

1 **EXHIBIT 7 - COST ALLOCATION**

2

3 **Response to Ontario Energy Board Interrogatory 7-Staff-84**

4

5 **Ref: Exhibit 7, Tab 1, Schedule 1, p. 1 – Cost Allocation Model**

6

7 **Interrogatory:**

8

9 On June 12, 2015, the OEB issued its letter outline the new policy regarding cost
10 allocation for the street lighting class. The letter approved recommendations provided
11 in the referenced report, prepared by Navigant Consulting Ltd. The report
12 recommended the use of a “street lighting adjustment factor” instead of the number of
13 connections for the allocation of primary and line transformer assets.

14

15 On page 1 of exhibit 7, Kingston Hydro stated that it used the OEB version 3.2 Cost
16 Allocation Model for each of the 5 test years during the custom IR term.

17

18 a) Please provide an updated cost allocation study using the OEB version 3.3 Cost
19 Allocation Model reflecting the changes adopted by the OEB’s new cost
20 allocation policy for the street lighting class, as well as any other updates to the
21 application (i.e. working capital allowance).

22

23 **Response:**

24

25 a) Kingston Hydro has filed as part of this response live Excel versions of OEB 3.3
26 Cost Allocation Model for each of the 5 test years 2016-2020. The models being
27 filed reflect the updated load forecast, as well as any other updates to the
28 application.

29 By test year, for each of the test years 2016 through 2020, Input sheets I-6, I-8,
30 Output O-1 and O-2 from the updated OEB version 3.3 Cost Allocation Model
31 are provided as Attachment 1 to this response.

Response to the Ontario Energy Board
Staff Interrogatory 7-Staff-84

Attachment 1



2016 Cost Allocation Model

EB-2015-0083

Sheet 16.1 Revenue Worksheet -

2016 CA

Total kWhs from Load Forecast	698,126,864
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Total kW from Load Forecast	1,029,084
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Deficiency/sufficiency (RRWF 8. cell F51)	- 895,436
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Miscellaneous Revenue (RRWF 5. cell F48)	576,998
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		1	2	3	6	7	9	
ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
Billing Data								
Forecast kWh	CEN	698,126,864	188,042,904	86,732,020	273,255,734	147,081,903	1,818,158	1,196,145
Forecast kW	CDEM	1,029,084			745,973	278,065	5,046	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		377,495			283,450	94,045		
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	698,126,864	188,042,904	86,732,020	273,255,734	147,081,903	1,818,158	1,196,145



2016 Cost Allocation Model

EB-2015-0083

Sheet I6.2 Customer Data Worksheet -

			1	2	3	6	7	9
	ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Billing Data								
Bad Debt 3 Year Historical Average	BDHA	\$151,896	\$117,882	\$13,971	\$20,044	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$52,875	\$38,070	\$11,632	\$3,172			
Number of Bills	CNB	330,996	289,884	35,400.00	3,972.00	36.00	12.00	1,692.00
Number of Devices	CDEV						5,349	
Number of Connections (Unmetered)	CCON	2,802					2,661	141
Total Number of Customers	CCA	27,583	24,157	2,950	331	3	1	141
Bulk Customer Base	CCB	-						
Primary Customer Base	CCP	27,786	24,157	2,950	331	3	204	141
Line Transformer Customer Base	CCLT	27,774	24,157	2,950	321	1	204	141
Secondary Customer Base	CCS	26,672	24,157	2,212	161		1	141
Weighted - Services	CWCS	30,901	24,157	5,464	1,255	-	-	25
Weighted Meter -Capital	CWMC	6,217,648	4,692,522	841,126	674,000	10,000	-	-
Weighted Meter Reading	CWMR	476,712	289,884	37,523	143,938	5,367	-	-
Weighted Bills	CWNB	369,379	289,884	35,400	42,461	373	9	1,252

Bad Debt Data

Historic Year:	2012	95,865	74,398	8,817	12,650			
Historic Year:	2013	170,966	132,681	15,725	22,560			
Historic Year:	2014	188,857	146,566	17,370	24,921			
Three-year average		151,896	117,882	13,971	20,044	-	-	-

2016 Cost Allocation Model

EB-2015-0083

Sheet IS Demand Data Worksheet -

2016 CA

This is an input sheet for demand allocators.

CP TEST RESULTS	4 CP
NCP TEST RESULTS	4 NCP

Co-incident Peak	Indicator
1 CP	CP 1
4 CP	CP 4
12 CP	CP 12

Non-co-incident Peak	Indicator
1 NCP	NCP 1
4 NCP	NCP 4
12 NCP	NCP 12

Customer Classes	Total	1	2	3	6	7	9	
		Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	131,365	46,069	15,640	52,055	17,043	425	133
Bulk Delivery CP	BCP1	131,365	46,069	15,640	52,055	17,043	425	133
Total Sytem CP	DCP1	131,365	46,069	15,640	52,055	17,043	425	133
4 CP								
Transformation CP	TCP4	478,798	184,463	50,602	173,196	68,613	1,381	543
Bulk Delivery CP	BCP4	478,798	184,463	50,602	173,196	68,613	1,381	543
Total Sytem CP	DCP4	478,798	184,463	50,602	173,196	68,613	1,381	543
12 CP								
Transformation CP	TCP12	1,263,344	386,347	151,271	480,324	241,974	1,789	1,639
Bulk Delivery CP	BCP12	1,263,344	386,347	151,271	480,324	241,974	1,789	1,639
Total Sytem CP	DCP12	1,263,344	386,347	151,271	480,324	241,974	1,789	1,639
NON CO. INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	157,967	51,326	21,359	57,543	27,169	425	144
Primary NCP	PNCP1	157,967	51,326	21,359	57,543	27,169	425	144
Line Transformer NCP	LTNCP1	145,471	51,326	21,359	54,236	17,980	425	144
Secondary NCP	SNCP1	98,538	51,326	15,551	31,092		425	144
4 NCP								
Classification NCP from Load Data Provider	DNCP4	580,397	201,009	72,910	200,613	103,595	1,698	573
Primary NCP	PNCP4	580,397	201,009	72,910	200,613	103,595	1,698	573
Line Transformer NCP	LTNCP4	533,180	201,009	72,910	188,432	68,558	1,698	573
Secondary NCP	SNCP4	351,145	201,009	53,085	94,780		1,698	573
12 NCP								
Classification NCP from Load Data Provider	DNCP12	1,450,498	458,350	186,527	530,424	268,434	5,095	1,667
Primary NCP	PNCP12	1,450,498	458,350	186,527	530,424	268,434	5,095	1,667
Line Transformer NCP	LTNCP12	1,266,421	458,350	186,527	437,135	177,647	5,095	1,667
Secondary NCP	SNCP12	851,521	458,350	135,809	250,600		5,095	1,667

2016 Cost Allocation Model

EB-2015-0083

Sheet 01 Revenue to Cost Summary Worksheet -

2016 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base		Total	1	2	3	6	7	9
Assets		Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
crev	Distribution Revenue at Existing Rates	\$11,358,235	\$6,536,804	\$1,834,449	\$2,439,094	\$422,418	\$89,061	\$36,408
mi	Miscellaneous Revenue (mi)	\$576,998	\$373,907	\$73,432	\$96,897	\$18,564	\$12,897	\$1,301
		Miscellaneous Revenue Input equals Output						
Total Revenue at Existing Rates		\$11,935,233	\$6,910,711	\$1,907,882	\$2,535,990	\$440,982	\$101,958	\$37,709
Factor required to recover deficiency (1 + D)		1.0788						
Distribution Revenue at Status Quo Rates		\$12,253,670	\$7,052,138	\$1,979,070	\$2,631,381	\$455,720	\$96,082	\$39,279
Miscellaneous Revenue (mi)		\$576,998	\$373,907	\$73,432	\$96,897	\$18,564	\$12,897	\$1,301
Total Revenue at Status Quo Rates		\$12,830,668	\$7,426,045	\$2,052,502	\$2,728,278	\$474,284	\$108,980	\$40,579
Expenses								
di	Distribution Costs (di)	\$2,850,863	\$1,553,075	\$378,620	\$704,857	\$158,448	\$50,650	\$5,213
cu	Customer Related Costs (cu)	\$1,562,697	\$1,178,516	\$162,854	\$202,255	\$3,504	\$12,981	\$2,587
ad	General and Administration (ad)	\$2,717,249	\$1,665,678	\$336,583	\$567,605	\$102,527	\$40,063	\$4,792
dep	Depreciation and Amortization (dep)	\$1,825,384	\$1,068,993	\$243,319	\$403,609	\$80,955	\$25,864	\$2,644
INPUT	PILs (INPUT)	\$211,786	\$120,072	\$28,242	\$49,815	\$9,583	\$3,706	\$368
INT	Interest	\$1,487,697	\$843,448	\$198,388	\$349,927	\$67,318	\$26,032	\$2,583
Total Expenses		\$10,655,677	\$6,429,783	\$1,348,006	\$2,278,068	\$422,335	\$159,297	\$18,187
Direct Allocation		\$0	\$0	\$0	\$0	\$0	\$0	\$0
NI	Allocated Net Income (NI)	\$2,174,991	\$1,233,109	\$290,040	\$511,588	\$98,418	\$38,059	\$3,777
Revenue Requirement (includes NI)		\$12,830,668	\$7,662,892	\$1,638,046	\$2,789,657	\$520,754	\$197,356	\$21,964
		Revenue Requirement Input equals Output						
Rate Base Calculation								
Net Assets								
dp	Distribution Plant - Gross	\$67,845,601	\$38,500,775	\$9,059,388	\$15,868,819	\$3,161,091	\$1,138,313	\$117,215
gp	General Plant - Gross	\$8,982,484	\$5,076,128	\$1,197,101	\$2,120,196	\$418,801	\$154,691	\$15,568
accum dep	Accumulated Depreciation	(\$2,861,376)	(\$15,927,005)	(\$3,731,344)	(\$6,421,683)	(\$1,280,328)	(\$452,946)	(\$48,071)
co	Capital Contribution	(\$2,848,475)	(\$1,508,394)	(\$375,399)	(\$717,357)	(\$208,837)	(\$33,846)	(\$4,643)
Total Net Plant		\$46,118,234	\$26,141,505	\$6,149,746	\$10,849,975	\$2,090,727	\$806,212	\$80,069
Directly Allocated Net Fixed Assets		\$0	\$0	\$0	\$0	\$0	\$0	\$0
COP	Cost of Power (COP)	\$87,863,612	\$23,678,208	\$10,914,722	\$34,382,692	\$18,506,673	\$230,709	\$150,608
	OM&A Expenses	\$7,130,810	\$4,397,269	\$878,057	\$1,474,717	\$264,479	\$103,694	\$12,593
	Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal		\$94,994,421	\$28,075,478	\$11,792,779	\$35,857,409	\$18,771,152	\$334,403	\$163,201
Working Capital		\$12,349,275	\$3,649,812	\$1,533,061	\$4,661,463	\$2,440,250	\$43,472	\$21,216
Total Rate Base		\$58,467,508	\$29,791,317	\$7,682,807	\$15,511,438	\$4,530,976	\$849,685	\$101,286
		Rate Base Input equals Output						
Equity Component of Rate Base		\$23,387,003	\$11,916,527	\$3,073,123	\$6,204,575	\$1,812,391	\$339,874	\$40,514
Net Income on Allocated Assets		\$2,174,991	\$996,262	\$704,496	\$450,210	\$51,948	(\$50,317)	\$22,392
Net Income on Direct Allocation Assets		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income		\$2,174,991	\$996,262	\$704,496	\$450,210	\$51,948	(\$50,317)	\$22,392

2016 Cost Allocation Model

EB-2015-0083

Sheet O1 Revenue to Cost Summary Worksheet -

2016 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base Assets	Total	1 Residential	2 GS <50	3 GS>50-Regular	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
	RATIOS ANALYSIS						
REVENUE TO EXPENSES STATUS QUO%	100.00%	96.91%	125.30%	97.80%	91.08%	55.22%	184.76%
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$895,436)	(\$752,181)	\$269,836	(\$253,667)	(\$79,772)	(\$95,397)	\$15,745
	Deficiency Input equals Output						
STATUS QUO REVENUE MINUS ALLOCATED COSTS	(\$0)	(\$236,847)	\$414,456	(\$61,379)	(\$46,470)	(\$88,376)	\$18,615
RETURN ON EQUITY COMPONENT OF RATE BASE	9.30%	8.36%	22.92%	7.26%	2.87%	-14.80%	55.27%



2016 Cost Allocation Model

EB-2015-0083

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

2016 CA

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	6	7	9
	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	\$5.11	\$6.29	\$60.72	\$109.47	\$0.40	\$1.51
Customer Unit Cost per month - Directly Related	\$7.38	\$9.03	\$89.61	\$173.92	\$0.65	\$2.45
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$13.62	\$14.88	\$109.53	\$328.24	\$5.93	\$6.84
Existing Approved Fixed Charge	\$12.56	\$25.85	\$280.09	\$5,164.00	\$1.02	\$11.55



2016 Cost Allocation Model

EB-2015-0083

Sheet 16.1 Revenue Worksheet -

2017 CA

Total kWhs from Load Forecast	693,295,773
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Total kW from Load Forecast	1,025,644
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Deficiency/sufficiency (RRWF 8. cell F51)	- 440,492
--	-----------

Miscellaneous Revenue (RRWF 5. cell F48)	583,921
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			1	2	3	6	7	9
		ID	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Billing Data								
Forecast kWh	CEN	693,295,773	187,260,718	84,778,808	273,818,458	144,444,566	1,821,740	1,171,483
Forecast kW	CDEM	1,025,644			747,509	273,079	5,056	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		376,392			284,034	92,358		
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	693,295,773	187,260,718	84,778,808	273,818,458	144,444,566	1,821,740	1,171,483



2016 Cost Allocation Model

EB-2015-0083

Sheet I6.2 Customer Data Worksheet -

			1	2	3	6	7	9
	ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Billing Data								
Bad Debt 3 Year Historical Average	BDHA	\$151,896	\$117,882	\$13,971	\$20,044	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$52,875	\$38,070	\$11,632	\$3,172			
Number of Bills	CNB	332,364	291,732	34,812	4,116	36	12	1,656
Number of Devices	CDEV						5,361	
Number of Connections (Unmetered)	CCON	2,805					2,667	138
Total Number of Customers	CCA	27,697	24,311	2,901	343	3	1	138
Bulk Customer Base	CCB	-						
Primary Customer Base	CCP	27,903	24,311	2,901	343	3	207	138
Line Transformer Customer Base	CCLT	27,891	24,311	2,901	333	1	207	138
Secondary Customer Base	CCS	26,793	24,311	2,176	167		1	138
Weighted - Services	CWCS	31,011	24,311	5,375	1,300	-	-	25
Weighted Meter -Capital	CWMC	6,245,592	4,722,437	827,155	686,000	10,000	-	-
Weighted Meter Reading	CWMR	480,608	291,732	36,935	146,574	5,367	-	-
Weighted Bills	CWNB	372,151	291,732	34,812	44,000	373	9	1,225

Bad Debt Data

Historic Year:	2012	95,865	74,398	8,817	12,650			
Historic Year:	2013	170,966	132,681	15,725	22,560			
Historic Year:	2014	188,857	146,566	17,370	24,921			
Three-year average		151,896	117,882	13,971	20,044	-	-	-

2016 Cost Allocation Model

EB-2015-0083

Sheet 18 Demand Data Worksheet -

2017 CA

This is an input sheet for demand allocators.

CP TEST RESULTS	4 CP
NCP TEST RESULTS	4 NCP

Co-incident Peak	Indicator
1 CP	CP 1
4 CP	CP 4
12 CP	CP 12

Non-co-incident Peak	Indicator
1 NCP	NCP 1
4 NCP	NCP 4
12 NCP	NCP 12

Customer Classes	Total	1	2	3	6	7	9	
		Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	130,621	45,878	15,288	52,163	16,737	425	131
Bulk Delivery CP	BCP1	130,621	45,878	15,288	52,163	16,737	425	131
Total Sytem CP	DCP1	130,621	45,878	15,288	52,163	16,737	425	131
4 CP								
Transformation CP	TCP4	476,009	183,696	49,462	173,553	67,383	1,383	532
Bulk Delivery CP	BCP4	476,009	183,696	49,462	173,553	67,383	1,383	532
Total Sytem CP	DCP4	476,009	183,696	49,462	173,553	67,383	1,383	532
12 CP								
Transformation CP	TCP12	1,254,950	384,740	147,864	481,313	237,635	1,792	1,605
Bulk Delivery CP	BCP12	1,254,950	384,740	147,864	481,313	237,635	1,792	1,605
Total Sytem CP	DCP12	1,254,950	384,740	147,864	481,313	237,635	1,792	1,605
NON CO. INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	156,901	51,113	20,878	57,662	26,682	425	141
Primary NCP	PNCP1	156,901	51,113	20,878	57,662	26,682	425	141
Line Transformer NCP	LTNCP1	143,449	51,113	20,878	54,348	16,544	425	141
Secondary NCP	SNCP1	98,036	51,113	15,201	31,156		425	141
4 NCP								
Classification NCP from Load Data Provider	DNCP4	576,466	200,173	71,268	201,026	101,738	1,702	561
Primary NCP	PNCP4	576,466	200,173	71,268	201,026	101,738	1,702	561
Line Transformer NCP	LTNCP4	525,603	200,173	71,268	188,820	63,080	1,702	561
Secondary NCP	SNCP4	349,300	200,173	51,890	94,975		1,702	561
12 NCP								
Classification NCP from Load Data Provider	DNCP12	1,440,646	456,443	182,326	531,516	263,621	5,105	1,633
Primary NCP	PNCP12	1,440,646	456,443	182,326	531,516	263,621	5,105	1,633
Line Transformer NCP	LTNCP12	1,246,995	456,443	182,326	438,035	163,452	5,105	1,633
Secondary NCP	SNCP12	847,048	456,443	132,751	251,116		5,105	1,633

2016 Cost Allocation Model

EB-2015-0083

Sheet O1 Revenue to Cost Summary Worksheet -

2017 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

		Total	1 Residential	2 GS <50	3 GS>50-Regular	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
Rate Base								
Assets								
crev	Distribution Revenue at Existing Rates	\$12,263,540	\$7,143,890	\$1,858,443	\$2,656,821	\$473,734	\$106,176	\$24,476
mi	Miscellaneous Revenue (mi)	\$583,921	\$378,613	\$73,141	\$99,396	\$18,499	\$12,990	\$1,282
	Miscellaneous Revenue Input equals Output							
	Total Revenue at Existing Rates	\$12,847,461	\$7,522,503	\$1,931,584	\$2,756,217	\$492,233	\$119,165	\$25,758
	Factor required to recover deficiency (1 + D)	1.0359						
	Distribution Revenue at Status Quo Rates	\$12,704,032	\$7,400,490	\$1,925,196	\$2,752,251	\$490,750	\$109,989	\$25,356
	Miscellaneous Revenue (mi)	\$583,921	\$378,613	\$73,141	\$99,396	\$18,499	\$12,990	\$1,282
	Total Revenue at Status Quo Rates	\$13,287,953	\$7,779,103	\$1,998,338	\$2,851,647	\$509,249	\$122,979	\$26,638
	Expenses							
di	Distribution Costs (di)	\$2,901,238	\$1,584,412	\$378,983	\$723,547	\$157,480	\$51,614	\$5,201
cu	Customer Related Costs (cu)	\$1,589,263	\$1,198,740	\$162,388	\$208,860	\$3,538	\$13,179	\$2,559
ad	General and Administration (ad)	\$2,762,850	\$1,696,865	\$336,353	\$582,644	\$101,332	\$40,883	\$4,773
dep	Depreciation and Amortization (dep)	\$1,967,120	\$1,158,034	\$257,797	\$437,369	\$82,657	\$28,435	\$2,829
INPUT	PILs (INPUT)	\$245,679	\$140,150	\$32,232	\$58,043	\$10,437	\$4,393	\$424
INT	Interest	\$1,565,740	\$893,191	\$205,415	\$369,916	\$66,518	\$27,995	\$2,704
	Total Expenses	\$11,031,890	\$6,671,392	\$1,373,167	\$2,380,379	\$421,961	\$166,500	\$18,491
	Direct Allocation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NI	Allocated Net Income (NI)	\$2,256,063	\$1,286,993	\$295,982	\$533,009	\$95,845	\$40,338	\$3,897
	Revenue Requirement (includes NI)	\$13,287,953	\$7,958,385	\$1,669,149	\$2,913,387	\$517,806	\$206,838	\$22,388
	Revenue Requirement Input equals Output							
	Rate Base Calculation							
	Net Assets							
dp	Distribution Plant - Gross	\$71,397,289	\$40,735,450	\$9,376,861	\$16,788,060	\$3,164,076	\$1,211,330	\$121,512
gp	General Plant - Gross	\$9,568,771	\$5,441,084	\$1,254,682	\$2,268,959	\$419,089	\$168,468	\$16,489
accum dep	Accumulated Depreciation	(\$29,757,628)	(\$17,082,936)	(\$3,917,752)	(\$6,903,418)	(\$1,321,499)	(\$482,087)	(\$49,937)
co	Capital Contribution	(\$2,848,475)	(\$1,511,556)	(\$369,472)	(\$725,729)	(\$203,335)	(\$33,837)	(\$4,547)
	Total Net Plant	\$48,359,957	\$27,582,043	\$6,344,320	\$11,427,873	\$2,058,330	\$863,874	\$83,517
	Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COP	Cost of Power (COP)	\$87,261,261	\$23,581,363	\$10,669,596	\$34,455,650	\$18,175,962	\$231,177	\$147,512
	OM&A Expenses	\$7,253,351	\$4,480,017	\$877,723	\$1,515,051	\$262,350	\$105,677	\$12,533
	Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal	\$94,514,612	\$28,061,380	\$11,547,320	\$35,970,701	\$18,438,312	\$336,854	\$160,046
	Working Capital	\$12,286,900	\$3,647,979	\$1,501,152	\$4,676,191	\$2,396,981	\$43,791	\$20,806
	Total Rate Base	\$60,646,856	\$31,230,022	\$7,845,471	\$16,104,064	\$4,455,311	\$907,665	\$104,323
	Rate Base Input equals Output							
	Equity Component of Rate Base	\$24,258,742	\$12,492,009	\$3,138,188	\$6,441,626	\$1,782,124	\$363,066	\$41,729
	Net Income on Allocated Assets	\$2,256,063	\$1,107,711	\$625,170	\$471,268	\$87,288	(\$43,520)	\$8,147
	Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net Income	\$2,256,063	\$1,107,711	\$625,170	\$471,268	\$87,288	(\$43,520)	\$8,147

2016 Cost Allocation Model

EB-2015-0083

Sheet O1 Revenue to Cost Summary Worksheet -

2017 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base Assets	Total	1 Residential	2 GS <50	3 GS>50-Regular	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
	RATIOS ANALYSIS						
REVENUE TO EXPENSES STATUS QUO%	100.00%	97.75%	119.72%	97.88%	98.35%	59.46%	118.98%
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$440,492)	(\$435,882)	\$262,436	(\$157,170)	(\$25,573)	(\$87,673)	\$3,371
	Deficiency Input equals Output						
STATUS QUO REVENUE MINUS ALLOCATED COSTS	(\$0)	(\$179,282)	\$329,189	(\$61,740)	(\$8,557)	(\$83,859)	\$4,250
RETURN ON EQUITY COMPONENT OF RATE BASE	9.30%	8.87%	19.92%	7.32%	4.90%	-11.99%	19.52%



2016 Cost Allocation Model

EB-2015-0083

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

2017 CA

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	6	7	9
	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	\$5.19	\$6.39	\$60.81	\$111.57	\$0.40	\$1.53
Customer Unit Cost per month - Directly Related	\$7.49	\$9.16	\$89.67	\$176.34	\$0.66	\$2.48
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$13.93	\$15.20	\$109.38	\$326.47	\$6.20	\$7.03
Existing Approved Fixed Charge	\$16.40	\$26.84	\$314.28	\$5,734.00	\$0.90	\$6.15



2016 Cost Allocation Model

EB-2015-0083

Sheet 16.1 Revenue Worksheet -

2018 CA

Total kWhs from Load Forecast	690,031,470
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Total kW from Load Forecast	1,026,015
-----------------------------	-----------

Deficiency/sufficiency (RRWF 8. cell F51)	- 428,102
--	-----------

Miscellaneous Revenue (RRWF 5. cell F48)	580,278
--	---------

		1	2	3	6	7	9	
ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
Billing Data								
Forecast kWh	CEN	690,031,470	186,243,142	82,438,874	273,991,419	144,385,384	1,825,321	1,147,330
Forecast kW	CDEM	1,026,015			747,982	272,967	5,066	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		376,534			284,213	92,321		
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	690,031,470	186,243,142	82,438,874	273,991,419	144,385,384	1,825,321	1,147,330



2016 Cost Allocation Model

EB-2015-0083

Sheet I6.2 Customer Data Worksheet -

			1	2	3	6	7	9
	ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Billing Data								
Bad Debt 3 Year Historical Average	BDHA	\$151,896	\$117,882	\$13,971	\$20,044	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$52,875	\$38,070	\$11,632	\$3,172			
Number of Bills	CNB	333,696	293,592	34,236	4,200	36	12	1,620
Number of Devices	CDEV						5,373	
Number of Connections (Unmetered)	CCON	2,808					2,673	135
Total Number of Customers	CCA	27,808	24,466	2,853	350	3	1	135
Bulk Customer Base	CCB	-						
Primary Customer Base	CCP	28,017	24,466	2,853	350	3	210	135
Line Transformer Customer Base	CCLT	28,005	24,466	2,853	340	1	210	135
Secondary Customer Base	CCS	26,912	24,466	2,140	170		1	135
Weighted - Services	CWCS	31,103	24,466	5,286	1,327	-	-	24
Weighted Meter -Capital	CWMC	6,276,014	4,752,546	813,469	700,000	10,000	-	-
Weighted Meter Reading	CWMR	484,883	293,592	36,359	149,566	5,367	-	-
Weighted Bills	CWNB	374,307	293,592	34,236	44,898	373	9	1,199

Bad Debt Data

Historic Year:	2012	95,865	74,398	8,817	12,650			
Historic Year:	2013	170,966	132,681	15,725	22,560			
Historic Year:	2014	188,857	146,566	17,370	24,921			
Three-year average		151,896	117,882	13,971	20,044	-	-	-

2016 Cost Allocation Model

EB-2015-0083

Sheet IS Demand Data Worksheet -

2018 CA

This is an input sheet for demand allocators.

CP TEST RESULTS	4 CP
NCP TEST RESULTS	4 NCP

Co-incident Peak	Indicator
1 CP	CP 1
4 CP	CP 4
12 CP	CP 12

Non-co-incident Peak	Indicator
1 NCP	NCP 1
4 NCP	NCP 4
12 NCP	NCP 12

Customer Classes	Total	1	2	3	6	7	9	
		Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	129,974	45,628	14,866	52,196	16,730	426	128
Bulk Delivery CP	BCP1	129,974	45,628	14,866	52,196	16,730	426	128
Total Sytem CP	DCP1	129,974	45,628	14,866	52,196	16,730	426	128
4 CP								
Transformation CP	TCP4	473,719	182,698	48,097	173,662	67,355	1,386	521
Bulk Delivery CP	BCP4	473,719	182,698	48,097	173,662	67,355	1,386	521
Total Sytem CP	DCP4	473,719	182,698	48,097	173,662	67,355	1,386	521
12 CP								
Transformation CP	TCP12	1,248,955	382,650	143,783	481,617	237,538	1,796	1,572
Bulk Delivery CP	BCP12	1,248,955	382,650	143,783	481,617	237,538	1,796	1,572
Total Sytem CP	DCP12	1,248,955	382,650	143,783	481,617	237,538	1,796	1,572
NON CO. INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	156,072	50,835	20,302	57,698	26,671	426	139
Primary NCP	PNCP1	156,072	50,835	20,302	57,698	26,671	426	139
Line Transformer NCP	LTNCP1	142,621	50,835	20,302	54,382	16,537	426	139
Secondary NCP	SNCP1	97,357	50,835	14,781	31,175		426	139
4 NCP								
Classification NCP from Load Data Provider	DNCP4	573,489	199,085	69,301	201,153	101,696	1,705	550
Primary NCP	PNCP4	573,489	199,085	69,301	201,153	101,696	1,705	550
Line Transformer NCP	LTNCP4	522,634	199,085	69,301	188,939	63,054	1,705	550
Secondary NCP	SNCP4	346,832	199,085	50,458	95,035		1,705	550
12 NCP								
Classification NCP from Load Data Provider	DNCP12	1,433,337	453,963	177,294	531,852	263,513	5,115	1,599
Primary NCP	PNCP12	1,433,337	453,963	177,294	531,852	263,513	5,115	1,599
Line Transformer NCP	LTNCP12	1,239,669	453,963	177,294	438,312	163,385	5,115	1,599
Secondary NCP	SNCP12	841,039	453,963	129,087	251,275		5,115	1,599

2016 Cost Allocation Model

EB-2015-0083

Sheet 01 Revenue to Cost Summary Worksheet -

2018 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

		Total	1 Residential	2 GS <50	3 GS>50-Regular	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
Rate Base								
Assets								
crev	Distribution Revenue at Existing Rates	\$12,713,323	\$7,427,565	\$1,868,229	\$2,780,278	\$490,672	\$121,720	\$24,858
mi	Miscellaneous Revenue (mi)	\$580,278	\$376,708	\$71,431	\$99,502	\$18,472	\$12,920	\$1,246
	Miscellaneous Revenue Input equals Output							
	Total Revenue at Existing Rates	\$13,293,601	\$7,804,273	\$1,939,660	\$2,879,780	\$509,144	\$134,640	\$26,104
	Factor required to recover deficiency (1 + D)	1.0337						
	Distribution Revenue at Status Quo Rates	\$13,141,425	\$7,677,677	\$1,931,139	\$2,873,900	\$507,195	\$125,819	\$25,695
	Miscellaneous Revenue (mi)	\$580,278	\$376,708	\$71,431	\$99,502	\$18,472	\$12,920	\$1,246
	Total Revenue at Status Quo Rates	\$13,721,703	\$8,054,385	\$2,002,570	\$2,973,402	\$525,667	\$138,739	\$26,941
	Expenses							
di	Distribution Costs (di)	\$2,952,525	\$1,613,683	\$377,666	\$742,303	\$161,223	\$52,462	\$5,188
cu	Customer Related Costs (cu)	\$1,616,281	\$1,219,887	\$162,001	\$214,908	\$3,571	\$13,382	\$2,532
ad	General and Administration (ad)	\$2,809,215	\$1,726,443	\$335,066	\$597,783	\$103,637	\$41,537	\$4,749
dep	Depreciation and Amortization (dep)	\$2,101,260	\$1,238,011	\$269,657	\$471,432	\$88,852	\$30,345	\$2,963
INPUT	PILs (INPUT)	\$314,370	\$179,392	\$40,395	\$74,975	\$13,444	\$5,630	\$534
INT	Interest	\$1,617,512	\$923,015	\$207,845	\$385,765	\$69,175	\$28,966	\$2,747
	Total Expenses	\$11,411,162	\$6,900,431	\$1,392,630	\$2,487,165	\$439,902	\$172,322	\$18,713
	Direct Allocation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NI	Allocated Net Income (NI)	\$2,310,540	\$1,318,484	\$296,896	\$551,047	\$98,813	\$41,376	\$3,924
	Revenue Requirement (includes NI)	\$13,721,703	\$8,218,915	\$1,689,526	\$3,038,212	\$538,714	\$213,698	\$22,637
	Revenue Requirement Input equals Output							
	Rate Base Calculation							
	Net Assets							
dp	Distribution Plant - Gross	\$74,509,601	\$42,571,829	\$9,582,973	\$17,654,667	\$3,315,219	\$1,260,879	\$124,034
gp	General Plant - Gross	\$10,051,344	\$5,718,386	\$1,290,875	\$2,405,322	\$442,319	\$177,410	\$17,033
accum dep	Accumulated Depreciation	(\$31,791,818)	(\$18,295,980)	(\$4,097,748)	(\$7,420,409)	(\$1,414,584)	(\$511,260)	(\$51,837)
co	Capital Contribution	\$2,848,475	(\$1,512,526)	(\$361,666)	(\$731,532)	(\$204,480)	(\$33,816)	(\$4,455)
	Total Net Plant	\$49,920,652	\$28,481,709	\$6,414,433	\$11,908,048	\$2,138,473	\$893,213	\$84,775
	Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COP	Cost of Power (COP)	\$86,396,142	\$23,330,768	\$10,320,834	\$34,296,970	\$18,073,425	\$230,429	\$143,715
	OM&A Expenses	\$7,378,021	\$4,560,013	\$874,733	\$1,554,994	\$268,431	\$107,381	\$12,469
	Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal	\$93,774,163	\$27,890,781	\$11,195,567	\$35,851,964	\$18,341,856	\$337,811	\$156,184
	Working Capital	\$12,190,641	\$3,625,802	\$1,455,424	\$4,660,755	\$2,384,441	\$43,915	\$20,304
	Total Rate Base	\$62,111,293	\$32,107,511	\$7,869,857	\$16,568,804	\$4,522,915	\$937,128	\$105,079
	Rate Base Input equals Output							
	Equity Component of Rate Base	\$24,844,517	\$12,843,004	\$3,147,943	\$6,627,521	\$1,809,166	\$374,851	\$42,032
	Net Income on Allocated Assets	\$2,310,540	\$1,153,954	\$609,940	\$486,237	\$85,765	(\$33,583)	\$8,228
	Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net Income	\$2,310,540	\$1,153,954	\$609,940	\$486,237	\$85,765	(\$33,583)	\$8,228

2016 Cost Allocation Model

EB-2015-0083

Sheet O1 Revenue to Cost Summary Worksheet -

2018 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base Assets	Total	1 Residential	2 GS <50	3 GS>50-Regular	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
	RATIOS ANALYSIS						
REVENUE TO EXPENSES STATUS QUO%	100.00%	98.00%	118.53%	97.87%	97.58%	64.92%	119.01%
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$428,102)	(\$414,642)	\$250,134	(\$158,432)	(\$29,571)	(\$79,057)	\$3,466
	Deficiency Input equals Output						
STATUS QUO REVENUE MINUS ALLOCATED COSTS	(\$0)	(\$164,530)	\$313,044	(\$64,811)	(\$13,048)	(\$74,959)	\$4,304
RETURN ON EQUITY COMPONENT OF RATE BASE	9.30%	8.99%	19.38%	7.34%	4.74%	-8.96%	19.58%



2016 Cost Allocation Model

EB-2015-0083

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

2018 CA

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	6	7	9
	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	\$5.30	\$6.53	\$61.97	\$113.53	\$0.41	\$1.54
Customer Unit Cost per month - Directly Related	\$7.62	\$9.33	\$91.14	\$178.91	\$0.67	\$2.51
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$14.22	\$15.53	\$111.02	\$336.13	\$6.39	\$7.18
Existing Approved Fixed Charge	\$19.78	\$27.60	\$322.99	\$5,880.00	\$1.03	\$6.35



2016 Cost Allocation Model

EB-2015-0083

Sheet 16.1 Revenue Worksheet -

2019 CA

Total kWhs from Load Forecast	685,891,912
-------------------------------	-------------

Total kW from Load Forecast	1,026,394
-----------------------------	-----------

Deficiency/sufficiency (RRWF 8. cell F51)	- 428,251
--	-----------

Miscellaneous Revenue (RRWF 5. cell F48)	590,370
--	---------

		1	2	3	6	7	9	
ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
Billing Data								
Forecast kWh	CEN	685,891,912	185,263,300	79,142,304	274,077,767	144,455,963	1,828,903	1,123,675
Forecast kW	CDEM	1,026,394			748,217	273,101	5,076	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		376,668			284,303	92,366		
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	685,891,912	185,263,300	79,142,304	274,077,767	144,455,963	1,828,903	1,123,675



2016 Cost Allocation Model

EB-2015-0083

Sheet I6.2 Customer Data Worksheet -

		1	2	3	6	7	9	
	ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Billing Data								
Bad Debt 3 Year Historical Average	BDHA	\$151,896	\$117,882	\$13,971	\$20,044	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$52,875	\$38,070	\$11,632	\$3,172			
Number of Bills	CNB	335,040	295,464	33,660	4,284	36	12	1,584
Number of Devices	CDEV						5,385	
Number of Connections (Unmetered)	CCON	2,811					2,679	132
Total Number of Customers	CCA	27,920	24,622	2,805	357	3	1	132
Bulk Customer Base	CCB	-						
Primary Customer Base	CCP	28,131	24,622	2,805	357	3	212	132
Line Transformer Customer Base	CCLT	28,119	24,622	2,805	347	1	212	132
Secondary Customer Base	CCS	27,033	24,622	2,104	174		1	132
Weighted - Services	CWCS	31,196	24,622	5,197	1,353	-	-	24
Weighted Meter -Capital	CWMC	6,306,632	4,782,849	799,783	714,000	10,000	-	-
Weighted Meter Reading	CWMR	489,171	295,464	35,783	152,557	5,367	-	-
Weighted Bills	CWNB	376,474	295,464	33,660	45,796	373	9	1,172

Bad Debt Data

Historic Year:	2012	95,865	74,398	8,817	12,650			
Historic Year:	2013	170,966	132,681	15,725	22,560			
Historic Year:	2014	188,857	146,566	17,370	24,921			
Three-year average		151,896	117,882	13,971	20,044	-	-	-

2016 Cost Allocation Model

EB-2015-0083

Sheet IS Demand Data Worksheet -

2019 CA

This is an input sheet for demand allocators.

CP TEST RESULTS	4 CP
NCP TEST RESULTS	4 NCP

Co-incident Peak	Indicator
1 CP	CP 1
4 CP	CP 4
12 CP	CP 12

Non-co-incident Peak	Indicator
1 NCP	NCP 1
4 NCP	NCP 4
12 NCP	NCP 12

Customer Classes	Total	1	2	3	6	7	9	
		Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	129,162	45,388	14,271	52,212	16,738	427	125
Bulk Delivery CP	BCP1	129,162	45,388	14,271	52,212	16,738	427	125
Total Sytem CP	DCP1	129,162	45,388	14,271	52,212	16,738	427	125
4 CP								
Transformation CP	TCP4	470,914	181,737	46,174	173,717	67,388	1,389	510
Bulk Delivery CP	BCP4	470,914	181,737	46,174	173,717	67,388	1,389	510
Total Sytem CP	DCP4	470,914	181,737	46,174	173,717	67,388	1,389	510
12 CP								
Transformation CP	TCP12	1,241,431	380,637	138,034	481,769	237,654	1,799	1,539
Bulk Delivery CP	BCP12	1,241,431	380,637	138,034	481,769	237,654	1,799	1,539
Total Sytem CP	DCP12	1,241,431	380,637	138,034	481,769	237,654	1,799	1,539
NON CO. INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	155,021	50,568	19,490	57,716	26,684	427	136
Primary NCP	PNCP1	155,021	50,568	19,490	57,716	26,684	427	136
Line Transformer NCP	LTNCP1	142,679	50,568	19,490	54,399	17,659	427	136
Secondary NCP	SNCP1	96,506	50,568	14,190	31,185		427	136
4 NCP								
Classification NCP from Load Data Provider	DNCP4	569,775	198,037	66,529	201,216	101,746	1,708	538
Primary NCP	PNCP4	569,775	198,037	66,529	201,216	101,746	1,708	538
Line Transformer NCP	LTNCP4	523,146	198,037	66,529	188,999	67,334	1,708	538
Secondary NCP	SNCP4	343,789	198,037	48,440	95,065		1,708	538
12 NCP								
Classification NCP from Load Data Provider	DNCP12	1,424,132	451,575	170,205	532,020	263,642	5,125	1,566
Primary NCP	PNCP12	1,424,132	451,575	170,205	532,020	263,642	5,125	1,566
Line Transformer NCP	LTNCP12	1,241,396	451,575	170,205	438,450	174,475	5,125	1,566
Secondary NCP	SNCP12	833,545	451,575	123,925	251,354		5,125	1,566

2016 Cost Allocation Model

EB-2015-0083

Sheet O1 Revenue to Cost Summary Worksheet -

2019 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

		Total	1 Residential	2 GS <50	3 GS>50-Regular	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
Rate Base								
Assets								
crev	Distribution Revenue at Existing Rates	\$13,155,704	\$7,717,996	\$1,865,916	\$2,902,229	\$507,341	\$137,222	\$24,999
mi	Miscellaneous Revenue (mi)	\$590,370	\$383,347	\$70,959	\$102,668	\$19,118	\$13,045	\$1,232
	Miscellaneous Revenue Input equals Output							
	Total Revenue at Existing Rates	\$13,746,074	\$8,101,343	\$1,936,876	\$3,004,898	\$526,460	\$150,268	\$26,231
	Factor required to recover deficiency (1 + D)	1.0326						
	Distribution Revenue at Status Quo Rates	\$13,583,955	\$7,969,236	\$1,926,657	\$2,996,704	\$523,857	\$141,689	\$25,813
	Miscellaneous Revenue (mi)	\$590,370	\$383,347	\$70,959	\$102,668	\$19,118	\$13,045	\$1,232
	Total Revenue at Status Quo Rates	\$14,174,325	\$8,352,583	\$1,997,616	\$3,099,373	\$542,975	\$154,735	\$27,044
	Expenses							
di	Distribution Costs (di)	\$3,004,730	\$1,643,308	\$372,493	\$762,967	\$167,510	\$53,287	\$5,165
cu	Customer Related Costs (cu)	\$1,643,758	\$1,241,412	\$161,586	\$221,064	\$3,605	\$13,587	\$2,505
ad	General and Administration (ad)	\$2,856,360	\$1,755,342	\$331,248	\$614,799	\$108,146	\$42,110	\$4,714
dep	Depreciation and Amortization (dep)	\$2,193,526	\$1,288,947	\$273,241	\$499,685	\$97,492	\$31,165	\$2,997
INPUT	PILs (INPUT)	\$372,747	\$211,461	\$46,431	\$90,633	\$17,005	\$6,600	\$617
INT	Interest	\$1,715,308	\$973,104	\$213,668	\$417,074	\$78,254	\$30,370	\$2,839
	Total Expenses	\$11,786,429	\$7,113,573	\$1,398,667	\$2,606,222	\$472,011	\$177,119	\$18,837
	Direct Allocation	\$0	\$0	\$0	\$0	\$0	\$0	\$0
NI	Allocated Net Income (NI)	\$2,387,896	\$1,354,666	\$297,449	\$580,613	\$108,938	\$42,278	\$3,952
	Revenue Requirement (includes NI)	\$14,174,325	\$8,468,239	\$1,696,117	\$3,186,835	\$580,949	\$219,397	\$22,789
	Revenue Requirement Input equals Output							
	Rate Base Calculation							
	Net Assets							
dp	Distribution Plant - Gross	\$78,246,601	\$44,604,678	\$9,758,583	\$18,804,958	\$3,642,022	\$1,309,736	\$126,625
gp	General Plant - Gross	\$10,533,844	\$5,960,638	\$1,311,465	\$2,568,020	\$492,230	\$184,092	\$17,400
accum dep	Accumulated Depreciation	(\$33,939,211)	(\$19,559,907)	(\$4,243,347)	(\$7,992,448)	(\$1,549,737)	(\$540,140)	(\$53,634)
co	Capital Contribution	(\$2,848,475)	(\$1,513,696)	(\$350,381)	(\$736,790)	(\$209,462)	(\$33,789)	(\$4,358)
	Total Net Plant	\$51,992,759	\$29,491,713	\$6,476,321	\$12,643,740	\$2,375,052	\$919,899	\$86,034
	Directly Allocated Net Fixed Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
COP	Cost of Power (COP)	\$86,325,895	\$23,329,187	\$9,959,834	\$34,486,734	\$18,176,578	\$232,076	\$141,486
	OM&A Expenses	\$7,504,848	\$4,640,061	\$865,327	\$1,598,830	\$279,261	\$108,984	\$12,384
	Directly Allocated Expenses	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Subtotal	\$93,830,743	\$27,969,249	\$10,825,161	\$36,085,563	\$18,455,839	\$341,060	\$153,870
	Working Capital	\$12,197,997	\$3,636,002	\$1,407,271	\$4,691,123	\$2,399,259	\$44,338	\$20,003
	Total Rate Base	\$64,190,756	\$33,127,715	\$7,883,592	\$17,334,863	\$4,774,312	\$964,237	\$106,037
	Rate Base Input equals Output							
	Equity Component of Rate Base	\$25,676,302	\$13,251,086	\$3,153,437	\$6,933,945	\$1,909,725	\$385,695	\$42,415
	Net Income on Allocated Assets	\$2,387,896	\$1,239,010	\$598,948	\$493,151	\$70,964	(\$22,384)	\$8,207
	Net Income on Direct Allocation Assets	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Net Income	\$2,387,896	\$1,239,010	\$598,948	\$493,151	\$70,964	(\$22,384)	\$8,207

2016 Cost Allocation Model

EB-2015-0083

Sheet O1 Revenue to Cost Summary Worksheet -

2019 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base Assets	Total	1 Residential	2 GS <50	3 GS>50-Regular	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
	RATIOS ANALYSIS						
REVENUE TO EXPENSES STATUS QUO%	100.00%	98.63%	117.78%	97.26%	93.46%	70.53%	118.67%
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$428,251)	(\$366,896)	\$240,759	(\$181,937)	(\$54,489)	(\$69,129)	\$3,442
	Deficiency Input equals Output						
STATUS QUO REVENUE MINUS ALLOCATED COSTS	\$0	(\$115,656)	\$301,499	(\$87,462)	(\$37,974)	(\$64,662)	\$4,256
RETURN ON EQUITY COMPONENT OF RATE BASE	9.30%	9.35%	18.99%	7.11%	3.72%	-5.80%	19.35%



2016 Cost Allocation Model

EB-2015-0083

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

2019 CA

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	6	7	9
	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	\$5.39	\$6.66	\$63.04	\$115.03	\$0.41	\$1.56
Customer Unit Cost per month - Directly Related	\$7.73	\$9.47	\$92.39	\$181.10	\$0.68	\$2.53
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$14.45	\$15.81	\$112.59	\$356.72	\$6.54	\$7.29
Existing Approved Fixed Charge	\$23.30	\$28.16	\$330.54	\$6,076.00	\$1.16	\$6.56



2016 Cost Allocation Model

EB-2015-0083

Sheet 16.1 Revenue Worksheet -

2020 CA

Total kWhs from Load Forecast	682,447,699
-------------------------------	-------------

Total kW from Load Forecast	1,028,072
-----------------------------	-----------

Deficiency/sufficiency (RRWF 8. cell F51)	- 321,999
--	-----------

Miscellaneous Revenue (RRWF 5. cell F48)	600,697
--	---------

		1	2	3	6	7	9	
ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
Billing Data								
Forecast kWh	CEN	682,447,699	184,359,435	75,933,648	274,516,295	144,705,330	1,832,484	1,100,508
Forecast kW	CDEM	1,028,072			749,414	273,572	5,086	
Forecast kW, included in CDEM, of customers receiving line transformer allowance		377,283			284,757	92,525		
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	682,447,699	184,359,435	75,933,648	274,516,295	144,705,330	1,832,484	1,100,508



2016 Cost Allocation Model

EB-2015-0083

Sheet I6.2 Customer Data Worksheet -

		1	2	3	6	7	9	
	ID	Total	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Billing Data								
Bad Debt 3 Year Historical Average	BDHA	\$151,896	\$117,882	\$13,971	\$20,044	\$0	\$0	\$0
Late Payment 3 Year Historical Average	LPHA	\$52,875	\$38,070	\$11,632	\$3,172			
Number of Bills	CNB	336,408	297,348	33,096	4,368	36	12	1,548
Number of Devices	CDEV						5,397	
Number of Connections (Unmetered)	CCON	2,814					2,685	129
Total Number of Customers	CCA	28,034	24,779	2,758	364	3	1	129
Bulk Customer Base	CCB	-						
Primary Customer Base	CCP	28,248	24,779	2,758	364	3	215	129
Line Transformer Customer Base	CCLT	28,236	24,779	2,758	354	1	215	129
Secondary Customer Base	CCS	27,154	24,779	2,068	177		1	129
Weighted - Services	CWCS	31,290	24,779	5,108	1,380	-	-	23
Weighted Meter -Capital	CWMC	6,337,728	4,813,346	786,382	728,000	10,000	-	-
Weighted Meter Reading	CWMR	493,482	297,348	35,219	155,548	5,367	-	-
Weighted Bills	CWNB	378,665	297,348	33,096	46,694	373	9	1,146

Bad Debt Data

Historic Year:	2012	95,865	74,398	8,817	12,650			
Historic Year:	2013	170,966	132,681	15,725	22,560			
Historic Year:	2014	188,857	146,566	17,370	24,921			
Three-year average		151,896	117,882	13,971	20,044	-	-	-

2016 Cost Allocation Model

EB-2015-0083

Sheet O1 Revenue to Cost Summary Worksheet -

2020 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base		Total	1	2	3	6	7	9
Assets		Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
crev	Distribution Revenue at Existing Rates	\$13,613,755	\$8,019,476	\$1,865,343	\$3,027,697	\$524,363	\$151,822	\$25,055
mi	Miscellaneous Revenue (mi)	\$600,697	\$390,118	\$70,460	\$106,009	\$19,721	\$13,171	\$1,218
Miscellaneous Revenue Input equals Output								
Total Revenue at Existing Rates		\$14,214,452	\$8,409,594	\$1,935,802	\$3,133,706	\$544,084	\$164,993	\$26,273
Factor required to recover deficiency (1 + D)		1.0237						
Distribution Revenue at Status Quo Rates		\$13,935,754	\$8,209,156	\$1,909,463	\$3,099,309	\$536,765	\$155,413	\$25,647
Miscellaneous Revenue (mi)		\$600,697	\$390,118	\$70,460	\$106,009	\$19,721	\$13,171	\$1,218
Total Revenue at Status Quo Rates		\$14,536,451	\$8,599,274	\$1,979,922	\$3,205,319	\$556,486	\$168,584	\$26,866
Expenses								
di	Distribution Costs (di)	\$3,057,884	\$1,673,914	\$367,190	\$785,040	\$172,483	\$54,111	\$5,146
cu	Customer Related Costs (cu)	\$1,671,701	\$1,263,282	\$161,186	\$227,323	\$3,638	\$13,794	\$2,476
ad	General and Administration (ad)	\$2,904,300	\$1,784,500	\$327,264	\$633,149	\$112,062	\$42,645	\$4,680
dep	Depreciation and Amortization (dep)	\$2,240,240	\$1,315,099	\$270,423	\$518,109	\$102,409	\$31,231	\$2,969
INPUT	PiLs (INPUT)	\$418,657	\$235,529	\$50,400	\$104,335	\$20,440	\$7,278	\$674
INT	Interest	\$1,780,665	\$1,001,770	\$214,366	\$443,765	\$86,938	\$30,957	\$2,868
Total Expenses		\$12,073,447	\$7,274,093	\$1,390,831	\$2,711,720	\$497,970	\$180,018	\$18,814
Direct Allocation		\$0	\$0	\$0	\$0	\$0	\$0	\$0
NI	Allocated Net Income (NI)	\$2,463,004	\$1,385,642	\$296,510	\$613,813	\$120,253	\$42,820	\$3,967
Revenue Requirement (includes NI)		\$14,536,451	\$8,659,735	\$1,687,341	\$3,325,533	\$618,223	\$222,837	\$22,782
Revenue Requirement Input equals Output								
Rate Base Calculation								
Net Assets								
dp	Distribution Plant - Gross	\$82,116,876	\$46,639,272	\$9,913,346	\$20,105,929	\$3,975,773	\$1,353,406	\$129,150
gp	General Plant - Gross	\$10,939,344	\$6,142,052	\$1,316,518	\$2,731,493	\$543,671	\$188,012	\$17,597
accum dep	Accumulated Depreciation	(\$36,156,094)	(\$20,858,712)	(\$4,382,885)	(\$8,620,322)	(\$1,670,287)	(\$568,472)	(\$55,416)
co	Capital Contribution	(\$2,848,475)	(\$1,517,103)	(\$340,045)	(\$745,444)	(\$207,834)	(\$33,780)	(\$4,270)
Total Net Plant		\$54,051,651	\$30,405,510	\$6,506,934	\$13,471,656	\$2,641,323	\$939,166	\$87,061
Directly Allocated Net Fixed Assets		\$0	\$0	\$0	\$0	\$0	\$0	\$0
COP								
Cost of Power (COP)		\$85,890,194	\$23,214,914	\$9,555,801	\$34,540,946	\$18,207,445	\$232,524	\$138,564
OM&A Expenses		\$7,633,885	\$4,721,696	\$855,641	\$1,645,512	\$288,183	\$110,551	\$12,302
Directly Allocated Expenses		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Subtotal		\$93,524,079	\$27,936,610	\$10,411,442	\$36,186,457	\$18,495,628	\$343,075	\$150,867
Working Capital		\$12,158,130	\$3,631,759	\$1,353,487	\$4,704,239	\$2,404,432	\$44,600	\$19,613
Total Rate Base		\$66,209,781	\$34,037,269	\$7,860,422	\$18,175,896	\$5,045,755	\$983,766	\$106,674
Rate Base Input equals Output								
Equity Component of Rate Base		\$26,483,913	\$13,614,908	\$3,144,169	\$7,270,358	\$2,018,302	\$393,506	\$42,670
Net Income on Allocated Assets		\$2,463,004	\$1,325,181	\$589,092	\$493,598	\$58,516	(\$11,434)	\$8,051
Net Income on Direct Allocation Assets		\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Income		\$2,463,004	\$1,325,181	\$589,092	\$493,598	\$58,516	(\$11,434)	\$8,051

2016 Cost Allocation Model

EB-2015-0083

Sheet 01 Revenue to Cost Summary Worksheet -

2020 CA

Instructions:
Please see the first tab in this workbook for detailed instructions

Class Revenue, Cost Analysis, and Return on Rate Base

Rate Base Assets	Total	1 Residential	2 GS <50	3 GS>50-Regular	6 Large Use >5MW	7 Street Light	9 Unmetered Scattered Load
	RATIOS ANALYSIS						
REVENUE TO EXPENSES STATUS QUO%	100.00%	99.30%	117.34%	96.39%	90.01%	75.65%	117.93%
EXISTING REVENUE MINUS ALLOCATED COSTS	(\$321,999)	(\$250,141)	\$248,462	(\$191,827)	(\$74,139)	(\$57,844)	\$3,491
	Deficiency Input equals Output						
STATUS QUO REVENUE MINUS ALLOCATED COSTS	\$0	(\$60,461)	\$292,581	(\$120,214)	(\$61,737)	(\$54,253)	\$4,084
RETURN ON EQUITY COMPONENT OF RATE BASE	9.30%	9.73%	18.74%	6.79%	2.90%	-2.91%	18.87%

2016 Cost Allocation Model

EB-2015-0083

Sheet 18 Demand Data Worksheet -

2020 CA

This is an input sheet for demand allocators.

CP TEST RESULTS	4 CP
NCP TEST RESULTS	4 NCP

Co-incident Peak	Indicator
1 CP	CP 1
4 CP	CP 4
12 CP	CP 12

Non-co-incident Peak	Indicator
1 NCP	NCP 1
4 NCP	NCP 4
12 NCP	NCP 12

Customer Classes	Total	1	2	3	6	7	9	
		Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	
CO-INCIDENT PEAK								
1 CP								
Transformation CP	TCP1	128,473	45,167	13,693	52,296	16,767	428	123
Bulk Delivery CP	BCP1	128,473	45,167	13,693	52,296	16,767	428	123
Total Sytem CP	DCP1	128,473	45,167	13,693	52,296	16,767	428	123
4 CP								
Transformation CP	TCP4	468,542	180,850	44,302	173,995	67,504	1,392	499
Bulk Delivery CP	BCP4	468,542	180,850	44,302	173,995	67,504	1,392	499
Total Sytem CP	DCP4	468,542	180,850	44,302	173,995	67,504	1,392	499
12 CP								
Transformation CP	TCP12	1,235,131	378,779	132,437	482,540	238,064	1,803	1,508
Bulk Delivery CP	BCP12	1,235,131	378,779	132,437	482,540	238,064	1,803	1,508
Total Sytem CP	DCP12	1,235,131	378,779	132,437	482,540	238,064	1,803	1,508
NON CO. INCIDENT PEAK								
1 NCP								
Classification NCP from Load Data Provider	DNCP1	154,121	50,321	18,700	57,809	26,730	428	133
Primary NCP	PNCP1	154,121	50,321	18,700	57,809	26,730	428	133
Line Transformer NCP	LTNCP1	140,642	50,321	18,700	54,486	16,573	428	133
Secondary NCP	SNCP1	95,732	50,321	13,615	31,235		428	133
4 NCP								
Classification NCP from Load Data Provider	DNCP4	566,601	197,071	63,832	201,538	101,921	1,712	527
Primary NCP	PNCP4	566,601	197,071	63,832	201,538	101,921	1,712	527
Line Transformer NCP	LTNCP4	515,637	197,071	63,832	189,301	63,194	1,712	527
Secondary NCP	SNCP4	341,003	197,071	46,476	95,217		1,712	527
12 NCP								
Classification NCP from Load Data Provider	DNCP12	1,416,313	449,371	163,304	532,871	264,097	5,135	1,534
Primary NCP	PNCP12	1,416,313	449,371	163,304	532,871	264,097	5,135	1,534
Line Transformer NCP	LTNCP12	1,222,244	449,371	163,304	439,152	163,747	5,135	1,534
Secondary NCP	SNCP12	826,697	449,371	118,900	251,756		5,135	1,534



2016 Cost Allocation Model

EB-2015-0083

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

2020 CA

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	6	7	9
	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load
Customer Unit Cost per month - Avoided Cost	\$5.46	\$6.73	\$63.73	\$116.06	\$0.42	\$1.58
Customer Unit Cost per month - Directly Related	\$7.80	\$9.54	\$93.18	\$182.77	\$0.69	\$2.56
Customer Unit Cost per month - Minimum System with PLCC Adjustment	\$14.57	\$15.97	\$113.58	\$370.94	\$6.61	\$7.35
Existing Approved Fixed Charge	\$26.97	\$28.60	\$337.90	\$6,275.85	\$1.28	\$6.73

1 **EXHIBIT 7 – COST ALLOCATION**

2
3 **Response to Ontario Energy Board Staff Interrogatory 7-Staff-85**

4
5 **Ref: Exhibit 7, Tab 1, Schedule 1, pp. 2-3 – Weighting Factors**

6
7 **Interrogatory:**

8
9 Kingston Hydro provided the following weighting factors, which remain constant over the
10 custom IR period.

	1	2	3	6	7	9
	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load

Insert Weighting Factor for Services Account 1855

1.0	2.5	7.8	11.5	0.0	0.2
-----	-----	-----	------	-----	-----

11 Insert Weighting Factor for Billing and Collecting

1.0	1.0	10.7	10.4	0.7	0.7
-----	-----	------	------	-----	-----

12
13 Kingston Hydro notes that these factors were developed based on Kingston Hydro's
14 evaluation of the costs of providing services to customer classes.

15
16 a) Please provide specific details as to how these weighting factors were developed.

17
18 **Response:**

19
20 a) Kingston Hydro developed the weighting factors for Services Account 1855 and for
21 Billing and Collecting using the weighting factor calculation examples provided in
22 OEB version 3.2 Cost Allocation Model, tab 'Instructions'.

23
24 For Services Account 1855, the cost of the service drop (the amount that would be
25 recorded in 1855) to an average customer in each class, (taking into account

26 Conditions of Service) was calculated for each customer class using current cost
27 data. The Residential average service drop cost was then established as a 1.0
28 weighting factor and other class weighting factors were calculated using their class
29 average cost of a service drop relative to the Residential class cost. Detail of the
30 Street Lighting class zero weighting factor is provided in 7-VECC-36 interrogatory
31 response.

32
33 For the Billing and Collecting, the 2014 actual cost of providing these services and
34 the 2016 forecast customer counts were used in establishing the factors. 2014
35 actual cost by vendor was detailed and then each vendor cost was evaluated
36 based on Kingston Hydro's knowledge of customer class cost causality and a
37 weighting for each class determined. Then 2016 forecast class customer counts
38 were applied to the weightings to allocate each vendor cost across
39 the classes. Total costs allocated to each customer class were tallied. Residential
40 total allocated cost was established as a 1.0 weighting factor and other classes
41 final weighting factors were calculated using their class total cost relative to the
42 Residential class cost.

EXHIBIT 7 – COST ALLOCATION

Response to Ontario Energy Board Staff Interrogatory 7-Staff-86

Ref: Exhibit 7, Tab 3, Schedule 2 – Appendix 2-P (C)

Interrogatory:

Kingston Hydro has proposed the following revenue to cost ratios from 2016 – 2020, as shown below:

2016 - 2020						
Class	Proposed Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	
Residential	97.66	97.81	98.36	99.37	100.40	85 - 115
GS < 50 kW	120.00	118.63	116.90	115.30	114.37	80 - 120
GS 50 to 4,999 kW	97.74	97.82	97.48	96.42	95.12	80 - 120
Large User	98.42	100.00	98.78	94.30	89.68	85 - 115
Street Lighting	54.00	58.00	62.00	66.00	70.00	70 - 120
Unmetered Scattered Load (USL)	120.00	118.45	117.32	116.30	115.97	80 - 120
Standby Approved on an Interim Basis						0
	0					0

a) Please explain why Kingston Hydro is moving away from parity for the Large use and the GS>50 customer classes after 2017, rather than lowering the revenue to cost ratio for the GS<50 customer class.

b) In a letter, issued June 12, 2015, the OEB determined that the revenue to cost ratio policy range for street lighting should be narrowed from the current 70%-120% to 80%-120%. The OEB further noted that this change in policy is effective immediately. Please update Kingston Hydro's revenue to cost ratios to comply with this policy or in the alternative, please explain why Kingston Hydro chooses not to apply the policy.

24 **Response:**

25

26 a) Per the OEB's cost allocation policy, the revenue-to-cost ratio target range for
27 GS < 50, GS 50 to 4,999 kW and Large User is 80%-120%, 80%-120%, and
28 85%-115% respectively. Kingston Hydro's understanding of the OEB's cost
29 allocation policy is that where a class is within its target range, status quo rate
30 increases are preferred and that the distributor is not supposed to manage cost
31 allocation within the target range. Since for 2018-2020 the GS 50 to 4,999kW
32 and Large User classes were within their respective target ranges, Kingston
33 Hydro proposed status quo rate increases for these classes.

34

35 b) Kingston Hydro filed its 2016 Custom IR application June 1, 2015 based upon
36 the cost allocation policy in effect at that time. It was subsequent to this filing
37 that the OEB issued an update to cost allocation policy for the Street Lighting
38 class. In Kingston Hydro's 2016 Custom IR application the Street Lighting
39 revenue-to-cost ratio was below the bottom of the target range of 70% and
40 Kingston Hydro proposed a phase-in of the movement to the bottom of the
41 range so that by 2020, the Street Lighting class proposed revenue-to-cost ratio
42 was 70%.

43

44 Kingston Hydro has populated the updated the Cost Allocation (CA) model
45 version 3.3 issued July 16, 2015 and has filed the live Excel version for each
46 year 2016-2020. CA model version 3.3 takes into account the street lighting
47 adjustment factor addressed in the OEB's letter issued June 12, 2015.

48 Interrogatory response to 7-Staff-84 provides updated Input sheets I-6, I-8,
49 Output O-1 and O-2 from the updated CA model version 3.3.

50

51 Kingston Hydro's proposed revenue to cost ratio phase-in to the bottom of the
52 target range by 2020 has been updated to reflect the new policy range lower
53 bound. More specifically, the Street Lighting class proposed revenue to cost
54 ratio for 2020 is 80% rather than the 70% proposed in the initial application.

1 **EXHIBIT 7 – COST ALLOCATION**

2

3 **Response to Energy Probe Interrogatory 7-Energy Probe-40**

4

5 **Ref: Exhibit 7, Tab 1, Schedule 1, Attachment 1**

6

7 **Interrogatory:**

8

9 Please provide a revised Table 7 from Attachment 1 that shows the status quo
10 revenue to cost ratios for all rate classes for each year shown, if the hourly load
11 profiles prepared by Hydro One for the 2006 CAIF were used for all classes, including
12 the Large Use class.

13

14 **Response:**

15

16 A revised Table 7 that shows the status quo revenue to cost ratios for all rate classes
17 for each year shown (updated to OEB CA model 3.3 and for the new street lighting
18 CA policy), using the hourly load profiles prepared by Hydro One for the 2006 CAIF
19 for all classes is shown below:

20 **Table 7: Revenue to Cost Ratios**

Customer Class	Kingston-2011	Kingston-2016 Status Quo Rates	Kingston-2017 Status Quo Rates	Board Target Range
Residential	91.07	96.76	97.43	85-115
GS < 50 kW	129.90	122.96	119.40	80-120
GS > 50 Regular	108.13	97.23	97.73	80-120
Large Use	85.00	99.11	100.94	85-115
Street Light	104.84	55.25	59.67	70-120
USL	121.18	184.38	119.42	80-120
Total	100.00	100.00	100.00	

21

Customer Class	Kingston-2018 Status Quo Rates	Kingston-2019 Status Quo Rates	Kingston-2020 Status Quo Rates	Board Target Range
Residential	97.96	98.91	100.06	85-115
GS < 50 kW	117.78	116.14	114.44	80-120
GS > 50 Regular	97.33	96.38	95.10	80-120
Large Use	99.69	95.27	90.62	85-115
Street Light	64.65	70.18	75.83	70-120
USL	118.45	118.22	116.79	80-120
Total	100.00	100.00	100.00	

22

1 **EXHIBIT 7 – COST ALLOCATION**

2

3 **Response to Energy Probe Interrogatory 7-Energy Probe-41**

4

5 **Ref: Exhibit 7, Tab 1, Schedule 1, Attachment 1**

6

7 **Interrogatory:**

8

9 a) Has the cost allocation model been prepared based on the new cost allocation
10 policy for the street lighting rate class that was issued by the Board on June 12,
11 2015? If not, please update the response to the previous interrogatory to also
12 reflect the new cost allocation policy for the street lighting rate class.

13

14 b) Based on the response to part (a) above, please provide a revised Appendix 2-P
15 summary table that shows by year the status quo and proposed revenue to cost
16 ratios for all rate classes.

17

18 **Response:**

19

20 a) The OEB issued its update to cost allocation policy for the Street Lighting class
21 after Kingston Hydro filed its 2016 Custom IR application on June 1, 2015. The
22 cost allocation model filed as part of Kingston Hydro's 2016 Custom IR application
23 was prepared based on the cost allocation policy in effect at that time and not the
24 new cost allocation policy issued by the Board on June 12, 2015.

25

26 The response to interrogatory 7-Energy Probe-40 reflects the new cost allocation
27 policy for street lighting policy with the revenue to cost ratio phase-in proposed in
28 the application and also reflects the original load forecast filed in the application.

- 29 b) The following revised Appendix 2-P summary tables show by year the status quo
30 and proposed revenue to cost ratios for all rate classes using load profiles
31 prepared by Hydro One for the 2006 CAIF, including Large Use class:
32

Class	Status Quo Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	
Residential	96.76	97.43	97.96	98.91	100.06	85 - 115
GS < 50 kW	122.96	119.40	117.78	116.14	114.44	80 - 120
GS 50 to 4,999 kW	97.23	97.73	97.33	96.38	95.10	80 - 120
Large User	99.11	100.94	99.69	95.27	90.62	85 - 115
Street Lighting	55.25	59.67	64.65	70.18	75.83	80 - 120
Unmetered Scattered Load (USL)	184.38	119.42	118.45	118.22	116.79	80 - 120
Standby Approved on an Interim Basis						0
						0
0						

33

Class	Proposed Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	
Residential	97.30	97.43	97.96	98.91	100.06	85 - 115
GS < 50 kW	120.00	118.80	117.21	115.56	113.94	80 - 120
GS 50 to 4,999 kW	97.75	97.73	97.33	96.38	95.10	80 - 120
Large User	99.11	100.94	99.69	95.27	90.62	85 - 115
Street Lighting	60.21	64.62	69.69	75.13	80.00	80 - 120
Unmetered Scattered Load (USL)	120.00	118.80	117.84	116.83	114.50	80 - 120
Standby Approved on an Interim Basis						0
						0
0						

34

1 **EXHIBIT 7 – COST ALLOCATION**

2

3 **Response to Energy Probe Interrogatory 7-Energy Probe-42**

4

5 **Ref: Exhibit 7, Tab 3, Schedule 2, Table 1 & Attachment 5**

6

7 **Interrogatory:**

8

9 Please explain why Kingston is proposing to change the revenue to cost ratios for those
10 ratios where the status quo figures are already within the Board approved ranges.

11

12 **Response:**

13 For 2016, the adjustment down of GS<50 kW and Unmetered Scattered Load revenue
14 to cost ratios (R/C) to the upper bound of their Board approved target ranges, and the
15 first year of proposed phase-in of Street Lighting to the lower bound result in 2016
16 status quo figures within the Board approved ranges for other classes being adjusted so
17 as to reconcile to the overall 2016 revenue requirement.

18

19 For 2017-2020, Kingston's proposed R/C ratios for those where status quo figures are
20 already within the Board approved ranges are essentially the status quo figures except
21 for adjustments as required to reconcile with the overall revenue requirements for each
22 of these years due to the proposed phase-in of the Street Lighting R/C ratio to the lower
23 bound by 2020.

1 **EXHIBIT 7 – COST ALLOCATION**

2

3 **Response to Vulnerable Energy Consumers Coalition Interrogatory 7-VECC-36**

4

5 **Reference: E7/T1/S1, pg. 1-3**

6

7 **Interrogatory:**

8

9 a) Please explain the basis for the zero weighting factor for the Street Light class in
10 regard to Services. Does the City perform all the work and provide all the
11 materials for Services at the time of installation?

12

13 b) Who maintains the Service connection for the Street Light class and, if it is
14 Kingston Hydro, how are the costs recorded and recovered?

15

16 **Response:**

17

18 a) The basis for the zero weighting factor for the Street Lighting class in regard to
19 Services is that the customer is responsible for paying for the service drop and all
20 maintenance and replacement associated with it going forward.

21

22 b) Utilities Kingston co-ordinates the maintenance of the Service connection.

1 **EXHIBIT 7 – COST ALLOCATION**

2
3 **Response to Vulnerable Energy Consumers Coalition Interrogatory 7-VECC-37**

4
5 **Reference: E7/T1/S1, Attachment 1, pg. 5-7**

6 **Kingston Hydro's Cost Allocation models**

7
8 **Interrogatory:**

9
10 a) What is the impact on the resulting revenue to cost ratios of using the updated
11 load profiles for the Large Use class as opposed to the hourly profile prepared for
12 the 2006 CAIF?

13
14 b) Please explain why the revenues at current rates shown in the Cost Allocation
15 models (Tabs I6.1 and O1) don't match the revenues at current rates as shown in
16 E3/T2/S1, Attachment 1. For example, for 2016, the cost allocation model shows
17 \$11,365,359 while Exhibit 3 shows \$11,840,603.

18
19 **Response:**

20
21 a) The resulting status quo revenue to cost ratios using the hourly profile prepared
22 the 2006 CAIF including Large Use is provided in response to 7-Energy Probe-41
23 interrogatory. The status quo revenue to cost ratios for Large Use using the 2006
24 CAIF are year over year about one percent higher in comparison to the Large Use
25 status quo revenue to cost ratios in the application that make use of the updated
26 load profiles for Large Use.

27

-
- 28 b) 2016 Cost Allocation Model, Sheet I6.2 Customer Data, the number of customers
29 for the GS 50 to 4,999 kW should be 337.
30 E3/T2/S1, Attachment 1 revenue at current rates, the transformer discount
31 allowance rate should be a credit (\$0.60) throughout the tables.
32
33 Making the above two changes reconciles for example 2016 in the Cost Allocation
34 Model (Tabs I6.1 and O1) to Exhibit 3; revenues at current rates will then both
35 show \$11,385,527.

1 **EXHIBIT 7 – COST ALLOCATION**

2

3 **Response to Vulnerable Energy Consumers Coalition Interrogatory 7-VECC-38**

4

5 **Reference: E7/T1/S1, Attachment 1, pg. 8-9**

6

Kingston Hydro's Cost Allocation models

7

8 **Interrogatory:**

9

- 10 a) Sheet I8 of the Cost Allocation model has no NCP values for the Large Use
11 class for either Line Transformers (LTNCP) or Secondary (SNCP). However,
12 Sheet I6.1 and Exhibit 8, Tab 1, Schedule 1 (pages 8-10) both report that only
13 slightly more than 1/3 of the Large Use load is eligible for the Transformer
14 Ownership Allowance suggesting the majority of the load uses Kingston Hydro-
15 owned transformers. Please reconcile.

16

17 **Response:**

18

- 19 a) Kingston Hydro has one Large Use customer eligible for the Transformer
20 Ownership Allowance. Sheet I8 of the OEB version 3.3 Cost Allocation Model
21 being filed as part of response to 7-Staff-84 interrogatory has been updated to
22 reflect this.

1 **EXHIBIT 7 – COST ALLOCATION**

2

3 **Response to Vulnerable Energy Consumers Coalition 7-VECC-39**

4

5 **Reference: E7/T3/S2 and Appendix 2-P**

6 **OEB – New Cost Allocation Policy for Street Lighting – Cost**

7 **Allocation Model Update, July 2015**

8

9 **Interrogatory:**

10

11 a) Please provide updated cost allocation model runs for 2016-2020 using the
12 Board's July 2015 Cost Allocation model.

13

14 b) Based on the results of part (a), please provide an updated version of Appendix
15 2-P for 2016-2020.

16

17 **Response:**

18

19 a) Please see 7-Staff-84 interrogatory response.

20

21 b) An updated version of Appendix 2-P for 2016-2020 reflecting updated cost
22 allocation model runs for 2016-2020 per 7-Staff-84 is provided in the following
23 Attachment 1 and an updated Excel version of Appendix 2-P has been filed.

Response to Vulnerable Energy
Consumers Coalition
Interrogatory 7-VECC-39

Attachment 1

Appendix 2-P Cost Allocation - 2016

Please complete the following four tables.

A) Allocated Costs

2016		Row 40 CA		
Classes	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%
Residential	\$ 7,166,577	60.86%	\$ 7,662,892	59.72%
GS < 50 kW	\$ 1,700,371	14.44%	\$ 1,638,046	12.77%
GS 50 to 4,999 kW	\$ 2,282,143	19.38%	\$ 2,789,657	21.74%
Large Use	\$ 465,454	3.95%	\$ 520,754	4.06%
Street Lighting	\$ 111,797	0.95%	\$ 197,356	1.54%
Unmetered Scattered Load (USL)	\$ 49,290	0.42%	\$ 21,964	0.17%
Standby Approved on an Interim Basis	\$ -	0.00%		0.00%
		0.00%		0.00%
		0.00%		0.00%
Total	\$ 11,775,632	100.00%	\$ 12,830,668	100.00%

Notes

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

B) Calculated Class Revenues

Classes (same as previous table)	2016	Row 18 CA	Row 23 CA	RateMaker Col K	Row 19 CA
	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	\$ 6,536,804	\$ 7,052,138	\$ 7,120,429	\$ 373,907	
GS < 50 kW	\$ 1,834,449	\$ 1,979,070	\$ 1,892,223	\$ 73,432	
GS 50 to 4,999 kW	\$ 2,439,094	\$ 2,631,381	\$ 2,631,388	\$ 96,897	
Large Use	\$ 422,418	\$ 455,720	\$ 478,625	\$ 18,564	
Street Lighting	\$ 89,061	\$ 96,082	\$ 105,950	\$ 12,897	
Unmetered Scattered Load (USL)	\$ 36,408	\$ 39,279	\$ 25,056	\$ 1,301	
Standby Approved on an Interim Basis					
0					
Total	\$ 11,358,235	\$ 12,253,670 existing	\$ 12,253,671 (1 + d)	\$ 576,998	

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	2016	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year: 2011	(7C + 7E) / (7A)	(7D + 7E) / (7A)		
	%	%	%	%	%
Residential	93.28	96.91	97.80	85 - 115	
GS < 50 kW	120.00	125.30	120.00	80 - 120	
GS 50 to 4,999 kW	107.00	97.80	97.80	80 - 120	
Large Use	93.00	91.08	95.47	85 - 115	
Street Lighting	104.00	55.22	60.22	80 - 120	
Unmetered Scattered Load (USL)	120.00	184.76	120.00	80 - 120	

Standby Approved on an Interim Basis	0.00			
0				

Notes

1 Previously Approved Revenue-to-Cost Ratios - For most applicants, Most Recent Year would be the third year of the IRM 3 period, e.g. if the applicant rebased in 2009 with further adjustments over 2 years, the Most recent year is 2011. For applicants whose most recent rebasing year is 2006, the applicant should enter the ratios from their Informational Filing.

2 Status Quo Ratios - The Board's updated Cost Allocation Model yields the Status Quo Ratios in Worksheet O-1. Status Quo means "Before Rebalancing".

**D) Proposed Revenue-to-Cost Ratios
2016**

Class	Proposed Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	%
Residential	97.80					85 - 115
GS < 50 kW	120.00					80 - 120
GS 50 to 4,999 kW	97.80					80 - 120
Large Use	95.47					85 - 115
Street Lighting	60.22					80 - 120
Unmetered Scattered Load (USL)	120.00					80 - 120
Standby Approved on an Interim Basis						0
						0
0						

Note

1 The applicant should complete Table D if it is applying for approval of a revenue to cost ratio in 2014 that is outside the Board's policy range for any customer class. Table (d) will show the information that the distributor would likely enter in the IRM model) in 2014. In 2015 Table (d), enter the planned ratios for the classes that will be 'Change' and 'No Change' in 2014 (in the current Revenue Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment', column d), and enter TBD for class(es) that will be entered as 'Rebalance'.

**Appendix 2-P
Cost Allocation - 2017**

Please complete the following four tables.

A) Allocated Costs

2017		Row 40 CA		
Classes	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%
Residential	\$ 7,166,577	60.86%	\$ 7,958,385	59.89%
GS < 50 kW	\$ 1,700,371	14.44%	\$ 1,669,149	12.56%
GS 50 to 4,999 kW	\$ 2,282,143	19.38%	\$ 2,913,387	21.93%
Large User	\$ 465,454	3.95%	\$ 517,806	3.90%
Street Lighting	\$ 111,797	0.95%	\$ 206,838	1.56%
Unmetered Scattered Load (USL)	\$ 49,290	0.42%	\$ 22,388	0.17%
Standby Approved on an Interim Basis		0.00%		0.00%
		0.00%		0.00%
		0.00%		0.00%
Total	\$ 11,775,632	100.00%	\$ 13,287,953	100.00%

Notes

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

B) Calculated Class Revenues

Classes (same as previous table)	2017	Row 18 CA	Row 23 CA	RateMaker Col K	Row 19 CA
	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	\$ 7,143,890	\$ 7,400,490	\$ 7,400,708	\$ 378,613	
GS < 50 kW	\$ 1,858,443	\$ 1,925,196	\$ 1,913,489	\$ 73,141	
GS 50 to 4,999 kW	\$ 2,656,821	\$ 2,752,251	\$ 2,752,228	\$ 99,396	
Large User	\$ 473,734	\$ 490,750	\$ 490,788	\$ 18,499	
Street Lighting	\$ 106,176	\$ 109,989	\$ 121,463	\$ 12,990	
Unmetered Scattered Load (USL)	\$ 24,476	\$ 25,356	\$ 25,355	\$ 1,282	
Standby Approved on an Interim Basis					
0					
Total	\$ 12,263,540	\$ 12,704,032	\$ 12,704,031	\$ 583,921	

existing 1 + d

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	2017	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year: 2011	(7C + 7E) / (7A)	(7D + 7E) / (7A)		
	%	%	%	%	%
Residential	93%	97.75	97.75	85 - 115	
GS < 50 kW	120%	119.72	119.02	80 - 120	
GS 50 to 4,999 kW	107%	97.88	97.88	80 - 120	
Large User	93%	98.35	98.35	85 - 115	
Street Lighting	104%	59.46	65.00	80 - 120	
Unmetered Scattered Load (USL)	120%	118.98	118.98	80 - 120	

Standby Approved on an Interim Basis	0%			
0				

Notes

1 Previously Approved Revenue-to-Cost Ratios - For most applicants, Most Recent Year would be the third year of the IRM 3 period, e.g. if the applicant rebased in 2009 with further adjustments over 2 years, the Most recent year is 2011. For applicants whose most recent rebasing year is 2006, the applicant should enter the ratios from their Informational Filing.

2 Status Quo Ratios - The Board's updated Cost Allocation Model yields the Status Quo Ratios in Worksheet O-1. Status Quo means "Before Rebalancing".

**D) Proposed Revenue-to-Cost Ratios
2017**

Class	Proposed Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	%
Residential	97.80	97.75				85 - 115
GS < 50 kW	120.00	119.02				80 - 120
GS 50 to 4,999 kW	97.80	97.88				80 - 120
Large User	95.47	98.35				85 - 115
Street Lighting	60.22	65.00				80 - 120
Unmetered Scattered Load (USL)	120.00	118.98				80 - 120
Standby Approved on an Interim Basis						0
0						0

Note

1 The applicant should complete Table D if it is applying for approval of a revenue to cost ratio in 2014 that is outside the Board's policy range for any customer class. Table (d) will show the information that the distributor would likely enter in the IRM model) in 2014. In 2015 Table (d), enter the planned ratios for the classes that will be 'Change' and 'No Change' in 2014 (in the current Revenue Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment', column d), and enter TBD for class(es) that will be entered as 'Rebalance'.

**Appendix 2-P
Cost Allocation - 2018**

Please complete the following four tables.

A) Allocated Costs

Classes	2018		Row 40 CA	
	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%
Residential	\$ 7,166,577	60.86%	\$ 8,218,915	59.90%
GS < 50 kW	\$ 1,700,371	14.44%	\$ 1,689,526	12.31%
GS 50 to 4,999 kW	\$ 2,282,143	19.38%	\$ 3,038,212	22.14%
Large User	\$ 465,454	3.95%	\$ 538,714	3.93%
Street Lighting	\$ 111,797	0.95%	\$ 213,698	1.56%
Unmetered Scattered Load (USL)	\$ 49,290	0.42%	\$ 22,637	0.16%
Standby Approved on an Interim Basis	\$ -	0.00%		0.00%
		0.00%		0.00%
		0.00%		0.00%
Total	\$ 11,775,632	100.00%	\$ 13,721,703	100.00%

Notes

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

B) Calculated Class Revenues

Classes (same as previous table)	2018	Row 18 CA	Row 23 CA	RateMaker Col K	Row 19 CA
	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	\$ 7,427,565	\$ 7,677,677	\$ 7,677,829	\$ 376,708	
GS < 50 kW	\$ 1,868,229	\$ 1,931,139	\$ 1,920,151	\$ 71,431	
GS 50 to 4,999 kW	\$ 2,780,278	\$ 2,873,900	\$ 2,873,997	\$ 99,502	
Large User	\$ 490,672	\$ 507,195	\$ 507,197	\$ 18,472	
Street Lighting	\$ 121,720	\$ 125,819	\$ 136,669	\$ 12,920	
Unmetered Scattered Load (USL)	\$ 24,858	\$ 25,695	\$ 25,580	\$ 1,246	
Standby Approved on an Interim Basis					
0					
Total	\$ 12,713,323	\$ 13,141,425	\$ 13,141,422	\$ 580,278	

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	2018		Proposed Ratios (7D + 7E) / (7A)	Policy Range
	Previously Approved Ratios Most Recent Year: 2011	Status Quo Ratios (7C + 7E) / (7A)		
	%	%	%	%
Residential	93%	98.00	98.00	85 - 115
GS < 50 kW	120%	118.53	117.88	80 - 120
GS 50 to 4,999 kW	107%	97.87	97.87	80 - 120
Large User	93%	97.58	97.58	85 - 115
Street Lighting	104%	64.92	70.00	80 - 120
Unmetered Scattered Load (USL)	120%	119.01	118.50	80 - 120

Standby Approved on an Interim Basis	0%			
0				

Notes

1 Previously Approved Revenue-to-Cost Ratios - For most applicants, Most Recent Year would be the third year of the IRM 3 period, e.g. if the applicant rebased in 2009 with further adjustments over 2 years, the Most recent year is 2011. For applicants whose most recent rebasing year is 2006, the applicant should enter the ratios from their Informational Filing.

2 Status Quo Ratios - The Board's updated Cost Allocation Model yields the Status Quo Ratios in Worksheet O-1. Status Quo means "Before Rebalancing".

**D) Proposed Revenue-to-Cost Ratios
2018**

Class	Proposed Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	%
Residential	97.80	97.75	98.00			85 - 115
GS < 50 kW	120.00	119.02	117.88			80 - 120
GS 50 to 4,999 kW	97.80	97.88	97.87			80 - 120
Large User	95.47	98.35	97.58			85 - 115
Street Lighting	60.22	65.00	70.00			80 - 120
Unmetered Scattered Load (USL)	120.00	118.98	118.50			80 - 120
Standby Approved on an Interim Basis						0
						0
0						

Note

1 The applicant should complete Table D if it is applying for approval of a revenue to cost ratio in 2014 that is outside the Board's policy range for any customer class. Table (d) will show the information that the distributor would likely enter in the IRM model) in 2014. In 2015 Table (d), enter the planned ratios for the classes that will be 'Change' and 'No Change' in 2014 (in the current Revenue Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment', column d), and enter TBD for class(es) that will be entered as 'Rebalance'.

**Appendix 2-P
Cost Allocation - 2019**

Please complete the following four tables.

A) Allocated Costs

Classes	2019		Row 40 CA	
	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%
Residential	\$ 7,166,577	60.86%	\$ 8,468,239	59.74%
GS < 50 kW	\$ 1,700,371	14.44%	\$ 1,696,117	11.97%
GS 50 to 4,999 kW	\$ 2,282,143	19.38%	\$ 3,186,835	22.48%
Large User	\$ 465,454	3.95%	\$ 580,949	4.10%
Street Lighting	\$ 111,797	0.95%	\$ 219,397	1.55%
Unmetered Scattered Load (USL)	\$ 49,290	0.42%	\$ 22,789	0.16%
Standby Approved on an Interim Basis	\$ -	0.00%		0.00%
		0.00%		0.00%
		0.00%		0.00%
Total	\$ 11,775,632	100.00%	\$ 14,174,325	100.00%

Notes

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

B) Calculated Class Revenues

Classes (same as previous table)	2019	Row 18 CA	Row 23 CA	RateMaker Col K	Row 19 CA
	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	\$ 7,717,996	\$ 7,969,236	\$ 7,968,877	\$ 383,347	
GS < 50 kW	\$ 1,865,916	\$ 1,926,657	\$ 1,917,249	\$ 70,959	
GS 50 to 4,999 kW	\$ 2,902,229	\$ 2,996,704	\$ 2,996,831	\$ 102,668	
Large User	\$ 507,341	\$ 523,857	\$ 523,837	\$ 19,118	
Street Lighting	\$ 137,222	\$ 141,689	\$ 151,502	\$ 13,045	
Unmetered Scattered Load (USL)	\$ 24,999	\$ 25,813	\$ 25,659	\$ 1,232	
Standby Approved on an Interim Basis					
0					
Total	\$ 13,155,704	\$ 13,583,955	\$ 13,583,955	\$ 590,370	

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	2019		Proposed Ratios (7D + 7E) / (7A)	Policy Range
	Previously Approved Ratios Most Recent Year: 2011	Status Quo Ratios (7C + 7E) / (7A)		
Residential	93%	98.63	98.63	85 - 115
GS < 50 kW	120%	117.78	117.22	80 - 120
GS 50 to 4,999 kW	107%	97.26	97.26	80 - 120
Large User	93%	93.46	93.46	85 - 115
Street Lighting	104%	70.53	75.00	80 - 120
Unmetered Scattered Load (USL)	120%	118.67	118.00	80 - 120

Standby Approved on an Interim Basis	0%			
0				

Notes

1 Previously Approved Revenue-to-Cost Ratios - For most applicants, Most Recent Year would be the third year of the IRM 3 period, e.g. if the applicant rebased in 2009 with further adjustments over 2 years, the Most recent year is 2011. For applicants whose most recent rebasing year is 2006, the applicant should enter the ratios from their Informational Filing.

2 Status Quo Ratios - The Board's updated Cost Allocation Model yields the Status Quo Ratios in Worksheet O-1. Status Quo means "Before Rebalancing".

**D) Proposed Revenue-to-Cost Ratios
2019**

Class	Proposed Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	%
Residential	97.80	97.75	98.00	98.63		85 - 115
GS < 50 kW	120.00	119.02	117.88	117.22		80 - 120
GS 50 to 4,999 kW	97.80	97.88	97.87	97.26		80 - 120
Large User	95.47	98.35	97.58	93.46		85 - 115
Street Lighting	60.22	65.00	70.00	75.00		80 - 120
Unmetered Scattered Load (USL)	120.00	118.98	118.50	118.00		80 - 120
Standby Approved on an Interim Basis						0
						0
0						

Note

1 The applicant should complete Table D if it is applying for approval of a revenue to cost ratio in 2014 that is outside the Board's policy range for any customer class. Table (d) will show the information that the distributor would likely enter in the IRM model) in 2014. In 2015 Table (d), enter the planned ratios for the classes that will be 'Change' and 'No Change' in 2014 (in the current Revenue Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment', column d), and enter TBD for class(es) that will be entered as 'Rebalance'.

Appendix 2-P Cost Allocation - 2020

Please complete the following four tables.

A) Allocated Costs

2020		Row 40 CA		
Classes	Costs Allocated from Previous Study	%	Costs Allocated in Test Year Study (Column 7A)	%
Residential	\$ 7,166,577	60.86%	\$ 8,659,735	59.57%
GS < 50 kW	\$ 1,700,371	14.44%	\$ 1,687,341	11.61%
GS 50 to 4,999 kW	\$ 2,282,143	19.38%	\$ 3,325,533	22.88%
Large User	\$ 465,454	3.95%	\$ 618,223	4.25%
Street Lighting	\$ 111,797	0.95%	\$ 222,837	1.53%
Unmetered Scattered Load (USL)	\$ 49,290	0.42%	\$ 22,782	0.16%
Standby Approved on an Interim Basis	\$ -	0.00%		0.00%
		0.00%		0.00%
		0.00%		0.00%
Total	\$ 11,775,632	100.00%	\$ 14,536,451	100.00%

Notes

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

B) Calculated Class Revenues

Classes (same as previous table)	2020	Row 18 CA	Row 23 CA	RateMaker Col K	Row 19 CA
	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	\$ 8,019,476	\$ 8,209,156	\$ 8,208,999	\$ 390,118	
GS < 50 kW	\$ 1,865,343	\$ 1,909,463	\$ 1,899,911	\$ 70,460	
GS 50 to 4,999 kW	\$ 3,027,697	\$ 3,099,309	\$ 3,099,472	\$ 106,009	
Large User	\$ 524,363	\$ 536,765	\$ 536,742	\$ 19,721	
Street Lighting	\$ 151,822	\$ 155,413	\$ 165,099	\$ 13,171	
Unmetered Scattered Load (USL)	\$ 25,055	\$ 25,647	\$ 25,527	\$ 1,218	
Standby Approved on an Interim Basis					
0					
Total	\$ 13,613,755	\$ 13,935,754	\$ 13,935,749	\$ 600,697	

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	2020	Previously Approved Ratios	Status Quo Ratios	Proposed Ratios	Policy Range
	Most Recent Year: 2011	(7C + 7E) / (7A)	(7D + 7E) / (7A)		
	%	%	%	%	%
Residential	93%	99.30	99.30	85 - 115	
GS < 50 kW	120%	117.34	116.77	80 - 120	
GS 50 to 4,999 kW	107%	96.39	96.39	80 - 120	
Large User	93%	90.01	90.01	85 - 115	
Street Lighting	104%	75.65	80.00	80 - 120	
Unmetered Scattered Load (USL)	120%	117.93	117.40	80 - 120	

Standby Approved on an Interim Basis	0%			
0				

Notes

1 Previously Approved Revenue-to-Cost Ratios - For most applicants, Most Recent Year would be the third year of the IRM 3 period, e.g. if the applicant rebased in 2009 with further adjustments over 2 years, the Most recent year is 2011. For applicants whose most recent rebasing year is 2006, the applicant should enter the ratios from their Informational Filing.

2 Status Quo Ratios - The Board's updated Cost Allocation Model yields the Status Quo Ratios in Worksheet O-1. Status Quo means "Before Rebalancing".

D) Proposed Revenue-to-Cost Ratios

Class	Proposed Revenue-to-Cost Ratios					Policy Range
	2016	2017	2018	2019	2020	
	%	%	%	%	%	%
Residential	97.80	97.75	98.00	98.63	99.30	85 - 115
GS < 50 kW	120.00	119.02	117.88	117.22	116.77	80 - 120
GS 50 to 4,999 kW	97.80	97.88	97.87	97.26	96.39	80 - 120
Large User	95.47	98.35	97.58	93.46	90.01	85 - 115
Street Lighting	60.22	65.00	70.00	75.00	80.00	80 - 120
Unmetered Scattered Load (USL)	120.00	118.98	118.50	118.00	117.40	80 - 120
Standby Approved on an Interim Basis						0
0						0

Note

1 The applicant should complete Table D if it is applying for approval of a revenue to cost ratio in 2014 that is outside the Board's policy range for any customer class. Table (d) will show the information that the distributor would likely enter in the IRM model) in 2014. In 2015 Table (d), enter the planned ratios for the classes that will be 'Change' and 'No Change' in 2014 (in the current Revenue Cost Ratio Adjustment Workform, Worksheet C1.1 'Decision - Cost Revenue Adjustment', column d), and enter TBD for class(es) that will be entered as 'Rebalance'.