

**API 2020 RATE DESIGN MODEL
SHEET 1 - 2019 EQUIVALENT RATES**

Determination of Residential R1 & R2 2019 Electricity Distribution Rates and RRRP Funding (Incl OEB Residential Rate Design Policy)

Equivalent Distribution Rates Required to Recover the Proposed 2015 Base Revenue Requirement at the Proposed 2019 Revenue to Cost Ratios Excluding Transformer Ownership Allowance												
2019 Approved Equivalent Electricity Distribution Rates												
Customer Class	Metric	Average # of Customers	Billing Determinant		F/V Split		Distribution Rates		Revenues			
			kWh	kW	Fixed Allocation	Variable Allocation	Monthly Service Charge	Variable Charge	Fixed	Variable	Total Revenue	Check
Residential - R1	kWh	8496	105,791,701		13.6%	86.4%	20.89	0.1274	2,130,168	13,479,207	15,609,374	-
Residential - R2	kW	50		198,901	12.0%	88.0%	769.64	17.0101	461,787	3,383,332	3,845,119	-
Seasonal	kWh	3138	7,731,414		47.5%	52.5%	38.88	0.2093	1,464,178	1,618,302	3,082,480	-
Street Lighting	kWh	1018	804,705		8.6%	91.4%	1.97	0.3171	24,012	255,195	279,207	-
									4,080,145	18,736,036	22,816,181	-

NOTE - the total revenue in the table above remains at \$22,816,181, as accepted in EB-2014-0055. Only the Class Shares have changed as a result of the proposed 2019 revenue to cost ratios. The fixed/variable splits are the same as accepted in EB-2014-0055.

IRM Indexed Revenue Requirement for 2019 Excluding Transformer Ownership Allowance			
Customer Class	Revenues		
	Fixed	Variable	Total Revenue
Residential - R1	2,223,200	14,067,890	16,291,090
Residential - R2	481,955	3,531,094	4,013,049
Seasonal	1,528,124	1,688,979	3,217,103
Street Lighting	25,060	266,340	291,401
	4,258,339	19,554,303	23,812,642

NOTE - the table to the left reflects the inflationary increase of \$22,816,181 by all annual price-cap adjustments from 2016-2019 - see 2019 IRM model for additional detail.

Update R1 and Seasonal Fixed/Variable Split for Equivalent Rates to Reflect OEB Policy Transition for Fixed Residential Rates Excluding Transformer Ownership Allowance												
Customer Class	Metric	Average # of Customers	Billing Determinant		F/V Split		Distribution Rates		Revenues			
			kWh	kW	Fixed Allocation	Variable Allocation	Monthly Service Charge	Variable Charge	Fixed	Variable	Total Revenue	Reconciliation
Residential - R1(i)	kWh	7531	80,045,884		73.5%	26.5%	42.23	0.0172	3,816,435	1,373,158	5,189,592	-
Residential - R1(ii)	kWh	965	25,745,817		24.2%	75.8%	25.64	0.0361	296,874	929,003	1,225,877	-
Residential - R1 - Combined	kWh	8496	105,791,701		64.1%	35.9%	40.35	0.0218	4,113,309	2,302,161	6,415,470	-
Seasonal	kWh	3138	7,731,414		64.1%	35.9%	54.75	0.1494	2,061,666	1,155,212	3,216,878	-

Equivalent Distribution Rates Reflecting 2015-2019 Price Cap Indexing and Changes to Fixed/Variable Splits for Use in 2020 Cost Allocation Excluding Transformer Ownership Allowance												
Customer Class	Metric	Average # of Customers	Billing Determinant		F/V Split		Distribution Rates		Revenues			
			kWh	kW	Fixed Allocation	Variable Allocation	Monthly Service Charge	Variable Charge	Fixed	Variable	Total Revenue	Check
Residential - R1	kWh	8496	105,791,701		64.1%	35.9%	102.45	0.0553	10,445,109	5,845,980	16,291,090	-
Residential - R2	kW	50		198,901	12.0%	88.0%	803.26	17.7530	481,955	3,531,094	4,013,049	-
Seasonal	kWh	3138	7,731,414		64.1%	35.9%	54.75	0.1494	2,061,810	1,155,293	3,217,103	-
Street Lighting	kWh	1018	804,705		8.6%	91.4%	2.05	0.3310	25,060	266,340	291,401	-
									13,013,935	10,798,707	23,812,642	-

Check: -

**API 2020 RATE DESIGN MODEL
SHEET 2 - RATE DESIGN FIXED/VARIABLE SPLIT**

Existing Rates

Customer Class Name	Current Rates and Fixed to Variable Split			Proposed Rates and Fixed to Variable Split		
	Rate	Fixed %	Variable %	Rate	Fixed %	Variable %
Residential R1	\$102.45	64.12%	35.88%	\$108.56	64.12%	35.88%
Residential R2	\$803.26	12.01%	87.99%	\$1,112.25	12.01%	87.99%
Seasonal	\$54.75	64.09%	35.91%	\$54.75	64.55%	35.45%
Street Lighting	\$2.05	8.60%	91.40%	\$1.37	8.60%	91.40%
TOTAL						

Cost Allocation Results - Minimum and Maximum MSC

Customer Class Name	Cost Allocation - Minimum Fixed Rate			Cost Allocation - Maximum Fixed Rate		
	Rate	Fixed %	Variable %	Rate	Fixed %	Variable %
Residential R1	\$12.33	7.28%	92.72%	\$102.45	60.51%	39.49%
Residential R2	\$300.86	3.25%	96.75%	\$803.26	8.67%	91.33%
Seasonal	\$10.41	12.27%	87.73%	\$83.68	98.66%	1.34%
Street Lighting	\$0.72	4.49%	95.51%	\$12.53	78.62%	21.38%
TOTAL						

Minimum System with PLCC * adjustment
\$90.06
\$588.76
\$83.68
\$12.53

Rate Design

Customer Class Name	Proposed Fixed Charge			Resulting Variable		
	Fixed Rate	Fixed %	Variable %	Variable \$	Rate	per
Residential R1	\$108.56	64.12%	35.88%	6,643,688	\$0.0639	kWh
Residential R2	\$1,112.25	12.01%	87.99%	3,732,908	\$18.9827	kW
Seasonal	\$54.75	64.55%	35.45%	1,068,178	\$0.1964	kWh
Street Lighting	\$1.37	8.60%	91.40%	195,262	\$0.3279	kWh
TOTAL						

Customer Class Name	Transf. Allowance (\$/kW):			Base Revenue Requirement \$		
	kW	Rate	Total \$	Total	Fixed	Variable
Residential R1	0	\$0.00	0	18,515,174	11,871,486	6,643,688
Residential R2	145,265	\$0.60	87,159	4,143,355	497,606	3,645,749
Seasonal	0	\$0.00	0	3,013,020	1,944,842	1,068,178
Street Lighting	0	\$0.00	0	213,627	18,365	195,262
TOTAL	145,265		87,159	25,885,176	14,332,298	11,552,878

Integrity Check (Base RR from Cost Allocation) 25,885,176

**API 2020 RATE DESIGN MODEL
SHEET 3 - REVENUE AT CURRENT AND PROPOSED RATES**

Projected Revenues at Current Rates

2019 Rates at 2020 Load

Test Year Projected Revenue from Existing Variable Charges								
Customer Class Name	Variable Distribution Rate	per	Test Year Volume	Gross Variable Revenue	Transform. Allowance Rate	Transform. Allowance kW's	Transform. Allowance \$'s	Net Variable Revenue
Residential R1	\$0.0553	kWh	103,931,742	\$5,743,200			\$0	\$5,743,200
Residential R2	\$17.7530	kW	196,648	\$3,491,098	(\$0.60)	145,265	-\$87,159	\$3,403,939
Seasonal	\$0.1494	kWh	5,439,365	\$812,795			\$0	\$812,795
Street Lighting	\$0.3310	kWh	595,435	\$197,077			\$0	\$197,077
Total Variable Revenue				\$10,244,170	-0.6	145,265	-\$87,159	\$10,157,011

2019 Rates at 2020 Load

Total Test Year Projected Revenue from Existing Rates								
Customer Class Name	Fixed Rate	Customers (Connections)	Fixed Charge Revenue	Variable Revenue	TOTAL	% Fixed Revenue	% Variable Revenue	% Total Revenue
Residential R1	\$102.45	9,113	\$11,203,468	\$5,743,200	\$16,946,668	66.1%	33.9%	71.5%
Residential R2	\$803.26	37	\$359,367	\$3,403,939	\$3,763,306	9.5%	90.5%	15.9%
Seasonal	\$54.75	2,960	\$1,944,978	\$812,795	\$2,757,773	70.5%	29.5%	11.6%
Street Lighting	\$2.05	1,117	\$27,500	\$197,077	\$224,576	12.2%	87.8%	0.9%
Total		13,227	\$13,535,312	\$10,157,011	\$23,692,323			

Projected Revenues at Proposed Rates

2020 Rates at 2020 Load

Test Year Projected Revenue from Proposed Variable Charges								
Customer Class Name	Variable Distribution Rate	per	Test Year Volume	Gross Variable Revenue	Transform. Allowance Rate	Transform. Allowance kW's	Transform. Allowance \$'s	Net Variable Revenue
Residential R1	\$0.0639	kWh	103,931,742	\$6,641,238			\$0	\$6,641,238
Residential R2	\$18.9827	kW	196,648	\$3,732,912	(\$0.60)	145,265	-\$87,159	\$3,645,753
Seasonal	\$0.1964	kWh	5,439,365	\$1,068,291			\$0	\$1,068,291
Street Lighting	\$0.3279	kWh	595,435	\$195,243			\$0	\$195,243
Total Variable Revenue				\$11,637,684	-0.6	145,265	-\$87,159	\$11,550,525

2020 Rates at 2020 Load

Total Test Year Projected Revenue from Proposed Rates Less Transformer Allowance								
Customer Class Name	Fixed Rate	Customers (Connections)	Fixed Charge Revenue	Variable Revenue	TOTAL	% Fixed Revenue	% Variable Revenue	% Total Revenue
Residential R1	\$108.56	9,113	\$11,871,486	\$6,641,238	\$18,512,724	64.1%	35.9%	71.5%
Residential R2	\$1,112.25	37	\$497,606	\$3,645,753	\$4,143,358	12.0%	88.0%	16.0%
Seasonal	\$54.75	2,960	\$1,944,842	\$1,068,291	\$3,013,133	64.5%	35.5%	11.6%
Street Lighting	\$1.37	1,117	\$18,365	\$195,243	\$213,608	8.6%	91.4%	0.8%
Total		13,227	\$14,332,298	\$11,550,525	\$25,882,824			

Base Revenue Requirement: \$25,885,176
 Difference due to Rounding: -\$2,352
 -0.009%

**API 2020 RATE DESIGN MODEL
SHEET 4 - API 2020 RRRP RATE DESIGN**

Revenues Allocated to the Residential R1 & R2 Classes for 2020

\$ 22,658,529

2020 Application of Rate Indexing Methodology													
Delivery Charges Indexed by Simple Average of Other LDC Increases in Current Year													
Simple Average Increase in Delivery Charge for 2020 using the 2019 Board Calculated RRRP Adjustment Factor													2.22%
Customer Class	Metric	Average # of Customers	Billing Determinant		2019 Distribution Rates		2020 Distribution Rates		F/V Split		2020 Revenue		
			kWh	kW	Monthly Service Charge	Variable Charge	Monthly Service Charge	Variable Charge	Fixed Allocation	Variable Allocation	Fixed	Variable	Total Revenue
Residential - R1 (i)	kWh	8116	78,446,984		42.23	0.0172	43.17	0.0176	75.3%	24.7%	4,204,169	1,380,667	5,584,836
Residential - R1 (ii)	kWh	997	25,484,758		25.64	0.0361	26.21	0.0369	25.0%	75.0%	313,676	940,388	1,254,063
Residential - R2	kW	37		196,648	659.94	3.4194	674.59	3.4953	30.5%	69.5%	301,803	687,344	989,147
Transformer Ownership Allowance - Allocated to the Residential - R2 class												87,159	87,159
The Rural and Remote Rate Protection Amount Required for 2020													\$ 14,917,642

Check \$ -

API 2020 RATE DESIGN MODEL
SHEET 5 - API 2020 NON-RRRP RATE DESIGN

2020 Distribution Base Rate Determination											
Customer Class	Metric	Average # of Customers	Billing Determinant		F/V Split		Distribution Rates		Revenues		
			kWh	kW	Fixed Allocation	Variable Allocation	Monthly Service Charge	Variable Charge	Fixed	Variable	Total Revenue
Seasonal	kWh	2960	5,439,365		64.5%	35.5%	54.75	0.1964	1,944,842	1,068,291	3,013,133
Street Lighting	kWh	1117	595,435		8.6%	91.4%	1.37	0.3279	18,365	195,243	213,608
									1,963,207	1,263,534	3,226,741

API 2020 RATE DESIGN MODEL
SHEET 6 - RATE DESIGN POLICY R1(i)

A) Data Inputs

Test Year Billing Determinants for Residential Class	
Customers	8,116
kWh	78,446,984

Proposed Residential Class Specific Revenue Requirement ¹	\$5,584,835.67
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Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$43.17
Distribution Volumetric Rate (\$/kWh)	\$0.0176

B) Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	\$43.17	8,116	\$4,204,168.75	75.28%
Variable	\$0.0176	78,446,984	\$1,380,666.92	24.72%
TOTAL	-	-	\$5,584,835.67	-

C) Calculating Test Year Base Rates

Number of Required Rate Design Policy Transition Years ²	
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	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$4,204,168.75	\$43.17	\$4,204,168.75
Variable	\$1,380,666.92	\$0.02	\$1,380,666.92
TOTAL	\$5,584,835.67	-	\$5,584,835.67

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Revenue Reconciliation @ Adjusted Rates
Fixed	82.25%	\$4,593,714.15	\$47.17	\$4,593,714.15
Variable	17.75%	\$991,121.52	\$0.0126	\$988,432.00
TOTAL	-	\$5,584,835.67	-	\$5,582,146.15

Checks³	
Change in Fixed Rate	\$4.00
Difference Between Revenues @ Proposed Rates and Class Specific	-\$2,689.52
	-0.0482%

Notes:

- The final residential class specific revenue requirement, as shown in Appendix 2-P, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- Default number of transition years for rate design policy change is 4. Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.
- Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)

API 2020 RATE DESIGN MODEL
SHEET 7 - RATE DESIGN POLICY SEASONAL

A) Data Inputs

Test Year Billing Determinants for Residential Class	
Customers	2,960
kWh	5,439,365

Proposed Residential Class Specific Revenue Requirement ¹	\$3,013,020.34
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Residential Base Rates on Current Tariff	
Monthly Fixed Charge (\$)	\$54.75
Distribution Volumetric Rate (\$/kWh)	\$0.1964

B) Current Fixed/Variable Split

	Base Rates	Billing Determinants	Revenue	% of Total Revenue
Fixed	\$54.75	2,960	\$1,944,842.10	64.55%
Variable	\$0.1964	5,439,365	\$1,068,291.27	35.45%
TOTAL	-	-	\$3,013,133.38	-

C) Calculating Test Year Base Rates

Number of Required Rate Design Policy Transition Years ²	
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	Test Year Revenue @ Current F/V Split	Test Year Base Rates @ Current F/V Split	Reconciliation - Test Year Base Rates @ Current F/V Split
Fixed	\$1,944,769.14	\$54.75	\$1,944,842.10
Variable	\$1,068,251.19	\$0.1964	\$1,068,291.27
TOTAL	\$3,013,020.34	-	\$3,013,133.38

	New F/V Split	Revenue @ new F/V Split	Final Adjusted Base Rates	Reconciliation @ Adjusted Rates
Fixed	69.26%	\$2,086,931.03	\$58.75	\$2,086,931.03
Variable	30.74%	\$926,089.31	\$0.1703	\$926,323.85
TOTAL	-	\$3,013,020.34	-	\$3,013,254.87

Checks³	
Change in Fixed Rate	\$4.00
Difference Between Revenues @ Proposed Rates and Class Specific	\$234.53
	0.0078%

Notes:

- 1 The final residential class specific revenue requirement, as shown in Appendix 2-P, should be used (i.e. the revenue requirement after any proposed adjustments to R/C ratios).
- 2 Default number of transition years for rate design policy change is 4. Where the change in the residential rate design will result in the fixed charge increasing by more than \$4/year, a distributor may propose an additional transition year.
- 3 Change in fixed rate due to rate design policy should be less than \$4. The difference between the proposed class revenue requirement and the revenue at calculated base rates should be minimal (i.e. should be reasonably considered as a rounding error)

**API 2020 RATE DESIGN MODEL
SHEET 8 - REVENUE RECONCILIATION**

	Volumetric Determinant	Test Year Customer/Load Forecast			Proposed Rates		Fixed Revenues at Proposed Rates	Variable Revenues at Proposed Rates	Total	Class Specific Revenue Requirement	Transformer Allowance Credit	Total	Difference	
		Customers/Connections	kWh	kW	Monthly Service Charge	Volumetric								
						kWh								kW
R1(i)	kWh	8,116	78,446,984	-	\$47.17	\$0.0126	\$4,593,714.15	\$988,432.00	\$5,582,146.15					
R1(ii)	kWh	997	25,484,758	-	\$26.21	\$0.0369	\$313,675.80	\$940,387.56	\$1,254,063.35					
R1 - Total		9,113	103,931,742				\$4,907,389.95	\$1,928,819.56	\$6,836,209.50	\$18,515,173.83		\$18,515,173.83	\$11,678,964.33	
R2	kW	37	85,867,987	196,648	\$674.59	\$3.4953	\$301,802.56	\$687,344.08	\$989,146.63	\$4,143,354.91	\$87,159.17	\$4,230,514.08	\$3,241,367.44	
RRRP							\$14,917,642.25	\$0.00	\$14,917,642.25				-\$14,917,642.25	
Total RRRP-Eligible							\$20,126,834.76	\$2,616,163.63	\$22,742,998.39	\$22,658,528.74	\$87,159.17	\$22,745,687.91	\$2,689.52	
Seasonal	kWh	2,960	5,439,365	-	\$58.75	\$0.1703	\$2,086,931.03	\$926,323.85	\$3,013,254.87	\$3,013,020.34		\$3,013,020.34	-\$234.53	
Street Lighting	kWh	1,117	595,435	-	\$1.37	\$0.3279	\$18,364.85	\$195,243.17	\$213,608.02	\$213,626.92		\$213,626.92	\$18.90	
Total							\$22,232,130.63	\$3,737,730.65	\$25,969,861.29	\$25,885,176.00	\$87,159.17	\$25,972,335	\$2,474	

Note Checks: - 0 0.010%

- The class specific revenue requirements in column M must be the amounts used in the final rate design process. The total of column M should equate to the proposed base revenue requirement.
- Rates should be entered with the number of decimal places that will show on the Tariff of Rates and Charges.