

Program Cost-Effectiveness - 2019 ACTUAL

	Total Resource Benefit / Cost Ratio	Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
Residential Programs											
Home Energy Assistance	0.86	874.0	1,020.067	-	383.834	2,497.850	35.4	30.5	2,952	1,368	29,298
Energy Star Homes	1.36	410.5	259.860	40.950	119.011	1,807.061	51.4	2.6	47	524	11,574
Home Performance with Energy Star	2.04	1,536.2	517.028	234.621	132.836	2,686.985	13.4	28.7	125	3,179	67,466
Energy Star Products	1.83	1,674.8	683.755	233.126	2,874.060	18,863.577	217.2	133.0	43,022	177	2,471
Home Energy Reports	2.93	491.3	167.701	-	2,350.149	6,446.409	183.0	61.3	24,900	-	-
ISO-NE Forward Capacity Market Expenses		-	9.194	-	-	-	-	-	-	-	-
Sub-Total Residential	1.57	4,986.8	2,657.605	508.697	5,859.890	32,301.881	500.5	256.0	71,046	5,247	110,809
Commercial, Industrial & Municipal											
Large Business Energy Solutions	1.79	6,049.8	1,280.014	2,095.935	4,682.917	60,427.507	916.9	748.7	22	-	-
Small Business Energy Solutions	1.77	3,505.9	935.895	1,042.527	2,879.216	38,276.408	418.1	377.6	110	-	-
Municipal Energy Solutions	0.95	386.9	264.183	142.872	443.486	5,765.324	105.3	12.5	9	-	-
Education		-	20.368	-	-	-	-	-	-	-	-
ISO Forward Capacity Market Expenses		-	16.898	-	-	-	-	-	-	-	-
Demand		-	53.925	-	-	-	-	-	-	-	-
Sub-Total Commercial & Industrial	1.70	9,942.7	2,571.284	3,281.334	8,005.619	104,469.239	1,440.3	1,138.8	141	-	-
Total	1.66	14,929.5	5,228.889	3,790.031	13,865.509	136,771.120	1,940.8	1,394.8	71,187	5,247	110,809

Note: a 10% NEI adder (20% for Home Energy Assistance) is applied to total benefits excluding water.
Low Income expenditures as a percent of portfolio spending 19.5%

Annual kWh Savings	13,865,509	90.0%	kWh > 55%	Lifetime kWh Savings	136,771,120	80.8%	kWh > 55%
Annual MMBTU Savings (in kWh)	<u>1,538,778</u>	<u>10.0%</u>		Lifetime MMBTU Savings (in kWh)	<u>32,495,374</u>	<u>19.2%</u>	
	15,404,287	100.0%			169,266,494	100.0%	

Program Cost-Effectiveness - 2019 FILED PLAN

	Total Resource Benefit / Cost Ratio	Benefit (\$000)	Utility Costs (\$000)	Customer Costs (\$000)	Annual MWh Savings	Lifetime MWh Savings	Winter kW Savings	Summer kW Savings	Number of Customers Served	Annual MMBTU Savings	Lifetime MMBTU Savings
Residential Programs											
Home Energy Assistance	1.86	1,824.5	980.094	-	85.861	1,148.575	10.7	12.6	115	3,103	62,053
Energy Star Homes	1.81	441.2	205.783	38.110	65.093	1,216.159	6.9	15.1	29	436	10,856
Home Performance with Energy Star	1.76	1,832.2	704.300	334.443	89.008	1,503.708	11.6	17.6	113	3,291	66,075
Energy Star Products	2.04	1,443.0	617.955	88.518	1,840.675	12,023.832	503.0	230.9	28,092	485	7,122
Home Energy Reports	1.12	207.0	184.985	-	917.000	2,423.614	90.0	60.7	25,800	-	-
ISO-NE Forward Capacity Market Expenses		-	13.500	-	-	-	-	-	-	-	-
Sub-Total Residential	1.81	5,747.9	2,706.617	461.070	2,997.6	18,315.9	622.3	336.9	54,149	7,315	146,106
Commercial, Industrial & Municipal											
Large Business Energy Solutions	1.87	5,186.9	1,353.124	1,419.776	4,148.2	56,285.9	496.4	532.6	59	-	-
Small Business Energy Solutions	1.67	2,699.0	1,008.203	605.344	2,535.5	32,911.0	143.6	224.4	56	-	-
Municipal Energy Solutions	1.14	393.5	220.642	123.771	411.5	5,481.1	9.4	9.9	26	90	1,800
Education		-	70.209	-	-	-	-	-	-	-	-
ISO Forward Capacity Market Expenses		-	19.990	-	-	-	-	-	-	-	-
CIM Other 1	0.00	-	-	-	-	-	-	-	-	-	-
Sub-Total Commercial & Industrial	1.72	8,279.5	2,672.168	2,148.891	7,095.3	94,678.0	649.3	767.0	141	90	1,800
Total	1.76	14,027.4	5,378.785	2,609.962	10,092.9	112,993.9	1,271.6	1,103.9	54,290	7,405	147,906

Note: a 10% NEI adder (20% for Home Energy Assistance) is applied to total benefits excluding water.

Annual kWh Savings	10,092,917	82.3%	kWh > 55%	Lifetime kWh Savings	112,993,926	72.3%	kWh > 55%
Annual MMBTU Savings (in kWh)	<u>2,170,134</u>	<u>17.7%</u>		Lifetime MMBTU Savings (in kWh)	<u>43,346,987</u>	<u>27.7%</u>	
	12,263,051	100.0%			156,340,913	100.0%	

Present Value Benefits - 2019 ACTUAL

	CAPACITY					ENERGY													Total Gas Benefit	Other Fuels	Fossil Emissions	Water Benefit	Other Non-Resource Benefit
	Total Benefits (\$000)	Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Electric DRIPE	Total Electric Benefit	Gas Benefit	Gas DRIPE										
Residential Programs																							
Home Energy Assistance	\$ 874.0	\$ 21.3	\$ -	\$ 28.1	\$ 24.9	\$ 60.4	\$ 40.8	\$ 23.1	\$ 15.0	\$ 11.4	\$ 224.9	\$ 48.1	\$ 1.5	\$ 49.6	\$ 425.1	\$ 34.2	\$ 0.4	\$ 139.9					
Energy Star Homes	\$ 410.5	\$ 2.1	\$ -	\$ 2.7	\$ 2.4	\$ 42.7	\$ 45.7	\$ 4.5	\$ 3.7	\$ 2.9	\$ 106.7	\$ 10.2	\$ 0.3	\$ 10.5	\$ 244.1	\$ 12.9	\$ 0.1	\$ 36.1					
Home Performance with Energy Star	\$ 1,536.2	\$ 39.0	\$ -	\$ 43.9	\$ 38.9	\$ 40.0	\$ 51.1	\$ 18.0	\$ 21.3	\$ 12.1	\$ 264.3	\$ 146.5	\$ 4.7	\$ 151.2	\$ 914.2	\$ 73.6	\$ -	\$ 133.0					
Energy Star Products	\$ 1,674.8	\$ 56.2	\$ -	\$ 91.7	\$ 81.2	\$ 452.4	\$ 298.6	\$ 188.4	\$ 116.5	\$ 64.1	\$ 1,349.1	\$ 5.6	\$ 0.2	\$ 5.7	\$ 31.4	\$ 2.5	\$ 147.5	\$ 138.6					
Home Energy Reports	\$ 491.3	\$ 7.1	\$ -	\$ 15.1	\$ 13.4	\$ 186.5	\$ 97.6	\$ 70.8	\$ 35.8	\$ 20.2	\$ 446.6	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 44.7					
Sub-Total Residential	\$ 4,986.8	\$ 125.7	\$ -	\$ 181.5	\$ 160.8	\$ 782.1	\$ 533.8	\$ 304.8	\$ 192.3	\$ 110.8	\$ 2,391.6	\$ 210.4	\$ 6.6	\$ 217.0	\$ 1,614.8	\$ 123.2	\$ 147.9	\$ 492.3					
Commercial/Industrial Programs																							
Large Business Energy Solutions	\$ 6,049.8	\$ 549.9	\$ -	\$ 753.6	\$ 667.3	\$ 1,275.4	\$ 1,038.2	\$ 501.8	\$ 387.2	\$ 326.4	\$ 5,499.8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 550.0					
Small Business Energy Solutions	\$ 3,505.9	\$ 289.1	\$ -	\$ 390.6	\$ 345.9	\$ 806.8	\$ 600.6	\$ 338.7	\$ 240.1	\$ 175.5	\$ 3,187.2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 318.7					
Municipal Energy Solutions	\$ 386.9	\$ 9.4	\$ -	\$ 12.8	\$ 11.3	\$ 126.4	\$ 92.9	\$ 51.3	\$ 35.7	\$ 12.0	\$ 351.8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 35.2					
Sub-Total Commercial & Industrial	\$ 9,942.7	\$ 848.4	\$ -	\$ 1,156.9	\$ 1,024.5	\$ 2,208.7	\$ 1,731.7	\$ 891.8	\$ 662.9	\$ 514.0	\$ 9,038.8	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 903.9					
Total	\$ 14,929.5	\$ 974.0	\$ -	\$ 1,338.4	\$ 1,185.2	\$ 2,990.7	\$ 2,265.5	\$ 1,196.5	\$ 855.2	\$ 624.7	\$ 11,430.4	\$ 210.4	\$ 6.6	\$ 217.0	\$ 1,614.8	\$ 123.2	\$ 147.9	\$ 1,396.2					

Present Value Benefits - 2019 PLAN

	CAPACITY					ENERGY															Other Non-Resource Benefit
	Total Benefits (\$000)	Summer Generation	Winter Generation	Transmission	Distribution	Winter Peak	Winter Off Peak	Summer Peak	Summer Off Peak	Electric DRIPE	Total Electric Benefit	Gas Benefit	Gas DRIPE	Total Gas Benefit	Other Fuels	Fossil Emissions	Water Benefit				
Residential Programs																					
Home Energy Assistance	\$ 1,824.5	\$ 12.9	\$ -	\$ 15.7	\$ 13.9	\$ 20.3	\$ 22.4	\$ 7.7	\$ 8.3	\$ 5.3	\$ 106.4	\$ -	\$ -	\$ -	\$ 1,354.0	\$ 72.0	\$ -	\$ 292.1			
Energy Star Homes	\$ 441.2	\$ 17.6	\$ -	\$ 20.8	\$ 18.4	\$ 18.6	\$ 24.3	\$ 7.5	\$ 9.5	\$ 6.3	\$ 123.0	\$ 0.1	\$ 0.0	\$ 0.1	\$ 263.3	\$ 12.8	\$ 3.3	\$ 38.6			
Home Performance with Energy Star	\$ 1,832.2	\$ 20.5	\$ -	\$ 24.1	\$ 21.3	\$ 23.6	\$ 28.5	\$ 10.7	\$ 11.7	\$ 7.2	\$ 147.5	\$ -	\$ -	\$ -	\$ 1,448.2	\$ 76.9	\$ -	\$ 159.6			
Energy Star Products	\$ 1,443.0	\$ 79.0	\$ -	\$ 138.5	\$ 122.7	\$ 290.0	\$ 184.1	\$ 124.6	\$ 75.5	\$ 56.0	\$ 1,070.3	\$ 14.0	\$ 0.5	\$ 14.5	\$ 103.9	\$ 7.3	\$ 128.2	\$ 118.9			
Home Energy Reports	\$ 207.0	\$ 6.9	\$ -	\$ 14.5	\$ 12.8	\$ 52.6	\$ 53.2	\$ 19.4	\$ 19.7	\$ 9.1	\$ 188.2	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 18.8			
Sub-Total Residential	\$ 5,747.9	\$ 136.9	\$ -	\$ 213.5	\$ 189.0	\$ 405.2	\$ 312.5	\$ 169.8	\$ 124.7	\$ 83.9	\$ 1,635.5	\$ 14.1	\$ 0.5	\$ 14.6	\$ 3,169.4	\$ 169.0	\$ 131.5	\$ 628.0			
Commercial/Industrial Programs																					
Large Business Energy Solutions	\$ 5,186.9	\$ 425.5	\$ -	\$ 566.6	\$ 501.7	\$ 1,182.7	\$ 969.4	\$ 462.3	\$ 352.2	\$ 254.9	\$ 4,715.4	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 471.5			
Small Business Energy Solutions	\$ 2,699.0	\$ 168.0	\$ -	\$ 228.9	\$ 202.7	\$ 655.3	\$ 557.5	\$ 282.6	\$ 238.3	\$ 120.4	\$ 2,453.7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 245.4			
Municipal Energy Solutions	\$ 393.5	\$ 7.4	\$ -	\$ 10.1	\$ 9.0	\$ 106.8	\$ 119.3	\$ 29.8	\$ 35.3	\$ 10.6	\$ 328.3	\$ -	\$ -	\$ -	\$ 27.4	\$ 2.3	\$ -	\$ 35.6			
Sub-Total Commercial & Industrial	\$ 8,279.5	\$ 600.9	\$ -	\$ 805.6	\$ 713.4	\$ 1,944.9	\$ 1,646.2	\$ 774.6	\$ 625.8	\$ 385.9	\$ 7,497.3	\$ -	\$ -	\$ -	\$ 27.4	\$ 2.3	\$ -	\$ 752.5			
Smart Start	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -			
Total	\$ 14,027.4	\$ 737.8	\$ -	\$ 1,019.1	\$ 902.4	\$ 2,350.0	\$ 1,958.7	\$ 944.4	\$ 750.6	\$ 469.8	\$ 9,132.8	\$ 14.1	\$ 0.5	\$ 14.6	\$ 3,196.8	\$ 171.2	\$ 131.5	\$ 1,380.5			

Performance Incentive Calculation 2019

	<u>Actual</u>	<u>Planned</u>
Commercial/Industrial Incentive		
1. Benefit/Cost Ratio	1.66	1.67
2. Threshold Benefit / Cost Ratio ¹	1.0	1.0
3. Lifetime kWh Savings	104,469,239	94,678,039
4. Threshold Lifetime kWh Savings (65%) ²		61,540,725
5. Implementation Expenses	\$2,571,284	\$2,672,168
6. Benefit / Cost Percentage of Implementaton Expenses	2.73%	2.75%
7. Lifetime kWh Percentage of Implementation Expenses	3.03%	2.75%
8. Commercial & Industrial Performance Incentive	\$148,322	\$146,969
9. Maximum Commercial & Industrial Performance Incentive (6.875%)		\$183,712
Residential Incentive		
10. Benefit / Cost Ratio	1.50	1.73
11. Threshold Benefit / Cost Ratio ¹	1.00	1.00
12. Lifetime kWh Savings	32,301,881	18,315,887
13. Threshold Lifetime kWh Savings (65%)		11,905,327
14. Implementation Expenses	\$2,657,605	\$2,706,617
15. Benefit / Cost Percentage of Implementation Expenses	2.38%	2.75%
16. Lifetime kWh Percentage of Implementation Expenses	3.44%	2.75%
17. Residential Performance Incentive	\$154,678	\$148,864
18. Maximum Residential Performance Incentive (6.875%)		\$186,080
19. TOTAL PERFORMANCE INCENTIVE	\$303,000	\$295,833

Notes

1. Actual Benefit / Cost Ratio for each sector must be greater than or equal to 1.0.
2. Actual Lifetime kWh Savings for each sector must be greater than or equal to 65% of projected savings.
3. Benefit Cost ratios are Nominal\$/Nominal\$

**Planned Versus Actual Benefit / Cost Ratio by Sector
2019**

	<u>Actual</u>	<u>Planned</u>
Commercial & Industrial		
1. Benefits (Value) From Eligible Programs	\$9,942,655	\$8,279,460
2. Implementation Expenses	\$2,571,284	\$2,672,168
3. Customer Contribution	\$3,281,334	\$2,148,891
4. Performance Incentive	\$148,322	\$146,969
5. Total Costs	\$6,000,940	\$4,968,029
6. Benefit/Cost Ratio - Commercial & Industrial Sector	1.66	1.67
Residential		
7. Benefits (Value) From Eligible Programs	\$4,986,802	\$5,747,921
8. Implementation Expenses	\$2,657,605	\$2,706,617
9. Customer Contribution	\$508,697	\$461,070
10. Performance Incentive	\$154,678	\$148,864
11. Total Costs	\$3,320,979	\$3,316,552
12. Benefit/Cost Ratio - Residential Sector	1.50	1.73

Lifetime Energy Savings by Sector and Program
2019 Lifetime kWh Savings

	Actual	Planned
Commercial & Industrial		
Large Business Energy Solutions	60,427,507	56,285,881
Small Business Energy Solutions	38,276,408	32,911,026
Municipal Energy Solutions	5,765,324	5,481,132
Total Commercial & Industrial	104,469,239	94,678,039
Residential		
Home Energy Assistance	2,497,850	1,148,575
Energy Star Homes	1,807,061	1,216,159
Home Performance with Energy Star	2,686,985	1,503,708
Energy Star Products	18,863,577	12,023,832
Home Energy Reports	6,446,409	2,423,614
Total Residential	32,301,881	18,315,887

2019 Annual Report Reconciliation

Unitil Electric Energy Efficiency
January 1, 2019 - December 31, 2019

Unitil Electric Annual Report 2019 2019 Electric Revenue and Expense Reconciliation

		Residential	Low Income	C&I	Total 2019
1. Beginning Balance: 1/1/2019	(Over)/Under	\$ (543,687)	\$ (287,587)	\$ (671,382)	\$ (1,502,657)
Revenues					
2. System Benefits Charge Revenue		\$ 1,449,701	\$ 841,466	\$ 1,997,824	\$ 2,291,167
3. FCM Revenue		\$ 251,632		\$ 587,140	\$ 838,772
4. RGGI Proceeds			\$ 51,807	\$ 236,010	\$ 287,817
5. Interest		\$ 39,078	\$ 28,391	\$ 45,420	\$ 112,889
6. Total Funding	Σ Lines 2 - 5	\$ 1,740,410	\$ 921,663	\$ 2,866,394	\$ 3,530,644
Expenses					
7. Program Expenses		\$ 1,637,537	\$ 1,020,067	\$ 2,571,284	\$ 5,228,889
8. 2019 Planned PI		\$ 90,432	\$ 51,669	\$ 140,581	\$ 282,682
9. PI - Prior Year(s) True Up		\$ (12,356)	\$ (9,576)	\$ 12,296	\$ (9,636)
10. Transfer to OBF				\$ 375,000	\$ 375,000
11. Total Expenses	Σ Lines 7 - 10	\$ 1,715,613	\$ 1,062,161	\$ 3,099,161	\$ 5,501,935
12. Ending Balance: 12/31/2019	Lines 1 - 6 + 11	\$ (568,484)	\$ (147,090)	\$ (438,616)	\$ (1,154,190)
		\$ (568,484)	\$ (147,090)	\$ (438,616)	

Notes:

Line 8: 2019 Planned PI reflects what was budgeted and booked in 2019

Line 9: PI Prior Year(s) True-Up reflects adjustments for 2018 PI as booked in 2019

2016 - 2019 Program Reconciliation
Unitil RGGI Retail and Large Business Grant Program
January 1, 2016 - December 31, 2019

	<u>C&I Programs</u>
RGGI Grant Revenues	
2016	\$ 77,929
2017	\$ 35,433
2018	\$ 24,300
2019	\$ -
Total Funding	<u>\$ 137,662</u>
Expenses	
2016	\$ 7,322
2017	\$ 6,665
2018	\$ 12,970
2019	\$ 107,703
Total Expenses	<u>\$ 134,659</u>
Total Expenses eligible for PI	\$ 31,198
Ending Balance: 12/31/2019¹	(\$3,003)
 Ending Balance Adjusted for Current Year Actual PI	
Total PI Earned ¹	<u>\$ 2,340</u>
Ending Balance w/ Actual PI ¹	\$ (663)

Notes:

¹ Total PI earned is equal to 7.5% of the eligible expenditures (net funds provided to the NH Electric Coop for customers participating in the program)

2019 Annual Report Reconciliation
Unitil RGGI Retail and Large Business Grant Program
January 1, 2019 - December 31, 2019

Revenue and Expense Reconciliation

	<u>C&I Programs</u>
Beginning Balance: 1/1/2019¹	(\$110,705)
Revenues	
RGGI Grant Proceeds	\$ -
 Total New Funding 2019	 \$ -
Expenses	
C&I Retail Partners Program	\$ 23,948
C&I Large Business Partners Program	\$ 83,755
Total Expenses	\$ 107,703
 Ending Balance: 12/31/2019¹	 (\$3,003)
 Ending Balance Adjusted for Current Year Actual PI	
Actual PI - 2019 ²	\$ 2,340
Ending Balance w/ Actual PI	\$ (663)

Notes:

¹ Does not include PI from prior years.

² The "Actual PI - 2019" is equal to 7.5% of the actual expenditures over the term of the program, net of funds provided to the NH Electric Coop for customers participating in the program.

2019 Annual Report Reconciliation

Unitil - RGGI On-Bill Financing January 1, 2019 - December 31, 2019

Revenue and Expense Reconciliation

	<u>Resi</u>	<u>C&I</u>	<u>Total</u>
Beginning Balance: 1/1/2019	(\$293,847)	(\$176,635)	(\$470,482)
2019 Revenues			
Customer Loan Repayments	\$32,260	\$76,806	\$109,066
 New Grant Funding	 \$0	 \$375,000	 \$375,000
Total Revenues	\$32,260	\$451,806	\$484,066
2019 Expenses			
Customer On-Bill Loans	\$32,057	\$28,265	\$60,321
Administrative Expense	\$0		\$0
Defaults and Write Offs	\$0	\$66,223	\$66,223
Total Expenses	\$32,057	\$94,488	\$126,544
 Ending Balance: 12/31/2019	 (\$294,051)	 (\$533,954)	 (\$828,004)

Notes

Unitil Energy Systems, Inc.
NHPUC Docket No. DE 17-136
2019 Annual Report – Lost Base Revenue

In accordance with the requirements of the Settlement Agreement approved by the New Hampshire Public Utilities Commission in Order No. 26,095, dated January 2, 2018 in DE 17-136, Unitil Energy Systems, Inc. (“UES”) herein provides its calculation of lost base revenue (“LBR”) for 2019. A description of how the Average Distribution Rate (“ADR”) for lost revenue was calculated, including information on the inclusion or exclusion of relevant inputs such as customer charges, meter charges, or outdoor lighting services is included herein. As required, the billing determinants in such calculation are based on 2019 data and rates in effect throughout 2019. The reconciliation of LBR with revenue collected through the lost revenue component of the System Benefits Charge is also provided as part of this report. The contents of the report are provided below.

Page 1 provides the total LBR for January through December 2019. The calculation is based on the kWh savings provided on page 3 and the ADRs provided on pages 4 and 5.

Page 2 provides a reconciliation of the 2019 LBR from page 1 with revenues collected through the lost revenue component of the System Benefits Charge.

Page 3 provides program year 2019 savings for the LBR calculations.

Page 4 provides the calculation of the ADR for the January 1 to April 30, 2019 period. As shown, the ADR does not include customer, meter or luminaire charges.

Page 5 provides the calculation of the ADR for the May 1 to December 31, 2019 period. As shown, the ADR does not include customer, meter or luminaire charges. On May 1, 2019, UES implemented new distribution rates as approved in Order No. 26,236, dated April 22, 2019 in DE 19-043.

Pages 6 and 7 provide supporting detail for the ADR calculated on page 4.

Pages 8 and 9 provide supporting detail for the ADR calculated on page 5.

Pages 10 and 11 provide supporting documentation of the distribution rates in effect January 1 to April 30, 2019, which are used in the calculations on pages 6 and 7.

Pages 12 and 13 provide supporting documentation of the distribution rates in effect May 1 to December 31, 2019, which are used in the calculations on pages 8 and 9.

Page 14 provides supporting documentation for billing determinants used in the ADR calculations. This data was extracted from the company’s billing system. Note that for customer counts, these figures were derived for each rate class by dividing customer charge revenue by the customer charge in effect. This method was used since customer counts change throughout the month. Dividing customer charge revenue by the customer charge in effect results in a customer count that reflects the billing determinant for the month. As indicated above, the ADR does not include customer charges so this method has no impact on LBR.

With respect to the calculation of ADR, as shown on pages 4 and 5, UES calculated an ADR for each sector by dividing the total demand and energy distribution revenue by the kWh for the applicable time period. Details by class are shown on pages 6-7 and pages 8-9. As shown, the demand and energy distribution revenue is calculated by multiplying the distribution rates that were billed for the period by the billing determinants for the same period. As indicated above, UES calculated ADR for two periods (January to April and May to December), since it had a distribution rate change effective May 1, 2019.

Unitil Energy System, Inc.
Actual Monthly and Cumulative Savings (kWh) and Lost Base Revenue
January 1, 2019 to December 31, 2019

Unitil Energy Systems, Inc.
NHPUC Docket No. DE 17-136
2019 Annual Report
Page 1 of 14

Line	Description	12/31/2018	Actual Jan 2019	Actual Feb 2019	Actual Mar 2019	Actual Apr 2019	Actual May 2019	Actual June 2019	Actual Jul 2019	Actual Aug 2019	Actual Sep 2019	Actual Oct 2019	Actual Nov 2019	Actual Dec 2019	2019 Annual Savings
	Col. A	Col. B	Col. C	Col. D	Col. E	Col. F	Col. G	Col. H	Col. I	Col. J	Col. K	Col. L	Col. M	Col. N	Col. O
1	Residential Annualized Savings	4,212,431	193,018	156,252	773,470	231,574	424,024	378,872	627,987	563,840	315,031	606,340	364,256	57,391	4,692,054
2	C&I Annualized Savings	12,713,021	-	135,027	1,253,288	34,078	587,610	204,920	367,399	331,642	840,926	1,080,803	1,085,129	489,333	6,410,154
3	Total		193,018	291,279	2,026,758	265,651	1,011,634	583,792	995,386	895,482	1,155,956	1,687,143	1,449,385	546,724	11,102,208
4	Residential Annualized (17&18) Savings Retirements		-	-	-	-	(23)	-	-	-	(68)	(62,171)	(110,966)	(212,425)	(385,652)
5	C&I Annualized (17&18) Savings Retirements		-	-	-	-	-	-	-	-	-	-	-	-	-
6	Total		-	-	-	-	(23)	-	-	-	(68)	(62,171)	(110,966)	(212,425)	(385,652)
			Jan 2019	Feb 2019	Mar 2019	Apr 2019	May 2019	June 2019	Jul 2019	Aug 2019	Sep 2019	Oct 2019	Nov 2019	Dec 2019	LBR Savings
7	Monthly Residential Savings		16,085	13,021	64,456	19,298	35,333	31,573	52,332	46,987	26,247	45,347	21,107	(12,919)	358,867
8	Cumulative Residential Savings (Page 3, Line 23)	351,036	367,121	380,142	444,598	463,895	499,229	530,802	583,134	630,120	656,367	701,715	722,822	709,903	6,689,847
9	Average Residential Distribution Rate		<u>0.03537</u>	<u>0.03537</u>	<u>0.03537</u>	<u>0.03537</u>	<u>0.03558</u>	<u>0.03558</u>	<u>0.03558</u>	<u>0.03558</u>	<u>0.03558</u>	<u>0.03558</u>	<u>0.03558</u>	<u>0.03558</u>	
10	Lost Residential Revenue		\$ 12,985	\$ 13,446	\$ 15,725	\$ 16,408	\$ 17,763	\$ 18,886	\$ 20,748	\$ 22,420	\$ 23,354	\$ 24,967	\$ 25,718	\$ 25,258	\$ 237,677
11	Monthly C&I Savings (2017 & 2018)	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	1,059,418	
12	Average C&I Distribution Rate		<u>0.03121</u>	<u>0.03121</u>	<u>0.03121</u>	<u>0.03121</u>	<u>0.03254</u>	<u>0.03254</u>	<u>0.03254</u>	<u>0.03254</u>	<u>0.03254</u>	<u>0.03254</u>	<u>0.03254</u>	<u>0.03254</u>	
13	Lost C&I Revenue		\$ 33,069	\$ 33,069	\$ 33,069	\$ 33,069	\$ 34,474	\$ 34,474	\$ 34,474	\$ 34,474	\$ 34,474	\$ 34,474	\$ 34,474	\$ 34,474	\$ 408,071
14	Monthly C&I Savings (2019)		0	11,252	104,441	2,840	48,967	17,077	30,617	27,637	70,077	90,067	90,427	40,778	
15	Cumulative C&I Savings	-	0	11,252	115,693	118,533	167,500	184,577	215,193	242,830	312,907	402,974	493,402	534,180	
16	Average C&I Distribution Rate		<u>0.00037</u>	<u>0.00037</u>	<u>0.00037</u>	<u>0.00037</u>	<u>0.00018</u>	<u>0.00018</u>	<u>0.00018</u>	<u>0.00018</u>	<u>0.00018</u>	<u>0.00018</u>	<u>0.00018</u>	<u>0.00018</u>	
17	Lost C&I Revenue		\$ -	\$ 4	\$ 43	\$ 44	\$ 30	\$ 33	\$ 39	\$ 44	\$ 56	\$ 73	\$ 89	\$ 96	\$ 550
18	Monthly C&I kW Savings (2019)		0	1	12	0	7	2	4	2	12	23	9	23	
19	Cumulative C&I kW Savings	-	0	1	13	13	20.05	21.56	25.62	27.61	39.66	63.08	72.36	95.04	
20	Average C&I Demand Rate		<u>\$ 9.06</u>	\$ 9.06	\$ 9.06	\$ 9.06	<u>\$ 9.18</u>	\$ 9.18	\$ 9.18	\$ 9.18	\$ 9.18	\$ 9.18	\$ 9.18	\$ 9.18	
21	Lost C&I Demand Revenue		\$ -	\$ 10	\$ 117	\$ 120	\$ 184	\$ 198	\$ 235	\$ 253	\$ 364	\$ 579	\$ 664	\$ 872	\$ 3,598
22	Total Lost Revenue		\$ 46,055	\$ 46,529	\$ 48,955	\$ 49,642	\$ 52,451	\$ 53,591	\$ 55,496	\$ 57,191	\$ 58,248	\$ 60,093	\$ 60,945	\$ 60,701	\$ 649,897

Line 1: Actual (Capped) kWh Savings - See page 3
Line 2: Actual (Capped) kWh Savings - See page 3
Line 3: Line 1 + Line 2
Line 4: Actual Retired kWh Savings - See page 3
Line 5: Actual Retired kWh Savings - See page 3
Line 6: Line 4 + Line 5
Line 7: (Line 1 + Line 4) / 12
Line 8: Prior month Line 8 + current month Line 7
Line 9: Page 4, Line 1, Col. 8; Page 5, Line 1, Col. 8
Line 10: Line 8 x Line 9
Line 11: Line 5 + Prior month Line 11
Line 12: Page 4, Line 4, Col. 8; Page 5, Line 4, Col. 8
Line 13: Line 11 x Line 12
Line 14: (Line 2) / 12
Line 15: Prior month Line 15 + current month Line 14
Line 16: Page 4, Line 4, Col. 7; Page 5, Line 4, Col. 7
Line 17: Line 15 x Line 16
Line 18: Actual kW Savings, Page 3, Line 34
Line 19: Prior month Line 19 + current month Line 18
Line 20: Page 4, Line 4, Col. 6; Page 5, Line 4, Col. 6
Line 21: Line 19 x Line 20
Line 22: Line 10 + Line 13 + Line 17 + Line 21

Unitil Energy System, Inc.
Lost Base Revenue Reconciliation
January 1, 2019 to December 31, 2019

Unitil Energy Systems, Inc.
NHPUC Docket No. DE 17-136
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Line	Description	Actual Jan 2019	Actual Feb 2019	Actual Mar 2019	Actual Apr 2019	Actual May 2019	Actual June 2019	Actual Jul 2019	Actual Aug 2019	Actual Sep 2019	Actual Oct 2019	Actual Nov 2019	Actual Dec 2019	2019 Total
	Col. A	Col. B	Col. C	Col. D	Col. E	Col. F	Col. G	Col. H	Col. I	Col. J	Col. K	Col. L	Col. M	Col. N
1	Beginning Balance	\$ (29,866)	\$ (29,077)	\$ (36,467)	\$ (38,749)	\$ (37,329)	\$ (30,834)	\$ (22,402)	\$ (27,598)	\$ (33,413)	\$ (23,498)	\$ (12,628)	\$ 3,863	
2	Lost Revenues	\$ 46,055	\$ 46,529	\$ 48,955	\$ 49,642	\$ 52,451	\$ 53,591	\$ 55,496	\$ 57,191	\$ 58,248	\$ 60,093	\$ 60,945	\$ 60,701	\$ 649,897
3	Revenue (\$)	\$ 45,134	\$ 53,787	\$ 51,069	\$ 48,050	\$ 45,797	\$ 45,039	\$ 60,576	\$ 62,863	\$ 48,205	\$ 49,143	\$ 44,436	\$ 51,113	\$ 605,213
4	Cumulative (Over)/Under Recovery	\$ (28,946)	\$ (36,335)	\$ (38,582)	\$ (37,157)	\$ (30,675)	\$ (22,282)	\$ (27,482)	\$ (33,270)	\$ (23,370)	\$ (12,548)	\$ 3,881	\$ 13,451	
INTEREST														
5	Average Monthly Balance	\$ (29,406)	\$ (32,706)	\$ (37,524)	\$ (37,953)	\$ (34,002)	\$ (26,558)	\$ (24,942)	\$ (30,434)	\$ (28,391)	\$ (18,023)	\$ (4,373)	\$ 8,657	
6	Interest Rate	5.25%	5.25%	5.25%	5.50%	5.50%	5.50%	5.50%	5.50%	5.50%	5.25%	5.25%	5.25%	
7	Days per Month	31	28	31	30	31	30	31	31	30	31	30	31	365
8	Computed Interest	\$ (131)	\$ (132)	\$ (167)	\$ (172)	\$ (159)	\$ (120)	\$ (117)	\$ (142)	\$ (128)	\$ (80)	\$ (19)	\$ 39	\$ (1,328)
9	Ending Balance	\$ (29,077)	\$ (36,467)	\$ (38,749)	\$ (37,329)	\$ (30,834)	\$ (22,402)	\$ (27,598)	\$ (33,413)	\$ (23,498)	\$ (12,628)	\$ 3,863	\$ 13,489	

Line 1: Prior period ending balance. 2018 Annual Report, page 2, line 9, col. M.

Line 2: Page 1, Line 12

Line 3: Actual Revenues

Line 4: Line 1 + Line 2 - Line 3

Line 5: (Line 1 + Line 4)/2

Line 6: Prime Rate

Line 8: Line 7 * ((Line 5/# days per year) * Line 9))

Line 9: Line 4 + Line 8

**Unitil Energy System, Inc.
Electric Savings for LBR Calculation
Program Year 2019**

Unitil Energy Systems, Inc.
NHPUC Docket No. DE 17-136
2019 Annual Report
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2019 Annual Energy Savings - kWh						2019 Peak Demand Savings - kW					
	PLAN	ACTUAL	SAVINGS CAP	VARIANCE		PLAN	ACTUAL	SAVINGS CAP	VARIANCE		
	Annual kWh	Annual kWh	Plan @ 110% kWh	Cap - Actual kWh	Variance from Plan	Annual kW	Annual kW	Plan @ 110% kW	Cap - Actual kW	Variance from Plan	
1. Residential Programs											
2. EnergyStar Homes	65,093	119,011				-					
3. Home Performance w/EnergyStar	89,008	132,836				-					
4. EnergyStar Products	1,840,675	2,874,060				-					
5. Home Energy Reports	917,000	2,350,149				-					
6. Home Energy Assistance	85,861	383,834				-					
7. Residential	2,997,636	5,859,890				n/a	n/a	(Note 2)			
8.											
9. Commercial & Industrial Programs											
10. Large Business Energy Solutions	4,148,221	4,682,917				726	749				
11. Small Business Energy Solutions	2,535,530	2,879,216				357	378				
12. Municipal Energy Solutions	411,529	443,486				19	13				
13. Commercial & Industrial	7,095,280	8,005,619				1,101	1,139				
14.					(Note 1)						
15. Total Savings Portfolio	10,092,917	13,865,509	11,102,208	(2,763,301)	37.4%	1,101	1,139	1,211	-	3.4%	

LBR Savings Allocation

		Prior Year	Actual Jan-19	Actual Feb-19	Actual Mar-19	Actual Apr-19	Actual May-19	Actual Jun-19	Actual Jul-19	Actual Aug-19	Actual Sep-19	Actual Oct-19	Actual Nov-19	Actual Dec-19	Total
16. Residential Programs															
17. Annualized kWh Savings by Month	Installed kWh / Mo		193,018	156,252	773,470	231,574	424,024	378,872	627,987	563,840	315,031	606,340	364,256	57,391	4,692,054
18. Annualized kWh Retirements by Month	Retired kWh / Mo.		0	0	0	0	(23)	0	0	0	(68)	(62,171)	(110,966)	(212,425)	(385,652)
19.															
20. Monthly Incremental	L. 17 / 12		16,085	13,021	64,456	19,298	35,335	31,573	52,332	46,987	26,253	50,528	30,355	4,783	391,005
21. Monthly Retirements	L. 18 / 12		-	-	-	-	(1.88)	-	-	-	(5.65)	(5.181)	(9.247)	(17.702)	(32,138)
22. Monthly Cumulative	Sum of L. 20 + L. 21	(Note 3)	16,085	29,106	93,562	112,859	148,193	179,766	232,098	279,085	305,331	350,679	371,786	358,867	2,477,416
23. Monthly Cumulative Including Prior	Sum of L. 22 + Prior	351,036	367,121	380,142	444,598	463,895	499,229	530,802	583,134	630,120	656,367	701,715	722,822	709,903	6,689,847
24.															
25. Commercial & Industrial Programs															
26. Annualized kWh by Month	Installed kWh / Mo.		0	135,027	1,253,288	34,078	587,610	204,920	367,399	331,642	840,926	1,080,803	1,085,129	489,333	6,410,154
27. Annualized kWh Retirements by Month	Retired kWh / Mo.		0	0	0	0	0	0	0	0	0	0	0	0	0
28.															
29. Monthly Incremental	L. 26 / 12		0	11,252	104,441	2,840	48,967	17,077	30,617	27,637	70,077	90,067	90,427	40,778	534,180
30. Monthly Retirements	L. 27 / 12		-	-	-	-	-	-	-	-	-	-	-	-	0
31. Monthly Cumulative	Sum of L. 29 + L. 30	(Note 3)	0	11,252	115,693	118,533	167,500	184,577	215,193	242,830	312,907	402,974	493,402	534,180	2,799,042
32. Monthly Cumulative Including Prior	Sum of L. 31 + Prior	1,059,418	1,059,418	1,070,671	1,175,111	1,177,951	1,226,919	1,243,995	1,274,612	1,302,249	1,372,326	1,462,393	1,552,820	1,593,598	15,512,063
33.															
34. Peak Demand - kW	Installed kW / Mo.		-	1	12	0	7	2	4	2	12	23	9	23	95
35. Monthly Cumulative	Sum of L. 34		-	1	13	13	20	22	26	28	40	63	72	95	392
36. Monthly Cumulative Including Prior	Sum of L. 35 + Prior	-	-	1	13	13	20	22	26	28	40	63	72	95	
37.															
38. Total Annualized Savings															
39. Total Annualized kWh by Mo.	L. 17 + L. 26 + Prior		193,018	484,297	2,511,055	2,776,706	3,788,340	4,372,132	5,367,518	6,263,000	7,418,956	9,106,099	10,555,484	11,102,208	
40. Percent of Plan Savings	L. 39 + L. 15 Plan		2%	5%	25%	28%	38%	43%	53%	62%	74%	90%	105%	110%	

NOTES:

1. Equals [(Actual + Plan) - 1]. See Settlement, Page 5 in DE 15-137. "In each calendar year, for each utility, the savings for which lost revenue may be recovered will be capped at 110% of planned annual savings."
2. LBR associated with residential peak reductions is not applicable.
3. Adjustments were made to December 2019 savings data to reflect compliance with the 110% cap on LBR collections per Settlement in DE 15-137. See Note 1.

Unitil Energy Systems, Inc.
Calculation of Average Distribution Rate for Lost Revenue
Based on Actual Billing Determinants for January - April 2019 and Effective Distribution Rates*

	(1)	(2)	(3) = (1) + (2)	(4)	(5)	(6) = (1) / (4)	(7) = (2) / (5)	(8) = (3) / (4)
	Revenue							
Rate Class	Demand Charges	kWh Charges	Total Demand and kWh Charges	Delivery kW	Delivery kWh	Average Distribution Rate \$/kW	Average Distribution Rate \$/kWh ^(a)	Average Distribution Rate \$/kWh ^(b)
1 Residential D	\$ -	\$ 6,035,843	\$ 6,035,843	-	170,648,657	N/A	N/A	\$ 0.03537
2 Regular General G2	\$ 4,330,668	\$ 81,497	\$ 4,412,165	415,057	115,597,514	\$ 10.43	\$ 0.00071	\$ 0.03817
3 Large General Service Rate G1	\$ 2,493,000	\$ -	\$ 2,493,000	338,133	105,617,564	\$ 7.37	\$ -	\$ 0.02360
4 Commercial and Industrial	\$ 6,823,668	\$ 81,497	\$ 6,905,166	753,190	221,215,078	\$ 9.06	\$ 0.00037	\$ 0.03121

Note: See page 6 for details.

* Revenues include demand charges and kWh charges only.

Customer, meter and per luminaire charges are excluded.

(a) For 2019 C&I Savings.

(b) For 2017 and 2018 C&I Savings (in 2019 calculation).

Unitil Energy Systems, Inc.
Calculation of Average Distribution Rate for Lost Revenue
Based on Actual Billing Determinants for May - December 2019 and May 1, 2019 Distribution Rates*

	(1)	(2)	(3) = (1) + (2)	(4)	(5)	(6) = (1) / (4)	(7) = (2) / (5)	(8) = (3) / (4)
	Revenue							
<u>Rate Class</u>	<u>Demand Charges</u>	<u>kWh Charges</u>	<u>Total Demand and kWh Charges</u>	<u>Delivery kW</u>	<u>Delivery kWh</u>	<u>Average Distribution Rate \$/kW</u>	<u>Average Distribution Rate \$/kWh^(a)</u>	<u>Average Distribution Rate \$/kWh^(b)</u>
1 Residential D	\$ -	\$ 11,146,518	\$ 11,146,518	-	313,280,444	N/A	N/A	\$ 0.03558
2 Regular General G2	\$ 9,462,241	\$ 80,804	\$ 9,543,044	\$ 901,493	227,184,552	\$ 10.50	\$ 0.00036	\$ 0.04201
3 Large General Service Rate G1	\$ 5,080,918	\$ -	\$ 5,080,918	\$ 683,498	222,221,036	\$ 7.43	\$ -	\$ 0.02286
4 Commercial and Industrial	\$ 14,543,159	\$ 80,804	\$ 14,623,963	1,584,990	449,405,588	\$ 9.18	\$ 0.00018	\$ 0.03254

Note: See page 8 for details.

* Revenues include demand charges and kWh charges only.

Customer, meter and per luminaire charges are excluded.

(a) For 2019 C&I Savings.

(b) For 2017 and 2018 C&I Savings (in 2019 calculation).

Unitil Energy Systems, Inc.
Calculation of Distribution Revenue at the Rate Level Effective January 1, 2019
Based on Billing Determinants for the Four Months Ending April 30, 2019

Unitil Energy Systems, Inc.
NHPUC Docket No. DE 17-136
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Rate Class	Customer Group		(a)	(b)	(c) Calculated Revenue = (a) X (b)				
			1/1/2019 Monthly Distribution Charge (1)	Jan - Apr Billing Determinants (2)	Customer/ Meter/ Luminaire	Demand	kWh	Total	
Residential Rate R	Standard Rate	Customer Charge	\$ 16.12	265,754	\$ 4,283,956				
		All kWh	\$ 0.03537	170,648,657			\$ 6,035,843	\$ 10,319,799	
Total Rate R		Customers		265,754					
		Meters		n/a					
		KWH		170,648,657					
		Revenue			\$ 4,283,956	\$ -	\$ 6,035,843	\$ 10,319,799	
General Rate G2	Standard Rate	Customer Charge	\$ 29.02	41,435	\$ 1,202,436				
		Demand charge (All KW)	\$ 10.45	415,057		\$ 4,337,346			
		All KWH	\$ -	112,892,908			\$ -		
		Transformer Ownership Credit, G2	\$ (0.50000)	13,355		\$ (6,678)		\$ 5,539,782	
	G2 - kWh Meter	Customer Charge	\$ 18.27	1,681	\$ 30,712				
		All KWH	\$ 0.00878	201,322			\$ 1,768	\$ 32,479	
	QR Water Heating and/or Space Heat	Customer Charge	\$ 9.67	1,044	\$ 10,095				
		All KWH	\$ 0.03185	2,503,284			\$ 79,730	\$ 89,825	
	Total Rate G2		Customers		44,160				
			Meters		n/a				
Billing demand				415,057					
KWH				115,597,514					
Large General Rate G1	Standard Rate	Revenue			\$ 1,243,243	\$ 4,330,668	\$ 81,497	\$ 5,662,086	
		Customer Charge Secondary Voltage	\$ 161.23	523	\$ 84,323				
		Customer Charge Primary Voltage	\$ 85.99	132	\$ 11,351				
		All kVA	\$ 7.55	338,133		\$ 2,552,902			
		All KWH	\$ -	105,617,564			\$ -		
		Transformer Ownership Credit, G1	\$ (0.50000)	119,803		\$ (59,902)		\$ 2,588,674	
	Total Rate G1		Customers Secondary Voltage		523				
			Customers Primary Voltage		132				
			Meters		n/a				
			Billing demand		338,133				
		KWH		105,617,564					
		Revenue			\$ 95,674	\$ 2,493,000	\$ -	\$ 2,588,674	

Outdoor Lighting Rate OL	100W Mercury Vapor Street	\$13.20	5,443	\$	71,849
	175W Mercury Vapor Street	\$15.66	276	\$	4,322
	250W Mercury Vapor Street	\$17.75	292	\$	5,183
	400W Mercury Vapor Street	\$21.13	542	\$	11,456
	1000W Mercury Vapor Street	\$41.95	8	\$	336
	250W Mercury Vapor Flood	\$18.90	244	\$	4,611
	400W Mercury Vapor Flood	\$22.62	374	\$	8,459
	1000W Mercury Vapor Flood	\$37.48	58	\$	2,174
	100W Mercury Vapor Power Bracket	\$13.33	1,457	\$	19,417
	175W Mercury Vapor Power Bracket	\$14.79	206	\$	3,041
	50W Sodium Vapor Street	\$13.44	14,189	\$	190,700
	100W Sodium Vapor Street	\$15.13	420	\$	6,355
	150W Sodium Vapor Street	\$15.19	1,438	\$	21,849
	250W Sodium Vapor Street	\$19.03	4,573	\$	87,031
	400W Sodium Vapor Street	\$23.98	976	\$	23,404
	1000W Sodium Vapor Street	\$41.42	552	\$	22,864
	150W Sodium Vapor Flood	\$17.51	961	\$	16,828
	250W Sodium Vapor Flood	\$20.64	1,290	\$	26,634
	400W Sodium Vapor Flood	\$23.45	1,618	\$	37,937
	1000W Sodium Vapor Flood	\$41.78	881	\$	36,811
	50W Sodium Vapor Power Bracket	\$12.44	467	\$	5,811
	100W Sodium Vapor Power Bracket	\$13.96	293	\$	4,086
	175W Metal Halide Street	\$19.79	8	\$	158
	250W Metal Halide Street	\$21.52	-	\$	-
	400W Metal Halide Street	\$22.32	-	\$	-
	175W Metal Halide Flood	\$22.87	-	\$	-
	250W Metal Halide Flood	\$24.69	-	\$	-
	400W Metal Halide Flood	\$24.73	-	\$	-
	175W Metal Halide Power Bracket	\$32.03	-	\$	-
	250W Metal Halide Power Bracket	\$18.52	-	\$	-
	400W Metal Halide Power Bracket	\$19.69	-	\$	-
	1000W Metal Halide Flood (Contracts)	\$21.05	150	\$	3,150
	42W 3780 K LED Area Light Fixture	\$13.08	-	\$	-
	57W 5130K LED Area Light Fixture	\$13.13	-	\$	-
	25W 2500K LED Cobra Head Fixture	\$13.03	-	\$	-
	88W 8800K LED Cobra Head Fixture	\$13.22	-	\$	-
	108W 10800K LED Cobra Head Fixture	\$13.28	-	\$	-
	193W 19300K LED Cobra Head Fixture	\$13.54	-	\$	-
	123W 11070K LED Flood Light Fixture	\$13.33	-	\$	-
	227W 20340K LED Flood Light Fixture	\$13.54	-	\$	-
	365W 32850K LED Flood Light Fixture	\$13.85	-	\$	-

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Total Rate OL	Luminaires	36,716							
	Customers	n/a							
	Meters	-							
	KWH	2,656,046							
	Revenue	\$ -	\$	614,467	\$	-	\$	-	\$ 614,467

Total Retail	Customers	310,437							
	Meters	n/a							
	Luminaires	36,716							
	Billing Demand	753,190							
	KWH	394,519,781							
	Revenue	\$	6,237,341	\$	6,823,668	\$	6,117,340	\$	19,185,027

(1) See page 14 for support of customer counts and kWh data.

Unitil Energy Systems, Inc.
Calculation of Distribution Revenue at the Rate Level Effective May 1, 2019
Based on Billing Determinants for the Eight Months Ending December 2019

Unitil Energy Systems, Inc.
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Rate Class	Customer Group		(a) 5/1/2019 Monthly Distribution Charge	(b) May - Dec Billing Determinants	(c) Calculated Revenue = (a) X (b)			
					Customer/ Meter/ Luminaire	Demand	kWh	Total
Residential Rate R	Standard Rate	Customer Charge	\$ 16.22	542,581	\$ 8,800,663			
		All KWH	\$ 0.03558	313,280,444			\$ 11,146,518	\$ 19,947,181
Total Rate R		Customers		542,581				
		Meters		n/a				
		KWH		313,280,444				
		Revenue			\$ 8,800,663	\$ -	\$ 11,146,518	\$ 19,947,181
General Rate G2	Standard Rate	Customer Charge	\$ 29.19	84,226	\$ 2,458,559			
		Demand charge (All KW)	\$ 10.51	901,493		\$ 9,474,689		
		All KWH	\$ -	224,445,910			\$ -	
		Transformer Ownership Credit, G2	\$ (0.50000)	24,896		\$ (12,448)		\$ 11,933,248
	G2 - kWh Meter	Customer Charge	\$ 18.38	3,045	\$ 55,964			
		All KWH	\$ 0.00883	299,117			\$ 2,641	\$ 58,605
	QR Water Heating and/or Space Heat	Customer Charge	\$ 9.73	2,063	\$ 20,076			
		All KWH	\$ 0.03204	2,439,525			\$ 78,162	\$ 98,238
Total Rate G2		Customers		89,334				
		Meters		n/a				
		Billing demand		901,493				
		KWH		227,184,552				
		Revenue			\$ 2,534,599	\$ 9,462,241	\$ 80,804	\$ 12,090,091
Large General Rate G1	Standard Rate	Customer Charge Secondary Voltage	\$ 162.18	1,059	\$ 171,696			
		Customer Charge Primary Voltage	\$ 86.49	262	\$ 22,653			
		All kVA	\$ 7.60	683,498		\$ 5,194,582		
		All KWH	\$ -	222,221,036			\$ -	
		Transformer Ownership Credit, G1	\$ (0.50000)	227,328		\$ (113,664)		\$ 5,275,267
Total Rate G1		Customers Secondary Voltage		1,059				
		Customers Primary Voltage		262				
		Meters		n/a				
		Billing demand		683,498				
		KWH		222,221,036				
		Revenue			\$ 194,349	\$ 5,080,918	\$ -	\$ 5,275,267

SUMMARY OF DELIVERY SERVICE RATES

Each bill rendered for electric delivery service shall be calculated through the application of the effective rates as listed below.

Class		Distribution Charge*	Non-Transmission External Delivery Charge**	Transmission External Delivery Charge**	Total External Delivery Charge**	Stranded Cost Charge**	Storm Recovery Adjustment Factor***	System Benefits Charge**** (1)	Total Delivery Charges *****
D	Customer Charge	\$16.12							\$16.12
	All kWh	\$0.03537	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00101)	\$0.00133	\$0.00576	\$0.06534
G2	Customer Charge	\$29.02							\$29.02
	All kW	\$10.45				(\$0.21)			\$10.24
	All kWh	\$0.00000	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00021)	\$0.00133	\$0.00576	\$0.03077
G2 - kWh meter	Customer Charge	\$18.27							\$18.27
	All kWh	\$0.00878	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00101)	\$0.00133	\$0.00576	\$0.03875
G2 - Quick Recovery Water Heat and/or Space Heat	Customer Charge	\$9.67							\$9.67
	All kWh	\$0.03185	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00101)	\$0.00133	\$0.00576	\$0.06182
G1	Customer Charge	\$161.23	Secondary Voltage						\$161.23
	Customer Charge	\$85.99	Primary Voltage						\$85.99
	All kVA	\$7.55				(\$0.25)			\$7.30
	All kWh	\$0.00000	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00025)	\$0.00133	\$0.00576	\$0.03073
ALL GENERAL	Transformer Ownership Credit (kW/kVa)								(\$0.50)
	Voltage Discount at 4,160 Volts or Over (all kW/kVA and kWh)								2.00%
	Voltage Discount at 34,500 Volts or Over (all kW/kVA and kWh)								3.50%

(1) Includes low-income portion of \$0.00150 per kWh, energy efficiency portion of \$0.00373 per kWh and lost base revenue portion of \$0.00053 per kWh.

* Authorized by NHPUC Order No. 26,123 in Case No. DE 18-036, dated April 30, 2018
** Authorized by NHPUC Order No. 26,160 in Case No. DE 18-096, dated July 20, 2018
*** Authorized by NHPUC Order No. 26,123 in Case No. DE 18-036, dated April 30, 2018
**** Authorized by NHPUC Order No. 26,207 in Case No. DE 17-136, dated December 31, 2018
***** Authorized by NHPUC Secretarial Letter in Case No. DE 18-181, dated December 31, 2018

SUMMARY OF DELIVERY SERVICE RATES (continued)

Class	Distribution Charge*	Non-Transmission	Transmission	Stranded Cost Charge**	Storm Recovery Adjustment Factor***	System Benefits Charge**** (1)	Total Delivery Charges *****
		External Delivery Charge**	External Delivery Charge**				
OL							
All kWh	\$0.00000	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00101)	\$0.00133	\$0.00576
							\$0.02997

Luminaire Charges

Lamp Size Nominal Watts	Lumens (Approx.)	All-Night Service Monthly kWh	Midnight Service Monthly kWh	Description	Price Per Luminaire	
					Per Mo.	Per Year
100	3,500	43	20	Mercury Vapor Street	\$13.20	\$158.40
175	7,000	71	33	Mercury Vapor Street	\$15.66	\$187.92
250	11,000	100	46	Mercury Vapor Street	\$17.75	\$213.00
400	20,000	157	73	Mercury Vapor Street	\$21.13	\$253.56
1,000	60,000	372	173	Mercury Vapor Street	\$41.95	\$503.40
250	11,000	100	46	Mercury Vapor Flood	\$18.90	\$226.80
400	20,000	157	73	Mercury Vapor Flood	\$22.62	\$271.44
1,000	60,000	380	176	Mercury Vapor Flood	\$37.48	\$449.76
100	3,500	48	22	Mercury Vapor Power Bracket	\$13.33	\$159.96
175	7,000	71	33	Mercury Vapor Power Bracket	\$14.79	\$177.48
50	4,000	23	11	Sodium Vapor Street	\$13.44	\$161.28
100	9,500	48	22	Sodium Vapor Street	\$15.13	\$181.56
150	16,000	65	30	Sodium Vapor Street	\$15.19	\$182.28
250	30,000	102	47	Sodium Vapor Street	\$19.03	\$228.36
400	50,000	161	75	Sodium Vapor Street	\$23.98	\$287.76
1,000	140,000	380	176	Sodium Vapor Street	\$41.42	\$497.04
150	16,000	65	30	Sodium Vapor Flood	\$17.51	\$210.12
250	30,000	102	47	Sodium Vapor Flood	\$20.64	\$247.68
400	50,000	161	75	Sodium Vapor Flood	\$23.45	\$281.40
1,000	140,000	380	176	Sodium Vapor Flood	\$41.78	\$501.36
50	4,000	23	11	Sodium Vapor Power Bracket	\$12.44	\$149.28
100	9,500	48	22	Sodium Vapor Power Bracket	\$13.96	\$167.52
175	8,800	74	34	Metal Halide Street	\$19.79	\$237.48
250	13,500	102	47	Metal Halide Street	\$21.52	\$258.24
400	23,500	158	73	Metal Halide Street	\$22.32	\$267.84
175	8,800	74	34	Metal Halide Flood	\$22.87	\$274.44
250	13,500	102	47	Metal Halide Flood	\$24.69	\$296.28
400	23,500	158	73	Metal Halide Flood	\$24.73	\$296.76
1,000	86,000	374	174	Metal Halide Flood	\$32.03	\$384.36
175	8,800	74	34	Metal Halide Power Bracket	\$18.52	\$222.24
250	13,500	102	47	Metal Halide Power Bracket	\$19.69	\$236.28
400	23,500	158	73	Metal Halide Power Bracket	\$21.05	\$252.60
42	3,600	15	7	LED Area Light Fixture	\$13.08	\$156.96
57	5,200	20	9	LED Area Light Fixture	\$13.13	\$157.56
25	3,000	9	4	LED Cobra Head Fixture	\$13.03	\$156.36
88	8,300	30	14	LED Cobra Head Fixture	\$13.22	\$158.64
108	11,500	37	17	LED Cobra Head Fixture	\$13.28	\$159.36
193	21,000	67	31	LED Cobra Head Fixture	\$13.54	\$162.48
123	12,180	43	20	LED Flood Light Fixture	\$13.33	\$159.96
194	25,700	67	31	LED Flood Light Fixture	\$13.54	\$162.48
297	38,100	103	48	LED Flood Light Fixture	\$13.85	\$166.20

(1) Includes low-income portion of \$0.00150 per kWh, energy efficiency portion of \$0.00373 per kWh and lost base revenue portion of \$0.00053 per kWh.

* Authorized by NHPUC Order No. 26,123 in Case No. DE 18-036, dated April 30, 2018

** Authorized by NHPUC Order No. 26,160 in Case No. DE 18-096, dated July 20, 2018

*** Authorized by NHPUC Order No. 26,123 in Case No. DE 18-036, dated April 30, 2018

**** Authorized by NHPUC Order No. 26,207 in Case No. DE 17-136, dated December 31, 2018

***** Authorized by NHPUC Secretarial Letter in Case No. DE 18-181, dated December 31, 2018

SUMMARY OF DELIVERY SERVICE RATES

Each bill rendered for electric delivery service shall be calculated through the application of the effective rates as listed below.

<u>Class</u>		<u>Distribution Charge*</u>	<u>Non-Transmission External Delivery Charge**</u>	<u>Transmission External Delivery Charge**</u>	<u>Total External Delivery Charge**</u>	<u>Stranded Cost Charge**</u>	<u>Storm Recovery Adjustment Factor***</u>	<u>System Benefits Charge****</u> (1)	<u>Total Delivery Charges</u>
D	Customer Charge	\$16.22							\$16.22
	All kWh	\$0.03558	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00101)	\$0.00084	\$0.00576	\$0.06506
G2	Customer Charge	\$29.19							\$29.19
	All kW	\$10.51				(\$0.21)			\$10.30
	All kWh	\$0.00000	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00021)	\$0.00084	\$0.00576	\$0.03028
G2 - kWh meter	Customer Charge	\$18.38							\$18.38
	All kWh	\$0.00883	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00101)	\$0.00084	\$0.00576	\$0.03831
G2 - Quick Recovery Water Heat and/or Space Heat	Customer Charge	\$9.73							\$9.73
	All kWh	\$0.03204	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00101)	\$0.00084	\$0.00576	\$0.06152
G1	Customer Charge	\$162.18	Secondary Voltage						\$162.18
	Customer Charge	\$86.49	Primary Voltage						\$86.49
	All kVA	\$7.60				(\$0.25)			\$7.35
	All kWh	\$0.00000	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00025)	\$0.00084	\$0.00576	\$0.03024
ALL GENERAL	Transformer Ownership Credit (kW/kVa)								(\$0.50)
	Voltage Discount at 4,160 Volts or Over (all kW/kVA and kWh)								2.00%
	Voltage Discount at 34,500 Volts or Over (all kW/kVA and kWh)								3.50%

(1) Includes low-income portion of \$0.00150 per kWh, energy efficiency portion of \$0.00373 per kWh and lost base revenue portion of \$0.00053 per kWh.

* Authorized by NHPUC Order No. 26,236 in Case No. DE 19-043, dated April 22, 2019
** Authorized by NHPUC Order No. 26,160 in Case No. DE 18-096, dated July 20, 2018
*** Authorized by NHPUC Order No. 26,236 in Case No. DE 19-043, dated April 22, 2019
**** Authorized by NHPUC Order No. 26,207 in Case No. DE 17-136, dated December 31, 2018

Issued: April 30, 2019
Effective: May 1, 2019

Issued By: Christine Vaughan
Sr. Vice President

SUMMARY OF DELIVERY SERVICE RATES (continued)

Class	Distribution Charge*	Non-Transmission	Transmission	Stranded Cost Charge**	Storm Recovery Adjustment Factor***	System Benefits Charge**** (1)	Total Delivery Charges
		External Delivery Charge**	External Delivery Charge**				
OL							
All kWh	\$0.00000	(\$0.00109)	\$0.02498	\$0.02389	(\$0.00101)	\$0.00084	\$0.00576
							\$0.02948

Luminaire Charges

Lamp Size		All-Night Service	Midnight Service		Price Per Luminaire	
Nominal	Lumens	Monthly	Monthly			
Watts	(Approx.)	kWh	kWh	Description	Per Mo.	Per Year
100	3,500	43	20	Mercury Vapor Street	\$13.28	\$159.36
175	7,000	71	33	Mercury Vapor Street	\$15.75	\$189.00
250	11,000	100	46	Mercury Vapor Street	\$17.85	\$214.20
400	20,000	157	73	Mercury Vapor Street	\$21.25	\$255.00
1,000	60,000	372	173	Mercury Vapor Street	\$42.19	\$506.28
250	11,000	100	46	Mercury Vapor Flood	\$19.02	\$228.24
400	20,000	157	73	Mercury Vapor Flood	\$22.75	\$273.00
1,000	60,000	380	176	Mercury Vapor Flood	\$37.70	\$452.40
100	3,500	48	22	Mercury Vapor Power Bracket	\$13.41	\$160.92
175	7,000	71	33	Mercury Vapor Power Bracket	\$14.87	\$178.44
50	4,000	23	11	Sodium Vapor Street	\$13.52	\$162.24
100	9,500	48	22	Sodium Vapor Street	\$15.22	\$182.64
150	16,000	65	30	Sodium Vapor Street	\$15.28	\$183.36
250	30,000	102	47	Sodium Vapor Street	\$19.14	\$229.68
400	50,000	161	75	Sodium Vapor Street	\$24.13	\$289.56
1,000	140,000	380	176	Sodium Vapor Street	\$41.66	\$499.92
150	16,000	65	30	Sodium Vapor Flood	\$17.61	\$211.32
250	30,000	102	47	Sodium Vapor Flood	\$20.76	\$249.12
400	50,000	161	75	Sodium Vapor Flood	\$23.58	\$282.96
1,000	140,000	380	176	Sodium Vapor Flood	\$42.03	\$504.36
50	4,000	23	11	Sodium Vapor Power Bracket	\$12.51	\$150.12
100	9,500	48	22	Sodium Vapor Power Bracket	\$14.04	\$168.48
175	8,800	74	34	Metal Halide Street	\$19.91	\$238.92
250	13,500	102	47	Metal Halide Street	\$21.65	\$259.80
400	23,500	158	73	Metal Halide Street	\$22.45	\$269.40
175	8,800	74	34	Metal Halide Flood	\$23.00	\$276.00
250	13,500	102	47	Metal Halide Flood	\$24.83	\$297.96
400	23,500	158	73	Metal Halide Flood	\$24.88	\$298.56
1,000	86,000	374	174	Metal Halide Flood	\$32.22	\$386.64
175	8,800	74	34	Metal Halide Power Bracket	\$18.63	\$223.56
250	13,500	102	47	Metal Halide Power Bracket	\$19.81	\$237.72
400	23,500	158	73	Metal Halide Power Bracket	\$21.17	\$254.04
42	3,600	15	7	LED Area Light Fixture	\$13.16	\$157.92
57	5,200	20	9	LED Area Light Fixture	\$13.21	\$158.52
25	3,000	9	4	LED Cobra Head Fixture	\$13.11	\$157.32
88	8,300	30	14	LED Cobra Head Fixture	\$13.30	\$159.60
108	11,500	37	17	LED Cobra Head Fixture	\$13.36	\$160.32
193	21,000	67	31	LED Cobra Head Fixture	\$13.62	\$163.44
123	12,180	43	20	LED Flood Light Fixture	\$13.41	\$160.92
194	25,700	67	31	LED Flood Light Fixture	\$13.62	\$163.44
297	38,100	103	48	LED Flood Light Fixture	\$13.93	\$167.16

(1) Includes low-income portion of \$0.00150 per kWh, energy efficiency portion of \$0.00373 per kWh and lost base revenue portion of \$0.00053 per kWh.

* Authorized by NHPUC Order No. 26,236 in Case No. DE 19-043, dated April 22, 2019

** Authorized by NHPUC Order No. 26,160 in Case No. DE 18-096, dated July 20, 2018

*** Authorized by NHPUC Order No. 26,236 in Case No. DE 19-043, dated April 22, 2019

**** Authorized by NHPUC Order No. 26,207 in Case No. DE 17-136, dated December 31, 2018

Unitil Energy Systems, Inc.
Average Distribution Rate Support

January - April 2019

(a)	(b)	(c)	(d)	(e)	(f)
No. of Customers	Customer Charge Revenue			Customer Charge	
Rate Class	Jan - Mar 2019	Apr-19	Total Jan-Apr	in Effect	Customers (d)/(e)
Residential	\$3,209,785	\$1,074,172	\$4,283,956	\$16.12	265,754
G2 kWh Meter	\$23,020	\$7,692	\$30,712	\$18.27	1,681
G2 QR Water Heating and/or Space Heat	\$7,581	\$2,514	\$10,095	\$9.67	1,044
G2	\$901,586	\$300,850	\$1,202,436	\$29.02	41,435
G1 Primary Voltage	\$8,513	\$2,838	\$11,351	\$85.99	132
G1 Secondary Voltage	\$63,041	\$21,282	\$84,323	\$161.23	523
OL	\$0	\$0	\$0	n/a	n/a
G2 Transformer Ownership Credits	(\$5,365)	(\$1,313)	(\$6,678)	(\$0.50)	13,355
G1 Transformer Ownership Credits	(\$45,517)	(\$14,384)	(\$59,902)	(\$0.50)	119,803
kWh Usage					
Residential	134,380,750	36,267,907	170,648,657		
G2 kWh Meter	156,290	45,032	201,322		
G2 QR Water Heating and/or Space Heat	2,040,878	462,406	2,503,284		
G2	85,938,009	26,954,899	112,892,908		
G1 Primary Voltage	31,900,389	10,395,125	42,295,514		
G1 Secondary Voltage	47,466,148	15,855,902	63,322,050		
OL	1,994,366	661,680	2,656,046		
Distribution Revenues				Calculated Dist rates	
Residential	\$4,753,066	\$1,282,801	\$6,035,867	\$0.03537	
G2 kWh Meter	\$1,373	\$395	\$1,768	\$0.00878	
G2 QR Water Heating and/or Space Heat	\$65,002	\$14,728	\$79,730	\$0.03185	
G2	\$0	\$0	\$0	\$0.00000	
G1 Primary Voltage	\$0	\$0	\$0	\$0.00000	
G1 Secondary Voltage	\$0	\$0	\$0	\$0.00000	
OL	\$460,998	\$152,885	\$613,883	\$0.23113	
Demand Usage (kW, kVA)					
G2 Demand	312,554	102,504	415,057		
G1 Demand	254,164	83,969	338,133		
Demand Revenue					
G2 Distribution Demand	\$3,266,168	\$1,071,181	\$4,337,349	\$10.45	
G1 Distribution Demand	\$1,918,938	\$633,965	\$2,552,903	\$7.55	

May - December 2019

No. of Customers - May 2019 - December 2019

	Customer Charge Revenue				
Rate Class	Jan - Dec 2019	Jan - April 2019	Total May-Dec	in Effect	Customers (d)/(e)
Residential	\$13,084,619	(\$4,283,956)	\$8,800,663	\$16.22	542,581
G2 kWh Meter	\$86,675	(\$30,712)	\$55,964	\$18.38	3,045
G2 QR Water Heating and/or Space Heat	\$30,171	(\$10,095)	\$20,076	\$9.73	2,063
G2	\$3,660,995	(\$1,202,436)	\$2,458,559	\$29.19	84,226
G1 Primary Voltage	\$34,004	(\$11,351)	\$22,653	\$86.49	262
G1 Secondary Voltage	\$256,019	(\$84,323)	\$171,696	\$162.18	1,059
OL	\$0	\$0	\$0	n/a	n/a
G2 Transformer Ownership Credits	(\$19,466)	\$6,678	(\$12,788)	(\$0.50)	25,576
G1 Transformer Ownership Credits	(\$173,566)	\$59,902	(\$113,664)	(\$0.50)	227,328
kWh Usage					
Residential	483,929,101	(170,648,657)	313,280,444		
G2 kWh Meter	500,439	(201,322)	299,117		
G2 QR Water Heating and/or Space Heat	4,942,809	(2,503,284)	2,439,525		
G2	337,338,818	(112,892,908)	224,445,910		
G1 Primary Voltage	127,844,446	(42,295,514)	85,548,932		
G1 Secondary Voltage	199,994,154	(63,322,050)	136,672,104		
OL	7,942,212	(2,656,046)	5,286,166		
Distribution Revenues				Calculated Dist rates	
D	\$17,179,193	(\$6,035,867)	\$11,143,326	\$0.03557	
G2 kWh	\$4,408	(\$1,768)	\$2,640	\$0.00883	
G2 QRSH	\$157,865	(\$79,730)	\$78,135	\$0.03203	
G2	-\$5	\$0	-\$5	\$0.00000	
G1 Primary	\$0	\$0	\$0	\$0.00000	
G1 Secondary	\$0	\$0	\$0	\$0.00000	
OL	\$1,845,028	(\$613,883)	\$1,231,145	\$0.23290	
Demand Usage (kW, kVA)					
G2 Demand	1,316,549.73	(415,057)	901,493		
G1 Demand	1,021,630.38	(338,133)	683,498		
Demand Revenue					
G2 Distribution Demand	\$13,809,065.29	(\$4,337,349)	\$9,471,717	\$10.51	
G1 Distribution Demand	\$7,745,750	(\$2,552,903)	\$5,192,847	\$7.60	

Note: G1 excludes backup/auxiliary service customer.

Unitil Energy Systems, Inc.
Actual C&I kW Savings Derivation
January 1, 2019 to December 31, 2019

Line No.	Description	Unitil
1.	Gross Annualized kWh Savings	8,005,619
2.	Maximum Demand Factor (MDF)	Varies by Measure
3.	Extended Max. Load Reduction kW	2,160
4.	% kW Demand Reduction at Customer Peak	Varies by Measure
5.	Sub-Total Customer Peak kW Reduction	1,140
6.	% Net to Gross	100%
7.	Sub-Total Customer Peak kW Reduction	1,140
8.	% In-Service Rate	100%
9.	Sub-Total Customer Peak kW Reduction	1,140
10.	% kW Realization Rate	Varies by Measure
11.	Sub-Total Customer Peak kW Reduction	1,140
12.	% Billing Adjustment to Reflect Ratchets	100%
13.	Sub-Total Customer Peak kW Reduction	1,140
14.	% Retirement Adjustment	100%
15.	Total Customer Peak kW Reduction, Full Year	1,140
16.	% Annual Savings Achieved in First Year (Note 1)	34.4%
17.	Total Customer Peak Red. in First Year	392
18.	Annualized (x12)	n/a
19.	Average Distribution Rate (ADR) - \$/kW (Note 2)	\$ 9.17
20.	LBR Calculation	\$ 3,598

Notes:

- (1) Weighed average percentage based on the actual installation dates of the 2019 equipment.
(2) The Company's C&I Average Distribution Rate (ADR) changed mid-year. The weighted average rate calculation is shown below. See UES' 2019 Annual Report, Page 1 of 14.

- Weighted Average ADR	\$ 3,598	392	\$ 9.17
	Demand Revenue	Sum kW	Avg \$/kW

Description	Residential kWh	Commercial kWh	C&I kW	Total	Reference	
Legacy (Measures Installed in 2017 and 2018):	(Note 1)					
1. Program Year 2017 Actual LBR Savings (Jan - Apr)	448,072	2,001,628	-	2,449,700	DE 14-216, 2017 Annual Report, P. 3 / 12 * 4	
2. 2019 Average Distribution Rate (ADR) (Jan - Apr)	<u>\$0.03537</u>	<u>\$0.03121</u>	-		DE 17-136, 2019 Annual Report, P. 1 Line 9 & 12	
3. Sub-Total LBR	\$ 15,848	\$ 62,480	\$ -	\$ 78,329	Line 1 * Line 2	
4. Program Year 2017 Actual LBR Savings (May - Dec)	896,144	4,003,256	-	4,899,400	DE 14-216, 2017 Annual Report, P. 3 / 12 * 8	
5. 2019 Average Distribution Rate (ADR) (May - Dec)	<u>\$0.03558</u>	<u>\$0.03254</u>	-		DE 17-136, 2019 Annual Report, P. 1 Line 9 & 12	
6. Sub-Total LBR	\$ 31,885	\$ 130,269	\$ -	\$ 162,153	Line 4 * Line 5	
7. Program Year 2018 Actual LBR Savings (Jan - Apr)	(Note 2)	956,072	2,236,048	-	3,192,120	DE 17-136, 2018 Annual Report, P. 3 / 12 * 4
8. 2019 Average Distribution Rate (ADR) (Jan - Apr)		<u>\$0.03537</u>	<u>\$0.03121</u>	-		DE 17-136, 2019 Annual Report, P. 1 Line 9 & 12
9. Sub-Total LBR	\$ 33,816	\$ 69,798	\$ -	\$ 103,614	Line 7 * Line 8	
10. Program Year 2018 Actual LBR Savings (May - Dec)	(Note 2)	1,912,144	4,472,096	-	6,384,240	DE 17-136, 2018 Annual Report, P. 3 / 12 * 8
11. Program Year 2018 Actual Retired LBR Savings (May - Dec)		(51,777)	-	(51,777)	DE 17-136, 2019 Annual Report, P. 3 Line 21	
12. 2019 Average Distribution Rate (ADR) (May - Dec)		<u>\$0.03558</u>	<u>\$0.03254</u>	-		DE 17-136, 2019 Annual Report, P. 1 Line 9 & 12
13. Sub-Total LBR	\$ 66,192	\$ 145,525	\$ -	\$ 211,717	(Line 10 + Line 11) * Line 12	
14. Sub-Total Legacy Savings (Measures Installed in 2017 and 2018)		4,160,655	12,713,028	-	16,873,683	Line 1 + Line 4 + Line 7 + Line 10 + Line 11
15. Sub-Total Legacy LBR	\$ 147,741	\$ 408,071	\$ -	\$ 555,813	Line 3 + Line 6 + Line 9 + Line 13	
New Methodology (Measures Installed in 2019 and forward):	(Note 3)					
16. Program Year 2019 Actual LBR Savings (Jan - Apr)	251,612	245,478	27	497,117	DE 17-136, 2019 Annual Report, P. 3 Line 22	
17. 2019 Average Distribution Rate (ADR) (Jan - Apr)	<u>\$0.03537</u>	<u>\$0.00037</u>	<u>\$9.06</u>		DE 17-136, 2019 Annual Report, P. 1 Line 9 & 17 & 18	
18. Sub-Total LBR	\$ 8,900	\$ 91	\$ 247	\$ 9,238	Line 16 * Line 17	
19. Program Year 2019 Actual LBR Savings (May - Dec)	2,277,581	2,553,564	365	4,831,510	DE 17-136, 2019 Annual Report, P. 3 Line 22	
20. 2019 Average Distribution Rate (ADR) (May - Dec)	<u>\$0.03558</u>	<u>\$0.00018</u>	<u>\$9.18</u>		DE 17-136, 2019 Annual Report, P. 1 Line 9 & 17 & 18	
21. Sub-Total LBR	\$ 81,036	\$ 460	\$ 3,351	\$ 84,846	Line 19 * Line 20	
22. Sub-Total "New Method" Monthly Savings - 2019	2,529,193	2,799,042	392	-	Line 16 + Line 19	
23. Sub-Total "New Method" LBR - 2019 Forward	\$ 89,936	\$ 550	\$ 3,598	\$ 94,084	Line 18 + Line 21	
24. Total 2019 Actual LBR	\$ 237,677	\$ 408,622	\$ 3,598	\$ 649,897	Line 15 + Line 23	

Comments

1. Legacy portion utilizes old methodology for calculating LBR - i.e. it utilizes a combined ADR for measures installed in 2017 and 2018.
2. Actual LBR Savings differ from program savings as the 110% LBR cap was reached
3. New methodology disaggregates kWh and kW components as specified in the Settlement Agreement in DE 17-136 (Order No. 26,095).