \$12,223,455 \$31,960 \$32,976 \$32,976 \$33,947 \$35,877 III Differest \$32,047 \$32,642 \$37,960 \$34,949 \$35,877 \$44,944 \$39,944 \$39,944 \$39,944	crev	Distribution Revenue at Existing Rates	\$1,858,210	\$1,062,369	\$316,081	\$396,106	\$64,254	\$19,401
Miscellaneous Revenue Input equals Output Total Revenue at Existing Rates Structure of Provided Structure Pactor requered to recover deficiency (1 = 0) 1.1562 512,23,34 5365,462 5457,660 517,223,34 5365,462 5457,660 517,223,34 5305,462 5457,660 517,223,34 5305,462 5457,660 517,223,34 5305,462 5457,660 517,223,34 5305,462 5457,660 517,223,34 5305,462 5457,660 517,223,34 5305,462 5457,660 517,425 531,860 577,015 532,626 577,015 532,620 511,450 510,941 510,941 510,941 510,941 510,941 510,941 510,941 511,245,01 533,864 527,270 597,105 532,571 513,347 513,247 513,247 513,247 513,247 513,247 513,247 513,247 513,247 513,247 533,644 597,105 532,571 544,379 544,379 544,379 544,379 544,379 544,379 544,379 544,379 544,547 544,547 544,547	mi	Miscellaneous Revenue (mi)	\$107,550	\$64,907	\$14,440	\$21,994	\$5,860	\$349
India Mediate Listing Nates Status (0)			Misce	llaneous Revenu	e Input equals	Output	070.444	A10.75
International Revenue Attainability 11 For J Miscolineous Revenue (1) 51,448,650 (2) 51,228,341 (2) 534,440 (2) 534,460 (2) 534,460 (2) 534,460 (2) 534,460 (2) 537,950 (2) 544,400 (2) 537,950 (2) 547,920 (2)		Factor required to recover deficiency (1 + D)	51,965,760	\$1,127,275	\$330,521	\$418,099	\$70,114	\$19,751
Miscelanceus Revenue (m) 3507,550 354,857 3514,460 321,354 35,856 Total Revenue at Status Quo Rates 52,256,061 51,283,249 5379,902 5479,863 580,152 di Distribution Costs (di) 552,1575 521,257 562,250 551,246 5379,902 511,466 510,873 di Distribution Costs (di) 552,751 532,251,570 552,250 531,2463 551,245 532,251 579,250 531,2463 551,045 533,751 544,971 di Direct Allocation and Amritization (dep) 522,47,981 532,241 532,251 53,757 55,751 54,497 HIPUT Total Expenses 52,001,175 512,241,02 522,7277 697,100 53,527 Direct Allocation \$0 \$0 \$0 \$0 \$0 \$0 \$0 N Allocated Het Income (N) \$224,984 \$116,405 \$38,441 \$94,575 \$4,997 gi Diarbition Plant - Gross \$11,245,007 \$206,7121 \$498,275 \$21,9157 <		Distribution Revenue at Status Quo Pates	\$2 148 518	\$1 228 343	\$365 462	\$457 989	\$74 292	\$22.433
Total Revenue at Status Quo Rates 52,266,068 51,293,249 5379,802 5479,803 580,152 Expenses (II) Distribution Costs (d) General and Administration (ad) General and Administration (ad) General and Administration (ad) General and Administration (ad) S521,3670 552,13,670 552,28,200 5115,456 510,873 IVIT PL INUT PL (RUPT) S23,047 512,20,31 533,864 552,736 532,736 541,943 IVIT PL (RUPT) S23,047 512,20,31 533,864 532,736 544,94 53,944 IVIT PL (RUPT) S23,047 512,241,02 527,877 597,106 53,527 Total Represes 52,041,175 51,240,507 531,6637 5548,869 541,916 Revenue Requirement (includes NI) 522,256,066 51,340,507 5316,637 5548,869 541,916 Ret Base Calculation S1,242,673 52,057,121 54,936,278 5251,937 General Combustion S1,242,673 52,067,121 54,936,278 5251,937 General Combustion S1,242,673 52,067,121 54,936,278 5251,937 General Combustion		Miscellaneous Revenue (mi)	\$107,550	\$64,907	\$14,440	\$21,994	\$5,860	\$349
Expenses di cu cu custom Felteted Costs (a) general and Administration (ad) general and Administration (ad) genererelised (ad) general and Administration (ad) general		Total Revenue at Status Quo Rates	\$2,256,068	\$1,293,249	\$379,902	\$479,983	\$80,152	\$22,782
dil Distribution Costs (di) 5429.735 521.0377 582.620 5151.456 510.873 cu Customer Related Costs (cu) 5527.450 5412.596 566.920 5151.456 510.873 depresizion and Ammitization (dep) 537.476 5120.251 532.444 512.625 512.456 510.845 HIT Status 5120.625 522.465 512.626 512.456 510.845 Direct Allocation 50								
cu Start (30)	di	Distribution Costs (di)	\$439 735	\$213 670	\$62 620	\$151 456	\$10.873	\$1.11
ad General and Administration (ad) (Berectation and Amonitization (ade) (Berectation add Amonitization (ade) (Berectation add Amonitization (add Add Add Add Add Add Add Add Add Add	CU	Customer Related Costs (cu)	\$521,630	\$412 596	\$66,930	\$31,980	\$7 015	\$3.10
dep Depreciation ad Amortization (dep) \$3247,981 \$20,047 \$100,056 \$32,203 \$32,777 \$20,0175 \$32,203 \$32,777 \$20,207 \$32,777 \$57,106 \$32,577 \$57,106 INT Total Expenses \$20,0175 \$1,224,102 \$27,277 \$57,706 \$35,557 Direct Allocation \$0 \$0 \$0 \$0 \$0 \$0 \$0 INI Allocated Net Income (NI) \$254,894 \$118,405 \$38,441 \$94,575 \$4,970 Revenue Requirement (includes NI) \$254,894 \$11,40,507 \$31,66,37 \$548,869 \$41,916 Revenue Requirement (includes NI) \$22,580,680 \$13,40,507 \$31,62,371 \$548,869 \$41,916 gp General Plant - Gross \$13,816,002 \$56,544,173 \$2,057,121 \$4,936,278 \$224,9324 \$34,9691 cord \$69,558,5673 \$578,646 \$61,412,200 \$35,639,417 \$52,037,121 \$549,202,273 \$241,9916 cord Bathaution \$53,397,150 \$59,562,4173 \$2,057,121 \$549,208,221 \$118,916,921 \$11,916,921 \$11,916	ad	General and Administration (ad)	\$587,915	\$382,681	\$79.250	\$112,463	\$10,941	\$2.58
HPUT Interest PLs. (INPUT) (INPUT) 123,047 (S10,065 S1,277 (S10,525 S1,376 (S2,297 S18,551 (S2,297 S18,642 S18,551 (S1,241,02) S18,642 S18,551 (S1,241,02) S18,612 (S1,200	dep	Depreciation and Amortization (dep)	\$247,981	\$122,031	\$38,644	\$82,736	\$4,139	\$43
INT Interest 5100,666 Size 2598 5227,277 567,108 532,527 Total Kepenses 52,001,175 51,224,102 5278,197 544,294 530,945 Direct Allocation 50 51,54,170 52,65,66,07 531,66,637 5548,869 541,916 70 7530,66,637 5548,869 541,916 50,524,113 552,057,121 54,936,276 5251,937 590,536,564 52,057,121 54,936,276 5251,937 530,870 51,544,173 552,057,121 54,936,276 55251,937 530,870 551,537 559,62,414 534,962 536,544 52,203,922 511,591,251,537 559,62,	INPUT	PILs (INPUT)	\$23,047	\$10,525	\$3,476	\$8,551	\$449	\$4
Iotal Expenses 32,001,175 31,224,102 3276,195 3494,294 330,245 Direct Allocation 50 50 50 50 50 50 50 50 NI Allocated Net Income (NI) 5264,894 \$116,405 \$38,441 \$94,575 \$54,970 Revenue Requirement (includes NI) \$2,266,068 \$1,340,507 \$316,637 \$548,869 \$41,916 Rate Base Calculation Net Assets S1,752,573 \$798,462 \$22,057,121 \$4,938,276 \$2251,937 gp General Plant - Gross \$13,816,002 \$6,544,173 \$22,057,121 \$4,938,276 \$231,890 co Gapta Combution (\$72,866) (\$4,403,816) \$11,815,200 \$33,803,387 \$34,092 co Gapta Combution (\$72,866) \$4,933,816 \$11,5200 \$34,932,333 \$118,900 \$34,932,333 \$118,900 \$34,922 \$11,618,900 \$34,932,933 \$34,932,933 \$34,932,933,933,933,933,933,933,933,933,933	INT	Interest	\$180,866	\$82,598	\$27,277	\$67,108	\$3,527	\$35
Direct Allocation S0 S0 S0 S0 S0 S0 HI Allocated Net Income (NI) S254,894 S116,405 S38,441 S94,575 S4,970 Revenue Requirement (includes NI) S2,256,068 S1,340,507 S316,637 S548,869 S41,916 Rate Base Calculation S2,256,068 S1,340,507 S316,637 S548,869 S251,937 gp Obtribution Plant - Gross S13,816,002 S6,544,173 S2,057,121 S4,938,276 S251,937 gp Obtribution Plant - Gross S1,752,77 S79,442 S264,113 S652,414 S34,002 cour dep Accumulated Depreciation (S7,2666) (S4,693,816) (S1,475,200) (S3,250,287) (S189,091) co Captal Contribution (S7,2666) S31,614 S24,1708 S652,444 S34,002 triotal Her Plant S5,303,1714 S2,17,1708 S56,268,05 S1,002,908 S28,839 S30,01 S0		Total Expenses	\$2,001,175	\$1,224,102	\$210,190	3434,294	\$30,945	\$1,031
NI Allocated Net Income (NI) \$254,894 \$116,405 \$338,441 \$94,575 \$4,970 Revenue Requirement (includes NI) \$2,256,068 \$13,40,507 \$316,637 \$548,869 \$41,916 Rate Base Calculation Revenue Requirement Input equals Output \$4,936,278 \$2551,937 \$90 \$4,936,278 \$2551,937 gp Obstribution Plant - Gross \$11,725,71 \$79,482 \$254,111 \$852,214 \$34,002 um dep Accumulated Depreciation \$17,727,71 \$79,482 \$254,111 \$852,321 \$(\$1,415,200) \$(\$3,353,387) \$(\$1,680,91) \$(\$1,135) co Capital Contribution \$5,337,114 \$2,712,018 \$305,664 \$2,203,222 \$11,5600 co Capital Contribution \$5,337,114 \$2,712,018 \$305,664 \$2,203,222 \$148,572 co Capital Contribution \$5,337,114 \$2,712,018 \$5,962,489 \$2,833 Directly Allocated Net Fixed Assets \$0 \$0 \$0 \$0 \$0 COP Cost of Power (COP) \$11,415,207		Direct Allocation	\$0	\$0	\$0	\$0	\$0	S
Revenue Requirement (includes NI) \$2,256,068 \$1,340,507 \$316,637 \$548,869 \$41,916 Revenue Requirement Input qp Distribution Plant - Gross \$13,816,002 \$6,544,173 \$2,057,121 \$4,936,276 \$251,937 gp General Plant - Gross \$13,816,002 \$798,462 \$264,131 \$5652,414 \$34,092 cm dep Accumulated Depreciation co Capital Contribution (\$1,652,673 \$799,462 \$264,131 \$5652,414 \$34,092 Directly Allocated Net Fixed Assets \$0 \$0 \$50 \$31,141 \$2,712,048 \$399,664 \$2,203,922 \$116,800 \$11,612,006 Directly Allocated Net Fixed Assets \$0	NI	Allocated Net Income (NI)	\$254,894	\$116,405	\$38, <mark>4</mark> 41	\$94,575	<mark>\$4,970</mark>	\$503
Revenue Requirement Input equals Output Ret asse Calculation Age Distribution Plant - Gross \$13,816,002 \$6,544,173 \$2,057,121 \$4,936,278 \$251,937 gp General Plant - Gross \$17,52,673 \$798,482 \$264,131 \$662,414 \$34,092 com dep Accumisted Depreciation (\$9,556,569) (\$4,603,316) (\$1,152,00) \$(\$33,03,37) (\$159,091) co Capital Contribution (\$72,866) (\$4,603,316) (\$1,152,00) \$33,03,37) (\$1,139) co Capital Contribution \$5,939,414 \$2,712,018 \$895,664 \$2,203,922 \$115,000 Directly Allocated Net Fixed Assets \$0 <td< td=""><td></td><td>Revenue Requirement (includes NI)</td><td>\$2,256,068</td><td>\$1,340,507</td><td>\$316,637</td><td>\$548,869</td><td>\$41,916</td><td>\$8,14</td></td<>		Revenue Requirement (includes NI)	\$2,256,068	\$1,340,507	\$316,637	\$548,869	\$41,916	\$8,14
Rate Base Calculation Net Assets gp State Base Calculation dp Distribution Plant - Gross gp S13,816,002 \$6,544,173 \$2,057,121 \$4,936,278 \$251,937 gp General Plant - Gross gp S17,762,573 \$798,462 \$264,131 \$865,214 \$334,092 com dep Accumulated Depreciation copial Contribution (\$9,566,595) (\$4,603,816) \$(\$1,15,200) \$(\$3,50,387) \$(\$1,139) co Capial Contribution \$5,939,114 \$2,712,016 \$3995,664 \$2,203,922 \$1115,800 co Cost of Power (COP) OM&A Expenses \$11,715,807 \$3,971,296 \$1,612,908 \$5,962,469 \$148,572 OM&A Expenses \$1,549,280 \$1,008,947 \$208,799 \$2295,899 \$228,330 Directly Allocated Expenses \$1,549,280 \$1,008,947 \$208,799 \$23,300 \$30 Subtotal \$13,265,087 \$4,980,243 \$1,827,708 \$6,258,388 \$117,402 Working Capital \$994,882 \$373,518 \$13,628 \$469,379 \$13,305 Total Rate Base \$2			Revenue Requ	uirement Input e	quals Output			
Net Assets Distribution Plant - Gross \$13,816,002 \$6,544,173 \$2,057,121 \$4,936,278 \$251,937 co Contribution Plant - Gross \$1,752,673 \$798,422 \$264,131 \$562,414 \$34,092 co Capital Contribution (\$72,866) (\$2,712,1038) (\$33,80,87) (\$184,992) Total Het Plant \$56,543,114 \$358,644 \$22,03,922 \$115,800 Directly Allocated Net Fixed Assets \$0		Rate Base Calculation						
dp Distribution Plant - Gross \$13,316,002 \$6,544,173 \$2,057,121 \$4,936,278 \$254,197 gp General Plant - Gross \$17,52,673 \$798,482 \$264,113 \$652,214 \$34,992 com dep Accumulated Depreciation (\$9,556,595) (\$4,603,816) (\$1,415,200) (\$3,350,387) (\$169,091) co Capital Contribution (\$5,939,114 \$22,712,018 \$899,664 \$22,203,922 \$115,800 COP Cost of Power (COP) \$11,715,807 \$3,971,296 \$1,612,908 \$5,923,489 \$148,572 OMAA Expenses \$1,649,280 \$1,008,947 \$206,799 \$2295,099 \$228,830 Directly Allocated Expenses \$13,265,087 \$4,980,243 \$1,821,708 \$6,258,388 \$177,402 Working Capital \$93,265,087 \$4,980,243 \$1,821,708 \$6,258,388 \$177,402 Uverking Capital \$994,882 \$373,518 \$136,628 \$469,379 \$13,305 Total Rate Base \$6,933,995 \$3,085,537 \$1,022,92 \$2,673,301 \$129,106		Net Assets						
gp General Plant - Gross \$1,762,673 \$7,984,422 \$224,131 \$3652,414 \$33,092 cm dep Accounulated Depreciation (\$9,566,695) (\$4,603,816) (\$1,415,200) (\$3,4383) (\$189,091) capital Contribution (\$72,666) (\$26,821) (\$1,415,200) (\$3,4383) (\$189,091) Total Net Plant \$6,939,114 \$2,712,018 \$895,664 \$2,203,922 \$116,600 Directly Allocated Net Fixed Assets \$0 \$0 \$0 \$0 \$0 \$0 COP Cost of Power (COP) \$11,715,807 \$3,971,296 \$1,612,908 \$5,962,489 \$148,572 OM&A Expenses \$1,549,280 \$1,008,947 \$208,799 \$228,830 \$0 \$0 \$0 Subtotal \$1,3265,087 \$4,980,243 \$1,821,708 \$6,258,388 \$1777,402 Working Capital \$994,882 \$373,518 \$136,628 \$469,379 \$13,305 Total Rate Base \$6,933,965 \$3,085,537 \$1,032,292 \$2,673,301 \$129,106 Rate Base	dp	Distribution Plant - Gross	\$13,816,002	\$6,544,173	\$2,057,121	\$4,936,278	\$251,937	\$26,49
Curro Correction (191,495,200) (191,416,200) (191,416,200) (191,	gp	General Plant - Gross	\$1,752,573	\$798,482	\$264,131	\$652,414	\$34,092	\$3,45
Total Net Plant \$5,933,114 \$2,712,018 \$3935,664 \$2,203,922 \$115,800 Directly Allocated Net Fixed Assets \$0 \$	com dep	Capital Contribution	(\$72,866)	(\$26,821)	(\$1,415,200) (\$10,389)	(\$3,350,367)	(\$169,091)	(\$13,10
Directly Allocated Net Fixed Assets S0 S0 S0 S0 S0 COP Cost of Power (COP) Oli&A Expenses Directly Allocated Expenses S11,715,807 S3,971,296 S1,612,908 S5,962,489 S148,572 Directly Allocated Expenses S1,549,280 S1,008,947 S208,799 S2295,999 S228,309 S0 Subtotal S13,265,007 S4,980,243 S1,821,708 S6,258,388 S177,402 S0 Working Capital S13,265,007 S4,980,243 S1,821,708 S6,258,388 S177,402 S1,821,708 S6,258,388 S177,402 S0 S13,005 S1,932,92 S2,673,301 S129,106 S12,6142 S1 S1,012,907 S1,642 S1,642 S1,014,205 S1,016,9320 S51,642 S10,0		Total Net Plant	\$5,939,114	\$2,712,018	\$895,664	\$2,203,922	\$115,800	\$11,71
COP Cost of Power (COP) OM&A Expenses Directly Allocated Expenses \$11,715,807 \$1,549,280 \$0 \$3,971,296 \$1,089,979 \$0 \$1,612,908 \$208,799 \$205,899		Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	s
OM&A Expenses \$1,549,280 \$1,008,947 \$208,799 \$295,899 \$28,830 Directly Allocated Expenses \$0	COP	Cost of Power (COP)	\$11,715,807	\$3.971.296	\$1,612,908	\$5,962,489	\$148.572	\$20.54
Directly Allocated Expenses \$0 <t< td=""><td></td><td>OM&A Expenses</td><td>\$1,549,280</td><td>\$1,008,947</td><td>\$208,799</td><td>\$295,899</td><td>\$28,830</td><td>\$6,80</td></t<>		OM&A Expenses	\$1,549,280	\$1,008,947	\$208,799	\$295,899	\$28,830	\$6,80
Subtotal \$13,265,087 \$4,980,243 \$1,821,708 \$6,258,388 \$177,402 Working Capital \$994,882 \$373,518 \$136,628 \$469,379 \$13,305 Total Rate Base \$6,933,995 \$3,085,537 \$1,032,292 \$2,673,301 \$129,105 Equity Component of Rate Base \$2,773,598 \$1,234,215 \$412,917 \$1,069,320 \$51,642 Net Income on Allocated Assets \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 Net Income on Direct Allocation Assets \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 RATIOS ANALYSIS \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 REVENUE TO EXPENSES STATUS QUO% 100.00% 96,47% 119,98% 87,45% 191,22% EXISTING REVENUE MINUS ALLOCATED COSTS (\$290,308) (\$213,231) \$13,884 (\$130,770) \$28,199		Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	S
Working Capital \$994,882 \$373,518 \$136,628 \$469,379 \$13,305 Total Rate Base \$6,933,995 \$3,085,537 \$1,032,292 \$2,673,301 \$129,105 \$1000000000000000000000000000000000000		Subtotal	\$13,265,087	\$4,980,243	\$1,821,708	\$6,258,388	\$177,402	\$27,34
Total Rate Base \$6,933,995 \$3,085,537 \$1,032,292 \$2,673,301 \$129,105 Rate Base Input equals \$1,032,292 \$2,673,301 \$129,105 Equity Component of Rate Base \$2,773,598 \$1,234,215 \$412,917 \$1,069,320 \$51,642 Net Income on Allocated Assets \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 Net Income on Direct Allocation Assets \$0 \$0 \$0 \$0 \$0 Net Income \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 RATIOS ANALYSIS \$0 \$0 \$0 \$0 \$0 REVENUE TO EXPENSES STATUS QUO% 100.00% \$6,47% 119.98% \$7.45% 191.22% EXISTING REVENUE MINUS ALLOCATED COSTS (\$290,308) (\$213,231) \$13,884 (\$130,770) \$28,199		Working Capital	\$994,882	\$373,518	\$136,628	\$469,379	\$13,305	\$2,05
Rate Base Input equals Output Equity Component of Rate Base \$2,773,598 \$1,234,215 \$412,917 \$1,069,320 \$51,642 Net Income on Allocated Assets \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 Net Income on Direct Allocation Assets \$0 \$0 \$0 \$0 \$0 Net Income \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 Net Income \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 RATIOS ANALYSIS \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 REVENUE TO EXPENSES STATUS QUO% 100.00% 96,47% 119.98% 87.45% 191.22% EXISTING REVENUE MINUS ALLOCATED COSTS (\$290,308) (\$213,231) \$13,884 (\$130,770) \$28,199 Deficiency Input equals Output Deficiency Input equals Output \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004 \$100,004		Total Rate Base	\$6,933,995	\$3,085,537	\$1,032,292	\$2,673,301	\$129,105	\$13,76
Equity Component of Rate Base \$2,773,598 \$1,234,215 \$412,917 \$1,069,320 \$51,642 Net Income on Allocated Assets \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 Net Income on Direct Allocation Assets \$0 \$0 \$0 \$0 \$0 Net Income \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 Ratios Analysis \$0 \$0 \$0 \$0 \$0 \$0 REVENUE TO EXPENSES STATUS QUO% 100.00% 96,47% 119.98% \$7.45% 191.22% EXISTING REVENUE MINUS ALLOCATED COSTS (\$290,308) (\$213,231) \$13,884 (\$130,770) \$28,199 Deficiency Input equals Output \$100,004			Rate Ba	se input equals	Output		142102	
Net Income on Allocated Assets \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 Net Income on Direct Allocation Assets \$0		Equity Component of Rate Base	\$2,773,598	\$1,234,215	\$412,917	\$1,069,320	\$51,642	\$5,50
Net Income on Direct Allocation Assets \$0 <td></td> <td>Net Income on Allocated Assets</td> <td>\$254,894</td> <td>\$69,148</td> <td>\$101,706</td> <td>\$25,689</td> <td>\$43,207</td> <td>\$15,14</td>		Net Income on Allocated Assets	\$254,894	\$69,148	\$101,706	\$25,689	\$43,207	\$15,14
Net Income \$254,894 \$69,148 \$101,706 \$25,689 \$43,207 RATIOS ANALYSIS Image: Comparison of the state of t		Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	S
RATIOS ANALYSIS 100.00% 96.47% 119.98% 87.45% 191.22% EXISTING REVENUE MINUS ALLOCATED COSTS (\$290,308) (\$213,231) \$13,884 (\$130,770) \$28,199 Deficiency Input equals Output Deficiency Input equals Output \$130,770) \$28,199		Net Income	\$254,894	\$69,148	\$101,706	\$25,689	\$43,207	\$15,14
REVENUE TO EXPENSES STATUS QUO% 100.00% 96.47% 119.98% 87.45% 191.22% EXISTING REVENUE MINUS ALLOCATED COSTS (\$290,308) (\$213,231) \$13,884 (\$130,770) \$28,199 Deficiency Input equals Output 0 <t< td=""><td></td><td>RATIOS ANALYSIS</td><td>10000</td><td></td><td></td><td></td><td></td><td>1.000</td></t<>		RATIOS ANALYSIS	10000					1.000
EXISTING REVENUE MINUS ALLOCATED COSTS (\$290,308) (\$213,231) \$13,884 (\$130,770) \$28,199 Deficiency Input equals Output		REVENUE TO EXPENSES STATUS QUO%	100.00%	96.47%	119.98%	87.45%	191.22%	279.85
control input of and output		EXISTING REVENUE MINUS ALLOCATED COSTS	(\$290,308) Deficier	(\$213,231)	\$13,884 Output	(\$130,770)	\$28,199	\$11,61
STATUS QUO REVENUE MINUS ALLOCATED COSTS (\$0) (\$47,257) \$63,265 (\$68,886) \$38,237		STATUS QUO REVENUE MINUS ALLOCATED COSTS	(\$0)	(\$47,257)	\$63,265	(\$68,886)	\$38,237	\$14,64

	1	2	3	7	9
Summary	Resident ial	GS <50	GS>50- Regular	Street Light	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	\$8.95	\$14.63	\$50.38	\$0.48	\$7.48
Customer Unit Cost per month - Directly Related	\$14.28	\$22.75	\$78.72	\$0.79	\$12.27
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$20.88	\$31.23	\$106.74	\$2.38	\$15.84
Existing Approved Fixed Charge	\$13.97	\$31.25	\$189.27	\$2.95	\$43.63

Sheet O-2 of the Cost Allocation Model

2

1

1 Class Revenue Requirements

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

- 3 The table below shows the results of the cost allocation updated 2017 study. These results are
- 4 used to compare, analyze the allocation under each option, and help the utility determine its
- 5 2017 proposed ratios.
- 6

Table 7.5:	Results	of the	Cost	Allocation	Study
	itoouito	0		/	olady

Cost Allocation Results		REVENUE ALLOCATION (sheet O1)							MER UNIT (NTH (shee	COST PER t O2)
Customer Class Name	Service F (row	Rev Req ⁄40)	Misc. F (mi) (Revenue row19)	Base R (row	ev Req ⁄80)	Rev2Cost Expenses %	Avoided Costs (Minimum Charge)	Directly Related	Minimum System with PLCC * adjustment
Residential	1,340,507	59.42%	64,907	60.35%	1,275,600	59.37%	96.47%	\$8.95	\$14.28	\$20.88
General Service < 50 kW	316,637	14.03%	14,440	13.43%	302,197	14.07%	119.98%	\$14.63	\$22.75	\$31.23
General Service > 50 to 4999 kW	548,869	24.33%	21,994	20.45%	526,875	24.52%	87.45%	\$50.38	\$78.72	\$106.74
Unmetered Scattered Load	8,141	0.36%	349	0.32%	7,791	0.36%	279.85%	\$7.48	\$12.27	\$15.84
Street Lighting	41,916	1.86%	5,860	5.45%	36,055	1.68%	191.22%	\$0.48	\$0.79	\$2.38
TOTAL	2,256,068	100.00%	107,550	100.00%	2,148,518	100.00%				

7

8 The table below shows the allocation percentage and base revenue requirement allocation

9 under existing rates, cost allocation results, and 2017 proposed allocation.

10

Table 7.6: Base Revenue Requirement Under 3 Scenarios

	Proposed Base Revenue Requirement %							
Customer Class Name								
	Cost Alloca	ation Results	Existin	ng Rates	Proposed	Allocation		
Residential	59.37%	1,275,600	57.17%	1,228,343	57.18%	1,228,548		
General Service < 50 kW	14.07%	302,197	17.01%	365,462	17.09%	367,076		
General Service > 50 to 4999 kW	24.52%	526,875	21.32%	457,989	22.06%	473,885		
Unmetered Scattered Load	0.36%	7,791	1.04%	22,432	0.82%	17,600		
Street Lighting	1.68%	36,055	3.46%	74,292	2.86%	61,410		
TOTAL	100.00%	2,148,518	100.00%	2,148,518	100.00%	2,148,518		

11

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- 1 Table 7.7 below shows the revenue offset allocation which resulted from Cost Allocation Study
- 2 (Sheet O1).
- 3

Table 7.7: Revenue Offset Allocation as per Cost Allocation Study

	Revenue Offsets			
Customer Class Name	%	\$		
Residential	60.35%	64,907		
General Service < 50 kW	13.43%	14,440		
General Service > 50 to 4999 kW	20.45%	21,994		
Unmetered Scattered Load	0.32%	349		
Street Lighting	5.45%	5,860		
TOTAL	100.00%	107,550		

4

- 5 Table 7.8 shows the allocation of the service revenue requirement under the same 3 scenarios.
- 6

7

Table 7.8: Service Revenue Requirement under 3 Scenarios

	Service Revenue Requirement \$					
Customer Class Name	Existing Rates	Cost Allocation	Rate Application			
Residential	1,293,249	1,340,507	1,293,455			
General Service < 50 kW	379,902	316,637	381,515			
General Service > 50 to 4999 kW	479,983	548,869	495,878			
Unmetered Scattered Load	22,782	8,141	17,950			
Street Lighting	80,152	41,915	67,270			
TOTAL	2,256,068	2,256,068	2,256,068			

Revenue-to-Cost Ratios

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

- 3 Per the Filing Requirements for Transmission and Distribution Applications dated July 17, 2013,
- 4 RHI has completed OEB Appendix 2-P with the results of the 2017 cost allocation study. The
- 5 Allocated cost table (Table A), calculated class revenues (Table B) and Rebalancing Revenue-
- 6 to-Cost (Revenue to Cost) Ratios (Table C) are summarized below.
- 7 The Appendix provides information on previously approved ratios and proposed ratios. The
- 8 section following Appendix 2-P addresses the method and logic used to update the ratios from
- 9 the Cost Allocation study to the proposed ratios.

- The table below shows the utility's proposed Revenue to Cost reallocation based on an analysis 1
- of the proposed results from the Cost Allocation Study vs the Board imposed floor and ceiling 2
- 3 ranges.
- 4

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	\$1,061,717.54	57.18%	\$1,340,506.67	59.42%
General Service < 50 kW	\$315,830.88	17.01%	\$316,636.63	14.03%
General Service > 50 to 4999 kW	\$395,641.47	21.31%	\$548,868.73	24.33%
Unmetered Scattered Load	\$19,399.10	1.04%	\$8,140.75	0.36%
Street Lighting	\$64,219.76	3.46%	\$41,915.50	1.86%
		0.00%		0.00%
Total	\$1,856,808.75	100.00%	\$2,256,068.29	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
Residential	\$1,061,717.54	\$1,228,342.51	\$1,228,548.10	\$64,906.69
General Service < 50 kW	\$315,830.88	\$365,462.04	\$367,075.57	\$14,439.89
General Service > 50 to 4999 kW	\$395,641.47	\$457,989.15	\$473,884.63	\$21,993.52
Unmetered Scattered Load	\$19,399.10	\$22,432.48	\$17,600.12	\$349.42
Street Lighting	\$64,219.76	\$74,291.94	\$61,409.69	\$5,860.49
Total	\$1,856,808.75	\$2,148,518.12	\$2,148,518.12	\$107,550.00

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)	
	2010			
	%	%	%	%
Residential	117.00	96.47	96.49	85 - 115
General Service < 50 kW	100.00	119.98	120.49	80 - 120
General Service > 50 to 4999 kW	80.00	87.45	90.35	80 - 120
Unmetered Scattered Load	64.00	279.85	220.49	80 - 120
Street Lighting	39.00	191.22	160.49	85 - 115

D) Proposed Revenue-to-Cost Ratios

Class	Proposed Revenue- to-Cost Ratios			Policy Range
	2017	2018	2019	
	%	%	%	%
Residential	96.49			85 - 115
General Service < 50 kW	120.49			80 - 120
General Service > 50 to 4999 kW	90.35			80 - 120
Unmetered Scattered Load	220.49	160	120	80 - 120
Street Lighting	160.49	120		85 - 115

Customer Class Name	Calculated R/C Ratio	Proposed R/C Ratio	Variance
Residential	0.96	0.96	-0.00
General Service < 50 kW	1.20	1.20	-0.01
General Service > 50 to 4999 kW	0.87	0.90	-0.03
Unmetered Scattered Load	2.80	2.20	0.59
Street Lighting	1.91	1.60	0.31

Table 7.9: Proposed Allocation

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

4 The proposed Revenue to Cost ratio is adjusted by changing the allocation percentage for each

5 class. The utility reviews and assesses the bill impacts for each class before adjusting the

6 Revenue to Cost ratios.

The utility does not propose to change any classes that fall within the range unless the purpose is to recover the shortfall of classes that fell outside the range. (In previous decisions, the Board

9 expressed reluctance to move revenue-to-cost ratios to 100% for each rate class in an effort to

10 remove cross-subsidization. The Board stated that there are data limitations inherent in cost

allocation models, and noted that as a practical matter, there may be little difference between a

12 revenue-to-cost ratio of near 100% and the theoretical ideal of 100%.

RHI proposes to maintain the ratio for the Residential class at 96% as it fell within the range and is also close to recovering its cost. The General Service <50kW at 1.20 was also not adjusted as it fell within the Board prescribed range. At current rates, the General Service>50kW is under-recovering revenues in comparison to its allocated costs. The utility opted to adjust from 0.87 to 0.90 to recover the shortfall of bringing the Streetlight and Unmetered Scattered Load classes closer to the ceiling of 120%.

The calculated ratio for the Streetlights and Unmetered Scattered Load ended well above the imposed lower limit (floor) of 120%. Although the classes only recover a small percentage of the revenue requirement (2.86% and 0.82% respectively), the utility must nonetheless be mindful of the bill impacts for this class. RHI proposes to adjust the Street Light class down to 1.2 over a period of three years 2017-2019, and proposes to adjust the Unmetered Scattered Load over two years 2017-2018. Implementing the Revenue to Cost reallocation over a period of time

1

- 1 helps minimize the bill impacts. For further details about the class specific bill impacts, please
- 2 refer to Exhibit 8.