

UNITIL ENERGY SYSTEMS, INC.
DOCKET DE 21-030
SETTLEMENT REVENUE REQUIREMENT SCHEDULES

UNITIL ENERGY SYSTEMS, INC.
REVENUE REQUIREMENT TABLE OF CONTENTS
12 MONTHS ENDED DECEMBER 31, 2020

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UNITIL ENERGY SYSTEMS, INC.
COMPUTATION OF REVENUE DEFICIENCY AND REVENUE REQUIREMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-1

LINE NO.	(1) DESCRIPTION	(2) REFERENCE	(3) AMOUNT	(4) SETTLEMENT UPDATE	(5) CHANGE FROM INITIAL FILING
1	Rate Base	Schedule RevReq-4	\$ 226,030,082	\$ 223,632,999	\$ (2,397,083)
2	Rate Of Return	Schedule RevReq-5	7.88%	7.42%	-0.46%
3	Income Required	Line 1 * Line 2	17,811,170	16,593,569	(1,217,601)
4	Adjusted Net Operating Income	Schedule RevReq-2	9,066,677	12,303,574	3,236,896
5	Deficiency	Line 3 - Line 4	8,744,493	4,289,995	(4,454,497)
6	Income Tax Effect	Line 7 - Line 5	3,247,900	1,593,400	(1,654,500)
7	Revenue Deficiency	1.3714 (Schedule RevReq-1-1) * Line 5	\$ 11,992,392	\$ 5,883,395	\$ (6,108,997)

UNITIL ENERGY SYSTEMS, INC.
COMPUTATION OF GROSS-UP FACTOR FOR REVENUE REQUIREMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-1-1

LINE NO.	(1) DESCRIPTION	(2) RATE	(3) AMOUNT
1	Federal Income Tax Rate	21.00%	0.2100
2	State Income Tax Rate	7.70%	0.0770
3	Federal Benefit of State Income Tax	-(Line 1 * Line 2)	<u>(0.0162)</u>
4	Effective Tax Rate	(Line 1 + Line 2 + Line 3)	<u>0.2708</u>
5	Gross-Up Factor	(1 / 1 - Line 4)	<u><u>1.3714</u></u>

UNITIL ENERGY SYSTEMS, INC.
OPERATING INCOME STATEMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-2
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LINE NO.	(1) DESCRIPTION	(2) TEST YEAR 12 MONTHS ENDED 12/31/2020	(3) TEST YEAR FLOW-THROUGH	(4) TEST YEAR DISTRIBUTION	(5) PROFORMA ADJUSTMENTS	(6) TEST YEAR DISTRIBUTION AS PROFORMED	(7) CALENDAR YEAR 2019 ⁽¹⁾	(8) CALENDAR YEAR 2018 ⁽¹⁾
1	Distribution Revenue	\$ 58,337,364	\$ -	\$ 58,337,364	\$ (280,812)	\$ 58,056,553	\$ 57,749,747	\$ 57,757,766
2	Flow-Through Revenue	98,489,216	98,489,216	-	-	-	101,655,415	97,267,289
3	Electric Service Revenue	156,826,580	98,489,216	58,337,364	(280,812)	58,056,553	159,405,162	155,025,055
4	Other Operating Revenue	2,096,875	1,078,347	1,018,528	443,993	1,462,521	2,426,664	2,623,127
5	Total Operating Revenues	158,923,455	99,567,563	59,355,892	163,181	59,519,073	161,831,826	157,648,182
6	Operating Expenses:							
7	Purchased Power	53,020,521	52,736,269	284,252	-	284,252	65,385,884	61,038,767
8	Transmission	35,468,734	35,400,175	68,559	-	68,559	28,308,204	29,608,490
9	Distribution	9,476,199	-	9,476,199	788,559	10,264,758	9,195,883	9,199,438
10	Customer Accounting	4,286,916	321,671	3,965,244	(47,904)	3,917,340	4,655,167	4,633,933
11	Customer Service	7,326,955	7,298,180	28,775	-	28,775	5,450,371	3,773,461
12	Administrative & General	9,750,830	825,374	8,925,457	(454,748)	8,470,709	10,867,236	10,763,947
13	Depreciation	12,680,791	-	12,680,791	(1,101,534)	11,579,258	11,905,213	11,419,121
14	Amortizations	3,262,428	1,059,270	2,203,158	(822,473)	1,380,685	3,378,749	3,484,160
15	Taxes Other Than Income	7,166,678	-	7,166,678	1,005,588	8,172,266	6,435,130	6,519,710
16	Federal Income Tax	(1,180,388)	-	(1,180,388)	4,367,047	3,186,659	4,672,111	(173,832)
17	State Income Tax	(1,096,468)	-	(1,096,468)	1,599,828	503,360	1,707,349	(927)
18	Deferred Federal & State Income Taxes	5,203,294	-	5,203,294	(5,861,441)	(658,148)	(3,692,668)	3,207,039
19	Interest On Customers Deposits	17,026	-	17,026	-	17,026	31,594	32,204
20	Total Operating Expenses	145,383,515	97,640,939	47,742,577	(527,077)	47,215,500	148,300,222	143,505,511
21	Net Operating Income	\$ 13,539,940	\$ 1,926,625	\$ 11,613,315	\$ 690,258	\$ 12,303,574	\$ 13,531,604	\$ 14,142,671

Notes

(1) Calendar Years 2019 and 2018 Represents Total Company (i.e., Flow-Through and Distribution).

UNITIL ENERGY SYSTEMS, INC.
PRO FORMA DISTRIBUTION OPERATING INCOME STATEMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-2
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LINE NO.	(1) DESCRIPTION	(2) TEST YEAR DISTRIBUTION	(3) PROFORMA ADJUSTMENTS	(4) TEST YEAR DISTRIBUTION AS PROFORMED	(5) PROOF (6) PRO FORMA REVENUE RATE REQUIREMENT RELIEF	
1	Distribution Revenue	\$ 58,337,364	\$ (280,812)	\$ 58,056,553	\$ 5,883,395	\$ 63,939,948
2	Flow-Through Revenue	-	-	-	-	-
3	Electric Service Revenue	58,337,364	(280,812)	58,056,553	5,883,395	63,939,948
4	Other Operating Revenue	1,018,528	443,993	1,462,521	-	1,462,521
5	Total Operating Revenues	59,355,892	163,181	59,519,073	5,883,395	65,402,469
6	Operating Expenses:					
7	Purchased Power	284,252	-	284,252	-	284,252
8	Transmission	68,559	-	68,559	-	68,559
9	Distribution	9,476,199	788,559	10,264,758	-	10,264,758
10	Customer Accounting	3,965,244	(47,904)	3,917,340	-	3,917,340
11	Customer Service	28,775	-	28,775	-	28,775
12	Administrative & General	8,925,457	(454,748)	8,470,709	-	8,470,709
13	Depreciation	12,680,791	(1,101,534)	11,579,258	-	11,579,258
14	Amortizations	2,203,158	(822,473)	1,380,685	-	1,380,685
15	Taxes Other Than Income	7,166,678	1,005,588	8,172,266	-	8,172,266
16	Federal Income Tax	(1,180,388)	4,367,047	3,186,659	1,140,379	4,327,037
17	State Income Tax	(1,096,468)	1,599,828	503,360	453,021	956,382
18	Deferred Federal & State Income Taxes	5,203,294	(5,861,441)	(658,148)	-	(658,148)
19	Interest On Customers Deposits	17,026	-	17,026	-	17,026
20	Total Operating Expenses	47,742,577	(527,077)	47,215,500	1,593,400	48,808,900
21	Net Operating Income	\$ 11,613,315	\$ 690,258	\$ 12,303,574	\$ 4,289,995	\$ 16,593,569

UNITIL ENERGY SYSTEMS, INC.
SUMMARY OF ADJUSTMENTS
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3

LINE NO.	(1) DESCRIPTION	(2) CLASSIFICATION	(3) SCHEDULE NO.	(4) AMOUNT	(5) SETTLEMENT UPDATE	(6) TOTAL ADJUSTMENT
1	Revenue Adjustments					
2	Non-Distribution Bad Debt	Dist Rev	Schedule RevReq-3-1	(143,623)	\$ -	\$ (143,623)
3	Unbilled Revenue Adjustment	Dist Rev	Schedule RevReq-3-1	(137,189)	-	(137,189)
4	New DOC Rent Revenue	Oth Rev	Schedule RevReq-3-1	313,007	-	313,007
5	Late Fee Adjustment	Oth Rev	Schedule RevReq-3-1	180,938	-	180,938
6	Remove Wheeling Revenue	Oth Rev	Schedule RevReq-3-1	-	(49,952)	(49,952)
7	Total Revenue Adjustments			<u>\$ 213,133</u>	<u>\$ (49,952)</u>	<u>\$ 163,181</u>
8	Operating & Maintenance Expense Adjustments					
9	Payroll	Dist	Schedule RevReq-3-2	\$ 709,516	\$ (356,250)	\$ 353,265
10	VMP Expense	Dist	Schedule RevReq-3-3	1,406,427	(989,500)	416,927
11	Medical & Dental Insurances	A&G	Schedule RevReq-3-4	483,155	(74,466)	408,689
12	Pension	A&G	Schedule RevReq-3-5	62,288	-	62,288
13	PBOP	A&G	Schedule RevReq-3-5	(41,636)	-	(41,636)
14	SERP	A&G	Schedule RevReq-3-5	85,989	-	85,989
15	401K	A&G	Schedule RevReq-3-5	41,844	(21,354)	20,490
16	Deferred Comp Expense	A&G	Schedule RevReq-3-5	64,957	-	64,957
17	Property & Liability Insurances	A&G	Schedule RevReq-3-6	72,468	(6,014)	66,454
18	DOC Expense Adjustment	Dist	Schedule RevReq-3-7	(1,968)	-	(1,968)
19	NHPUC Regulatory Assessment	A&G	Schedule RevReq-3-8	159,383	212,154	371,537
20	Dues & Subscriptions	A&G	Schedule RevReq-3-9	(14,473)	-	(14,473)
21	Pandemic Costs	A&G	Schedule RevReq-3-10	(39,857)	-	(39,857)
22	Claims & Litigation Adjustment	A&G	Schedule RevReq-3-11	44,072	-	44,072
23	Severance Expense	A&G	Schedule RevReq-3-12	(40,395)	-	(40,395)
24	Distribution Bad Debt	Cust Acct	Schedule RevReq-3-13	134,563	(38,844)	95,719
25	Non-Distribution Bad Debt	Cust Acct	Schedule RevReq-3-1	(143,623)	-	(143,623)
26	Arrearage Management Program (AMP) Implementation Cost	Cust Acct	Schedule RevReq-3-14	-	-	-
27	Inflation Allowance	A&G	Schedule RevReq-3-15	128,368	(128,368)	-
28	NH DOE Audit Adjustment #8 ⁽¹⁾	A&G	Schedule RevReq-3-22	-	(20,028)	(20,028)
29	NH DOE Audit Adjustment Removed (VMP) ⁽¹⁾	Dist	Schedule RevReq-3-22	-	20,334	20,334
30	Removal of Better Investing Invoice	A&G	Schedule RevReq-3-22	-	(815)	(815)
31	Update for Normalized Communications Expense	A&G	Schedule RevReq-3-22	-	18,290	18,290
32	Update for 2021 Lease Payments	A&G	Schedule RevReq-3-22	-	24,038	24,038
33	Settlement Adjustment	A&G		-	(1,464,346)	(1,464,346)
34	Total Operating & Maintenance Expense Adjustments			<u>\$ 3,111,077</u>	<u>\$ (2,825,169)</u>	<u>\$ 285,907</u>
35	Depreciation & Amortization Expense Adjustments					
36	Depreciation Annualization	Depr	Schedule RevReq-3-16 P1	\$ 908,712	\$ -	\$ 908,712
37	Proposed Depreciation Rates	Depr	Schedule RevReq-3-16 P2 Revised	(789,749)	54,957	(734,792)
38	Amortize Reserve Imbalance	Depr	Schedule RevReq-3-16 P3	-	(1,275,454)	(1,275,454)
39	Software Amortization	Amort	Schedule RevReq-3-17	238,591	(61,269)	177,322
40	Excess ADIT Flowback	Amort	Schedule RevReq-3-18	(999,795)	-	(999,795)
41	Total Depreciation & Amortization Expense Adjustments			<u>\$ (642,241)</u>	<u>\$ (1,281,766)</u>	<u>\$ (1,924,007)</u>
42	Taxes Other Than Income Adjustments					
43	Property Taxes	Taxes Other	Schedule RevReq-3-19	\$ 744,985	\$ 103,822	\$ 848,807
44	Payroll Taxes - Wage Increases	Taxes Other	Schedule RevReq-3-20 P1	54,278	(3,741)	50,537
45	Payroll Taxes - Employee Retention Credit	Taxes Other	Schedule RevReq-3-20 P2	106,244	-	106,244
46	Total Taxes Other Than Income Adjustments			<u>\$ 905,507</u>	<u>\$ 100,082</u>	<u>\$ 1,005,588</u>
47	Income Taxes Adjustments					
48	Federal Income Tax	FIT	Schedule RevReq-3-21 P1	\$ (681,065)	\$ 754,833	\$ 73,768
49	State Income Tax	SIT	Schedule RevReq-3-21 P1	(270,557)	299,861	29,305
50	Prior Year Federal Income Tax	FIT	Schedule RevReq-3-21 P4	4,293,279	-	4,293,279
51	Prior Year State Income Tax	SIT	Schedule RevReq-3-21 P4	1,570,523	-	1,570,523
52	Prior Year Deferred Federal Income Tax	DIT	Schedule RevReq-3-21 P4	(4,290,918)	-	(4,290,918)
53	Prior Year Deferred State Income Tax	DIT	Schedule RevReq-3-21 P4	(1,570,523)	-	(1,570,523)
54	Total Income Taxes Adjustments			<u>\$ (949,260)</u>	<u>\$ 1,054,694</u>	<u>\$ 105,434</u>
55	Rate Base Adjustments					
56	Cash Working Capital Adjustment	CWC	Schedule RevReq-4-2	\$ 967,154	\$ (277,917)	\$ 689,237
57	Kensington Distribution Operating Center Adj. - Net Book Value	Plant	Schedule RevReq-4-3	(988,214)	-	(988,214)
58	Kensington Distribution Operating Center Adj. - ADIT	RB DIT	Schedule RevReq-4-3	(71,351)	-	(71,351)
59	Exeter Distribution Operating Center Adj. - Net Book Value	Plant	Schedule RevReq-4-4	577,144	-	577,144
60	Excess Accumulated Income Tax Adj. (Storm)	EDIT	Schedule RevReq-4-5	-	-	-
61	Accumulated Deferred Income Tax Adj. (Storm)	EDIT	Schedule RevReq-4-5	-	-	-
62	Adjust M&S to 5-Qrt Average	M&S	Schedule RevReq-4-5	-	(34,007)	(34,007)
63	Prepaid Balance Adjustment	Prepay	Schedule RevReq-4-2 Revised	-	(156,803)	(156,803)
64	Total Rate Base Adjustments			<u>\$ 627,434</u>	<u>\$ (468,727)</u>	<u>\$ 158,707</u>

Notes:

(1) Audit Issue #2 is reflected in Prop & Liab Line Above and not NH DOE Audit Adjustments

UNITIL ENERGY SYSTEMS, INC.
REVENUE ADJUSTMENTS
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-1

LINE NO.	(1) DESCRIPTION	(2)	AMOUNT
1	<u>Non Distribution Bad Debt Adjustment (Revenue & Expense)</u>		
2	Remove: Accrued Revenue - Non Dist Bad Debt	\$	(143,623)
3	Remove: Provision For Doubtful Accts - Non-Dist	\$	(143,623)
4	<u>Unbilled Revenue Adjustment</u>		
5	Remove Unbilled Revenue	\$	(137,189)
6	<u>Rent Revenue Adjustment</u>		
7	Annual DOC Rental Revenue Received from USC	\$	313,007
8	<u>Late Payment Revenue Adjustment ⁽¹⁾</u>		
9	Late Payment Revenue Adjustment	\$	180,938

Notes

(1) Refer to Workpaper 1.1

UNITIL ENERGY SYSTEMS, INC.
PAYROLL ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-2
Page 1 of 2

LINE NO.	(1) DESCRIPTION	(2)	(3)	(4)	(5)	(6)
		NONUNION	UES UNION	SUBTOTAL	FROM USC	TOTAL
1	Test Year Payroll, Adjusted for Target Incentive Compensation	\$ 1,405,138	\$ 4,793,090	\$ 6,198,228	\$ 8,630,554	\$ 14,828,782
2	2020 Rate Increase, Annualized ⁽¹⁾	-	57,518	57,518	-	57,518
3	Payroll Annualized for 2020 Union Wage Increase	1,405,138	4,850,608	6,255,746	8,630,554	14,886,300
4	2021 Salary & Wage Increase ⁽²⁾	51,288	145,518	196,806	379,744	576,550
5	Payroll Proformed for 2020 and 2021 Wage Increases	1,456,426	4,996,126	6,452,552	9,010,298	15,462,850
6	2022 Salary & Wage Increase ⁽³⁾	53,160	149,884	203,043	396,453	599,496
7	Payroll Proformed for 2020, 2021 and 2022 Wage Increases	1,509,585	5,146,010	6,655,595	9,406,751	16,062,346
8	Less Amounts Chargeable to Capital ⁽⁴⁾	969,908	3,306,311	4,276,219	2,676,221	6,952,440
9	O&M Payroll Proformed	539,677	1,839,699	2,379,376	6,730,530	9,109,907
10	Less: Test Year O&M Payroll ⁽⁵⁾			2,225,229	6,175,162	8,400,391
11	Increase in O&M Payroll due to Annual Salary and Wage Increases			154,147	555,368	709,516
12	Incentive Compensation Target Adjustment ⁽⁶⁾			\$ -	-	-
13	Net Adjustment to O&M Payroll / Compensation			154,147	555,368	709,516

Notes

(1) UES Union increase of 3.0% effective June 1, 2020

(2) UES Non-union increase of 3.65% effective January 1, 2021, Union increase of 3.0% effective June 1, 2021 and USC increase of 4.40% effective January 1, 2021

(3) UES Non-union increase of 3.65% effective January 1, 2022, Union increase of 3.0% effective June 1, 2022 and USC increase of 4.40% effective January 1, 2022

(4) Test Year Payroll Capitalization Rates:

UES	64.25%
USC	28.45%

(5) Refer to Workpaper 2.2 and Schedule RevReq-3-2, page 2.

(6) Refer to Workpaper 2.4

UNITIL ENERGY SYSTEMS, INC.
PAYROLL ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-2 Revised
Page 1 of 2 Revised

LINE NO.	(1) DESCRIPTION	(2)	(3)	(4)	(5)	(6)
		NONUNION	UES UNION	SUBTOTAL	FROM USC	TOTAL
1	Test Year Payroll, Adjusted for Target Incentive Compensation	\$ 1,405,138	\$ 4,793,090	\$ 6,198,228	\$ 8,630,554	\$ 14,828,782
2	2020 Rate Increase, Annualized ⁽¹⁾	-	57,518	57,518	-	57,518
3	Payroll Annualized for 2020 Union Wage Increase	1,405,138	4,850,608	6,255,746	8,630,554	14,886,300
4	2021 Salary & Wage Increase ⁽²⁾	51,288	145,518	196,806	379,744	576,550
5	Payroll Proformed for 2020 and 2021 Wage Increases	1,456,426	4,996,126	6,452,552	9,010,298	15,462,850
6	2022 Salary & Wage Increase ⁽³⁾	-	-	-	-	-
7	Payroll Proformed for 2020, 2021 and 2022 Wage Increases	1,456,426	4,996,126	6,452,552	9,010,298	15,462,850
8	Less Amounts Chargeable to Capital ⁽⁴⁾	935,753	3,210,011	4,145,764	2,563,430	6,709,194
9	O&M Payroll Proformed	520,673	1,786,115	2,306,788	6,446,868	8,753,656
10	Less: Test Year O&M Payroll ⁽⁵⁾			2,225,229	6,175,162	8,400,391
11	Increase in O&M Payroll due to Annual Salary and Wage Increases			81,559	271,706	353,265
12	Incentive Compensation Target Adjustment ⁽⁶⁾			\$ -	-	-
13	Net Adjustment to O&M Payroll / Compensation			81,559	271,706	353,265

Notes

(1) UES Union increase of 3.0% effective June 1, 2020

(2) UES Non-union increase of 3.65% effective January 1, 2021, Union increase of 3.0% effective June 1, 2021 and USC increase of 4.40% effective January 1, 2021

(3) UES Non-union increase of 3.76% effective January 1, 2022, Union increase of 3.0% effective June 1, 2022 and USC increase of 4.56% effective January 1, 2022

(4) Test Year Payroll Capitalization Rates:

UES	64.25%
USC	28.45%

(5) Refer to Workpaper 2.2 and Schedule RevReq-3-2, page 2.

(6) Refer to Workpaper 2.4

**UNITIL ENERGY SYSTEMS, INC.
UNITIL SERVICE CORP PAYROLL ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020**

Schedule RevReq-3-2
Page 2 of 2

(1)		(2)
LINE NO.	DESCRIPTION	TOTAL
1	Test Year USC Labor Charges to Unitil Energy ⁽¹⁾	\$ 8,630,554
2	2021 Salary & Wage Increase % ⁽²⁾	4.40%
3	Payroll Increase	379,744
4	Proforma Payroll for 2019 Increase	9,010,298
5	2022 Salary & Wage Increase % ⁽²⁾	4.40%
6	Payroll Increase	396,453
7	Proforma Payroll for 2019 and 2020 Increase	9,406,751
8	Payroll Capitalization Ratio for 2021 and 2022 Increase	28.45%
9	Proforma Payroll Capitalization	2,676,221
10	Proforma Amount to O&M Expense	6,730,530
11	Test Year O&M Payroll Amount of USC Charge	6,175,162
12	O&M Payroll Increase	\$ 555,368

Notes

(1) Includes Incentive Compensation at Target of \$938,339

(2) Average Increase of 4.40% Effective January 1, 2021 and Average Increase of 4.40% Effective January 1, 2022

**UNITIL ENERGY SYSTEMS, INC.
UNITIL SERVICE CORP PAYROLL ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020**

Schedule RevReq-3-2 Revised
Page 2 of 2 Revised

(1)		(2)
LINE NO.	DESCRIPTION	TOTAL
1	Test Year USC Labor Charges to Unitil Energy ⁽¹⁾	\$ 8,630,554
2	2021 Salary & Wage Increase % ⁽²⁾	4.40%
3	Payroll Increase	379,744
4	Proforma Payroll for 2019 Increase	9,010,298
5	2022 Salary & Wage Increase % ⁽²⁾	0.00%
6	Payroll Increase	-
7	Proforma Payroll for 2019 and 2020 Increase	9,010,298
8	Payroll Capitalization Ratio for 2021 and 2022 Increase	28.45%
9	Proforma Payroll Capitalization	2,563,430
10	Proforma Amount to O&M Expense	6,446,868
11	Test Year O&M Payroll Amount of USC Charge	6,175,162
12	O&M Payroll Increase	\$ 271,706

Notes

(1) Includes Incentive Compensation at Target of \$938,339

(2) Average Increase of 4.40% Effective January 1, 2021 and Average Increase of 4.56% Effective January 1, 2022

UNITIL ENERGY SYSTEMS, INC.
RELIABILITY ENHANCEMENT AND VEGETATION MANAGEMENT PROGRAM ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-3

LINE NO.	(1) DESCRIPTION	(2) 2020 ⁽¹⁾	(3) 2021 ⁽¹⁾
1	Cycle Prune	\$ 1,487,245	\$ 1,746,507
2	Hazard Tree Mitigation	934,544	840,000
3	Forestry Reliability Work	18,168	115,360
4	Mid-Cycle Review	31,791	25,603
5	Police / Flagger	676,997	619,515
6	Core Work	176,579	154,500
7	VM Planning	-	-
8	Distribution Total	3,325,322	3,501,485
9	Sub-T	363,327	620,069
10	Substation Spraying	10,798	13,431
11	VM Staff	376,758	364,491
12	Program Total	4,076,205	4,499,476
13	Storm Resiliency Program	1,439,617	1,465,690
14	Reliability Enhancement Program	152,803	300,000
15	Deferral as of 12/31/2020	179,614	-
16	Total REP & VMP Expense	\$ 5,848,239	\$ 6,265,166
17	Increase in REP & VMP Expense		\$ 416,927
18	Removal of Test Year Third Party Reimbursement ⁽²⁾		989,500
19	Total Increase in REP & VMP Expense		\$ 1,406,427

Notes

(1) Per DE 20-183 filing made on February 17, 2021

(2) To be refunded as part of the Company's External Delivery Charge (EDC)

UNITIL ENERGY SYSTEMS, INC.
RELIABILITY ENHANCEMENT AND VEGETATION MANAGEMENT PROGRAM ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-3 Revised

LINE NO.	(1) DESCRIPTION	(2)	(3)
		2020 ⁽¹⁾	2021 ⁽¹⁾
1	Cycle Prune	\$ 1,487,245	\$ 1,746,507
2	Hazard Tree Mitigation	934,544	840,000
3	Forestry Reliability Work	18,168	115,360
4	Mid-Cycle Review	31,791	25,603
5	Police / Flagger	676,997	619,515
6	Core Work	176,579	154,500
7	VM Planning	-	-
8	Distribution Total	3,325,322	3,501,485
9	Sub-T	363,327	620,069
10	Substation Spraying	10,798	13,431
11	VM Staff	376,758	364,491
12	Program Total	4,076,205	4,499,476
13	Storm Resiliency Program	1,439,617	1,465,690
14	Reliability Enhancement Program	152,803	300,000
15	Third Party Remimbursements ⁽²⁾	(989,500)	(989,500)
16	Deferral as of 12/31/2020	179,614	-
17	Test Year VMP, REP & SRP Expense ⁽³⁾	\$ 4,858,739	\$ 5,275,666
18	Total Increase in VMP, REP & SRP Expense		\$ 416,927

Notes

(1) Per DE 20-183 filing made on February 17, 2021

(2) Third Party Reimbursement credit of \$989,500 reflected in base rates

(3) Amount in base rates per DE 16-384 and refer to DOE Audit Report Page 89

UNITIL ENERGY SYSTEMS, INC.
MEDICAL AND DENTAL INSURANCE ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-4

	(1)	(2)	(3)	(4)
LINE NO.	DESCRIPTION	TOTAL	UNITIL ENERGY SYSTEMS, INC. ⁽¹⁾	UNITIL SERVICE CORP. ⁽²⁾
1	Proformed Medical and Dental O&M Expense	\$ 995,556	\$ 219,155	\$ 776,401
2	Less: Test Year Medical And Dental Insurance O&M Expense	512,402	95,921	416,480
3	Proformed 2021 And 2022 O&M Increase	<u>\$ 483,155</u>	<u>\$ 123,234</u>	<u>\$ 359,921</u>

Notes

(1) See Workpapers W3.1

(2) See Workpapers W3.2

UNITIL ENERGY SYSTEMS, INC.
MEDICAL AND DENTAL INSURANCE ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-4 Revised

LINE NO.	(1)	(2)	(3)	(4)
	DESCRIPTION	TOTAL	UNITIL ENERGY SYSTEMS, INC. ⁽¹⁾	UNITIL SERVICE CORP. ⁽²⁾
1	Proformed Medical and Dental O&M Expense	\$ 921,090	\$ 202,305	\$ 718,785
2	Less: Test Year Medical And Dental Insurance O&M Expense	512,402	95,921	416,480
3	Proformed 2021 O&M Increase	<u>\$ 408,689</u>	<u>\$ 106,384</u>	<u>\$ 302,305</u>

Notes

(1) See Workpapers W3.1

(2) See Workpapers W3.2

Unitil Energy Systems, Inc.
PENSION, PBOP, SERP, 401(K) and Deferred Compensation Expense
12 MONTHS ENDED DECEMBER 21, 2020

Schedule RevReq-3-5

LINE NO.	(1) DESCRIPTION	(2) TOTAL	(3) UNITIL ENERGY SYSTEMS, INC.	(4) UNITIL SERVICE CORP.
1	Test Year Pension Expense, as Pro-Formed	\$ 1,122,160	\$ 479,438	\$ 642,721
2	Test Year PBOP Expense, as Pro-Formed	849,272	579,088	270,185
3	Test Year SERP Expense, as Pro-Formed	468,678	-	468,678
4	Test Year 401K Expense, as Pro-Formed	534,997	102,860	432,136
5	Test Year Deferred Comp Expense, as Pro-Formed	77,097	-	77,097
6	Total Test Year Retirement Costs as Pro-Formed	3,052,204	1,161,386	1,890,817
7	Test Year Pension Expense	\$ 1,059,872	\$ 456,916	\$ 602,955
8	Test Year PBOP Expense	890,909	590,644	300,265
9	Test Year SERP Expense	382,690	-	382,690
10	Test Year 401K Expense	493,152	96,674	396,479
11	Test Year Deferred Comp Expense	12,140	-	12,140
12	Total Test Year Retirement Costs	2,838,762	1,144,234	1,694,528
13	Test Year Pension Expense, Pro-Forma Adjustment ⁽¹⁾	62,288	22,522	39,766
14	Test Year PBOP Expense, Pro-Forma Adjustment ⁽²⁾	(41,636)	(11,556)	(30,080)
15	Test Year SERP Expense, Pro-Forma Adjustment ⁽³⁾	85,989	-	85,989
16	Test Year 401K Expense, Pro-Forma Adjustment ⁽⁴⁾	41,844	6,187	35,658
17	Test Year Deferred Comp Expense, Pro-Forma Adjustment ⁽⁵⁾	64,957	-	64,957
18	Total Test Year Pension, PBOP and 401K Expense, Pro-Forma Adjustment	\$ 213,441	\$ 17,152	\$ 196,289

Notes

(1) Refer to Workpaper 4.1

(2) Refer to Workpaper 4.2

(3) Refer to Workpaper 4.3

(4) Refer to Workpaper 4.4

(5) Refer to Workpaper 4.6

Unitil Energy Systems, Inc.
PENSION, PBOP, SERP, 401(K) and Deferred Compensation Expense
12 MONTHS ENDED DECEMBER 21, 2020

Schedule RevReq-3-5 Revised

LINE NO.	(1) DESCRIPTION	(2) TOTAL	(3) UNITIL ENERGY SYSTEMS, INC.	(4) UNITIL SERVICE CORP.
1	Test Year Pension Expense, as Pro-Formed	\$ 1,122,160	\$ 479,438	\$ 642,721
2	Test Year PBOP Expense, as Pro-Formed	849,272	579,088	270,185
3	Test Year SERP Expense, as Pro-Formed	468,678	-	468,678
4	Test Year 401K Expense, as Pro-Formed	513,643	99,719	413,924
5	Test Year Deferred Comp Expense, as Pro-Formed	77,097	-	77,097
6	Total Test Year Retirement Costs as Pro-Formed	3,030,850	1,158,245	1,872,605
7	Test Year Pension Expense	\$ 1,059,872	\$ 456,916	\$ 602,955
8	Test Year PBOP Expense	890,909	590,644	300,265
9	Test Year SERP Expense	382,690	-	382,690
10	Test Year 401K Expense	493,152	96,674	396,479
11	Test Year Deferred Comp Expense	12,140	-	12,140
12	Total Test Year Retirement Costs	2,838,762	1,144,234	1,694,528
13	Test Year Pension Expense, Pro-Forma Adjustment ⁽¹⁾	62,288	22,522	39,766
14	Test Year PBOP Expense, Pro-Forma Adjustment ⁽²⁾	(41,636)	(11,556)	(30,080)
15	Test Year SERP Expense, Pro-Forma Adjustment ⁽³⁾	85,989	-	85,989
16	Test Year 401K Expense, Pro-Forma Adjustment ⁽⁴⁾	20,490	3,045	17,445
17	Test Year Deferred Comp Expense, Pro-Forma Adjustment ⁽⁵⁾	64,957	-	64,957
18	Total Test Year Pension, PBOP and 401K Expense, Pro-Forma Adjustment	\$ 192,088	\$ 14,011	\$ 178,076

Notes

(1) Refer to Workpaper 4.1

(2) Refer to Workpaper 4.2

(3) Refer to Workpaper 4.3

(4) Refer to Workpaper 4.4 Revised

(5) Refer to Workpaper 4.6

UNITIL ENERGY SYSTEMS, INC.
PROPERTY & LIABILITY INSURANCE
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-6

LINE NO.	(1) DESCRIPTION	(2) TOTAL	(3) UES ⁽¹⁾	(4) UNITIL SERVICE CORP. ⁽²⁾
1	Proformed Property & Liability Insurances O&M Expense	\$ 369,896	\$ 328,517	\$ 41,379
2	Less: Test Year Property & Liability Insurances O&M Expense	297,428	273,026	24,402
3	Proformed 2021 And 2022 O&M Increase	<u>\$ 72,468</u>	<u>\$ 55,491</u>	<u>\$ 16,977</u>

Notes

(1) See Workpaper W5.1

(2) See Workpaper W5.2

UNITIL ENERGY SYSTEMS, INC.
PROPERTY & LIABILITY INSURANCE
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-6 Revised

LINE NO.	(1) DESCRIPTION	(2) TOTAL	(3) UES ⁽¹⁾	(4) UNITIL SERVICE CORP. ⁽²⁾
1	Proformed Property & Liability Insurances O&M Expense	\$ 359,457	\$ 312,618	\$ 46,839
2	Less: Test Year Property & Liability Insurances O&M Expense	293,003	268,601	24,402
3	Proformed 2021 O&M Increase	<u>\$ 66,454</u>	<u>\$ 44,017</u>	<u>\$ 22,437</u>

Notes

(1) See Workpaper W5.1 Revised

(2) See Workpaper W5.2 Revised

UNITIL ENERGY SYSTEMS, INC.
DISTRIBUTION OPERATION CENTER EXPENSE ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-7

	(1)	(2)
LINE NO.	DESCRIPTION	AMOUNT
1	New Exeter DOC Operating Expense ⁽¹⁾	\$ 119,250
2	Test Year DOC Operating Expense	121,218
3	Change in DOC Operating Expense	(1,968)

Notes

(1) Amount reflects 2021 budget and will be updated with 2021 actuals during pendency of case

UNITIL ENERGY SYSTEMS, INC.
REGULATORY ASSESSMENT FEE ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-8

LINE NO.	(1)	(2)	(3)
	DESCRIPTION	FY 2021 AS FILED	FY 2022 UPDATE
1	Regulatory Assessment for Fiscal Year 2021	\$ 801,884	\$ 1,014,038
2	Less: Supplier Portion	10,000	10,000
3	Regulatory Assessment Assigned to Base	791,884	1,004,038
4	Test Year Regulatory Assessment Assigned to Base	632,501	632,501
5	Regulatory Assessment Fee Adjustment	\$ 159,383	\$ 371,537

**UNITIL ENERGY SYSTEMS, INC.
DUES & SUBSCRIPTION ADJUSTEMENT
12 MONTHS ENDED DECEMBER 31, 2020**

Schedule RevReq-3-9

(1)		(2)
LINE NO.	DESCRIPTION	AMOUNT
1	EEl Membership Dues	
2	Regular Activities of Edison Electric Institute ⁽¹⁾	\$ 61,515
3	Industry Issues ⁽²⁾	6,152
4	Restoration, Operations, and Crisis Management Program ⁽³⁾	2,000
5	2021 Contribution to The Edison Foundation, which funds IEI ⁽⁴⁾	5,000
6	Total	<u>74,667</u>
7	Amount allocated to UES	68%
8	Test Year UES Dues & Subscriptions	<u>50,774</u>
9	Adjustment to remove lobbying portion of Dues & Subscriptions	<u><u>(14,473)</u></u>

Notes

- (1) The portion of 2021 membership dues relating to influencing legislation, which is not deductible for federal income tax purposes, is estimated to be 13%
- (2) The portion of the 2021 industry issues support relating to influencing legislation is estimated to be 24%
- (3) The Restoration, Operations, and Crisis Management Program is related to improvements to industry-wide responses to major outages (e.g. National Response Event); continuity of industry and business operations; and EEI's all hazards (storms, wildfires, cyber, etc.) support and coordination of the industry during times of crises. No portion of this assessment is allocable to influencing legislation
- (4) The Edison Foundation is an IRC 501(c)(3) educational and charitable organization. Contributions are deductible for federal income tax purposes to the extent provided by law. Please consult your tax advisor with respect to your specific situation

UNITIL ENERGY SYSTEMS, INC.
 PANDEMIC COST ADJUSTMENT
 12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-10

LINE NO.	(1) DESCRIPTION	(2) AMOUNT
1	Pandemic Cost Adjustment - UES	\$ 30,250
2	<u>Unitil Service Expense Allocated to UES</u>	
3	Total Unitil Service Pandemic Costs	\$ 49,496
4	UES Apportionment	27.50%
5	Expense Apportioned to UES	\$ 13,611
6	Capitalization Rate	29.42%
7	UES Capitalization	4,004
8	USC Allocable to UES Net Pandemic Expense	\$ 9,607
9	Removal of Total Pandemic Costs from Test Year	\$ (39,857)

UNITIL ENERGY SYSTEMS, INC.
CLAIMS & LITIGATION ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-11

	(1)	(2)
LINE NO.	DESCRIPTION	AMOUNT
1	Claims & Litigation Adjustment ⁽¹⁾	\$ 44,072

Notes

(1) Test year reflects a reclass adjustment from UES to Northern Utilities - Maine
Division for inadvertent expense booked in calendar year 2019

UNITIL ENERGY SYSTEMS, INC.
SEVERANCE EXPENSE ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-12

(1)		(2)
LINE NO.	DESCRIPTION	AMOUNT
1	Removal of test year severance expense	\$ (40,395)

UNITIL ENERGY SYSTEMS, INC.
DISTRIBUTION BAD DEBT ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-13

LINE NO.	(1) DESCRIPTION	(2) AMOUNT AS FILED	(3) SETTLEMENT UPDATE	(4) TOTAL
1	Calendar Year 2019 Write-Offs as a % of Retail Delivery Billed Revenue ⁽¹⁾	0.64%	0.64%	0.64%
2	Per Books Delivery Retail Billed Revenue - Calendar Year 2019 ⁽¹⁾	\$ 91,933,881	\$ -	\$ 91,933,881
3	Revenue Increase from Rate Case	11,992,392	(6,108,997)	5,883,395
4	2020 Total Normalized Delivery Retail Billed Revenue	\$ 103,926,273	\$ (6,108,997)	\$ 97,817,276
5	Uncollectible Delivery Revenue	\$ 660,815	\$ (38,844)	\$ 621,971
6	Less: Test Year Bad Debt Expense	\$ 526,252	\$ -	\$ 526,252
7	Increase in Bad Debt Expense	\$ 134,563	\$ (38,844)	\$ 95,719

Notes

(1) Normalized write offs and per books delivery retail billed revenue by using 2019 calendar year activity

UNITIL ENERGY SYSTEMS, INC.
 ARREARAGE MANGAEMENT PROGRAM (AMP) IMPLEMENTATION ADJUSTMENT
 12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-14

LINE NO.	(1) DESCRIPTION	(2) AMOUNT
1	Required AMP Full Time Employee	\$ -
2	Annual AMP Forgiveness ⁽¹⁾	-
3	Total AMP Implementation Costs	\$ -

Notes

(1) Annual over/under recovery of AMP forgiveness to be reconciled through Company's
 External Delivery Charge (EDC)

UNITIL ENERGY SYSTEMS, INC. Schedule RevReq-3-14 Revised
ARREARAGE MANGAEMENT PROGRAM (AMP) IMPLEMENTATION ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

(1)		(2)
LINE NO.	DESCRIPTION	AMOUNT
1	Required AMP Full Time Employee	\$ -
2	Allocation to UES	78%
3	Allocated AMP Full Time Employee Costs to UES	\$ -
4	Annual AMP Forgiveness ⁽¹⁾	-
5	Total AMP Implementation Costs	\$ -

Notes

(1) Annual over/under recovery of AMP forgiveness to be reconciled through Company's
External Delivery Charge (EDC)

UNITIL ENERGY SYSTEMS, INC.
INFLATION ALLOWANCE
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-15
Page 1 of 2

(1)		(2)
LINE NO.	DESCRIPTION	TOTAL
1	Test Year Distribution O&M Expenses	\$ 22,748,486
	Less Normalizing Adjustments Items:	
2	Payroll	\$ 8,400,391
3	Medical and Dental Insurance	512,402
4	401K Costs	493,152
5	Property & Liability Insurance	297,428
6	Regulatory Assessment Fees	632,501
7	Total Normalizing Adjustment Items	\$ 10,335,874
	Less Items not Subject to Inflation:	
8	Pension	\$ 1,059,872
9	Postemployment Benefits Other than Pensions	890,909
10	Supplemental Executive Retirement Plan	382,690
11	Deferred Comp Expense	12,140
12	Bad Debts	526,252
13	Vegetation Management Expense	4,858,739
14	Postage	298,842
15	Amortizations - USC Charge	107,733
16	Facility Leases - USC Charge	454,965
17	Total Items not Subject to Inflation	\$ 8,592,140
18	Residual O&M Expenses	\$ 3,820,472
19	Projected Inflation Rate ⁽¹⁾	3.36%
20	Increase in Other O&M Expense for Inflation	\$ 128,368
21	Inflation Allowance Agreed Upon in Settlement Agreement ⁽²⁾	\$ -

Notes

(1) Refer to Schedule RevReq-3-15, Page 2 of 2

(2) Settlement Parties Agree to Remove Inflation Allowance

UNITIL ENERGY SYSTEMS, INC.
INFLATION ALLOWANCE
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-15 Revised
Page 1 of 2

LINE NO.	(1) DESCRIPTION	(2) TOTAL
1	Test Year Distribution O&M Expenses	\$ 22,748,486
	Less Normalizing Adjustments Items:	
2	Payroll	\$ 8,400,391
3	Medical and Dental Insurance	512,402
4	401K Costs	493,152
5	Property & Liability Insurance	297,428
6	Regulatory Assessment Fees	632,501
7	Audit Adjustments & Better Investing Invoice	(509)
8	Total Normalizing Adjustment Items	\$ 10,335,365
	Less Items not Subject to Inflation:	
9	Pension	\$ 1,059,872
10	Postemployment Benefits Other than Pensions	890,909
11	Supplemental Executive Retirement Plan	382,690
12	Deferred Comp Expense	12,140
13	Bad Debts	526,252
14	Vegetation Management Expense	4,858,739
15	Postage	298,842
16	Amortizations - USC Charge	107,733
17	Facility Leases - USC Charge	454,965
18	Total Items not Subject to Inflation	\$ 8,592,140
19	Residual O&M Expenses	\$ 3,820,981
20	Projected Inflation Rate ⁽¹⁾	7.05%
21	Increase in Other O&M Expense for Inflation	\$ 269,379
22	Inflation Allowance Agreed Upon in Settlement Agreement ⁽²⁾	\$ -

Notes

(1) Refer to Schedule RevReq-3-15 Revised, Page 2 of 2

(2) Settlement Parties Agree to Remove Inflation Allowance

UNITIL ENERGY SYSTEMS, INC.
INFLATION ALLOWANCE
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-15
Page 2 of 2

LINE NO.	(1) DESCRIPTION	(2) INDEX ⁽¹⁾
	GDPIPD Index Value at the end of the Test Year:	
1	June 2020 Index-GDP	113.0
2	July 2020 Index-GDP	113.3
3	July 1, 2020 (Midpoint of Test Year) Index	113.2
	GDPIPD Index Value at date of permanent rates :	
4	March 2022 Index-GDP	116.8
5	April 2022 Index-GDP	117.1
6	April 1, 2022 (Date of Permanent Rates) Index	117.0
7	Projected Inflation Rate	3.36%

Notes

(1) Refer to Workpaper W6.1 for GDPIPD Indices

UNITIL ENERGY SYSTEMS, INC.
INFLATION ALLOWANCE
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-15 Revised
Page 2 of 2

LINE NO.	(1) DESCRIPTION	(2) INDEX ⁽¹⁾
	GDPIPD Index Value at the end of the Test Year:	
1	June 2020 Index-GDP	113.0
2	July 2020 Index-GDP	114.0
3	July 1, 2020 (Midpoint of Test Year) Index	113.5
	GDPIPD Index Value at date of permanent rates :	
4	March 2022 Index-GDP	121.4
5	April 2022 Index-GDP	121.6
6	April 1, 2022 (Date of Permanent Rates) Index	121.5
7	Projected Inflation Rate	7.05%

Notes

(1) Refer to Workpaper W6.1 Revised for GDPIPD Indices

UNITIL ENERGY SYSTEMS, INC.
DEPRECIATION ANNUALIZATION
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-16
Page 1 of 3

LINE NO.	(1) DESCRIPTION	(2) PLANT BALANCE 12/31/2020	(3) ADJUSTMENTS	(4) LESS NON DEPRECIABLE	(5) DEPRECIABLE PLANT	(6) LESS ITEMS CHARGED TO CLEARING ACCOUNT	(7) DEPRECIABLE PLANT CHARGED TO DEPRECIATION EXPENSE	(8) CURRENT DEPRECIATION RATES	(9) ANNUAL PROFORMED EXPENSE
1	Intangible Plant								
2	301-Organization	\$ 380	\$ -	\$ 380	\$ -	\$ -	-	N/A	N/A
3	303-Misc Intangible Plant	21,916,840	-	21,916,840	-	-	-	N/A	N/A
4	Total Intangible Plant	21,917,220	-	21,917,220	-	-	-	N/A	N/A
5	Other Production Plant:								
6	343-Movers	56,575	-	-	56,575	-	56,575	6.67%	3,774
7	Total Other Production Plant	56,575	-	-	56,575	-	56,575	6.67%	3,774
8	Distribution Plant								
9	360-Land & Land Rights	2,677,472	-	2,677,472	-	-	-	N/A	N/A
10	361-Structures & Improvements	2,173,616	-	-	2,173,616	-	2,173,616	2.45%	53,254
11	362-Station Equipment	50,412,132	-	-	50,412,132	-	50,412,132	2.60%	1,310,715
12	364-Poles, Towers & Fixtures	75,140,861	-	-	75,140,861	-	75,140,861	3.70%	2,780,212
13	365-Overhead Conductors & Devices	92,313,723	-	-	92,313,723	-	92,313,723	3.64%	3,360,220
14	366-Underground Conduit	2,587,958	-	-	2,587,958	-	2,587,958	2.04%	52,794
15	367-Underground Conductors & Devices	23,862,963	-	-	23,862,963	-	23,862,963	2.55%	608,506
16	368.0-Line Transformers	29,259,308	-	-	29,259,308	-	29,259,308	3.00%	877,779
17	368.1-Line Transformer Installations	25,947,042	-	-	25,947,042	-	25,947,042	2.89%	749,870
18	369-Services	25,642,632	-	-	25,642,632	-	25,642,632	5.67%	1,453,937
19	370.0-Meters	11,764,062	-	-	11,764,062	-	11,764,062	5.00%	588,203
20	370.1-Meter Installations	7,165,765	-	-	7,165,765	-	7,165,765	5.00%	358,288
21	371-Installations On Customer Premises	2,404,367	-	-	2,404,367	-	2,404,367	7.56%	181,770
22	373-Street Lighting & Signal Systems	3,580,954	-	-	3,580,954	-	3,580,954	7.79%	278,956
23	Total Distribution Plant	354,932,857	-	2,677,472	352,255,384	-	352,255,384	3.59%	12,654,504
24	General Plant								
25	389-General & Misc. Structure ⁽¹⁾	1,363,295	(9,679)	1,353,616	-	-	-	N/A	N/A
26	390-Structures ⁽¹⁾	19,114,262	(482,234)	-	18,632,028	-	18,632,028	2.08%	387,546
27	391.1-Office Furniture & Equipment	1,289,877	76,307	-	1,366,184	-	1,366,184	5.83%	79,649
28	391.3-Computer Equipment	-	-	-	-	-	-	N/A	N/A
29	392-Transportation Equip	1,073,517	-	-	1,073,517	1,073,517	-	N/A	N/A
30	393-Stores Equip	90,657	4,536	-	95,192	-	95,192	3.36%	3,198
31	394-Tools, Shop & Garage Eq	2,429,892	-	-	2,429,892	-	2,429,892	3.64%	88,448
32	395-Laboratory Equipment	948,530	-	-	948,530	-	948,530	3.90%	36,993
33	397-Communication Equip	5,005,568	-	-	5,005,568	-	5,005,568	6.60%	330,367
34	398-Miscellaneous Equip	102,943	-	-	102,943	-	102,943	4.88%	5,024
35	Total General Plant	31,418,541	(411,070)	1,353,616	29,653,855	1,073,517	28,580,338	3.26%	931,225
36	Total Plant in Service	\$ 408,325,192	\$ (411,070)	\$ 25,948,308	\$ 381,965,814	\$ 1,073,517	\$ 380,892,297	3.57%	\$ 13,589,503
37	Test Year Expense								12,680,791
38	Increase (Decrease) In Depreciation Expense								\$ 908,712

Notes

(1) Refer to Schedule RevReq-4-3 and Schedule RevReq-4-4

UNITIL ENERGY SYSTEMS, INC.
DEPRECIATION ANNUALIZATION
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-16
Page 2 of 3

LINE NO.	(1) DESCRIPTION	(2) PLANT BALANCE 12/31/2020	(3) ADJUSTMENTS	(4) LESS NON DEPRECIABLE	(5) DEPRECIABLE PLANT	(6) LESS ITEMS CHARGED TO CLEARING ACCOUNT	(7) DEPRECIABLE PLANT CHARGED TO DEPRECIATION EXPENSE	(8) PROPOSED DEPRECIATION RATES	(9) PROPOSED PROFORMED EXPENSE
1	Intangible Plant								
2	301-Organization	\$ 380	\$ -	\$ 380	\$ -	\$ -	\$ -	N/A	N/A
3	303-Misc Intangible Plant	21,916,840	-	21,916,840	-	-	-	N/A	N/A
4	Total Intangible Plant	21,917,220	-	21,917,220	-	-	-	N/A	N/A
5	Other Production Plant:								
6	343-Movers	56,575	-	-	56,575	-	56,575	18.66%	10,557
7	Total Other Production Plant	56,575	-	-	56,575	-	56,575	18.66%	10,557
8	Distribution Plant								
9	360-Land & Land Rights	2,677,472	-	2,677,472	-	-	-	N/A	N/A
10	361-Structures & Improvements	2,173,616	-	-	2,173,616	-	2,173,616	2.40%	52,167
11	362-Station Equipment	50,412,132	-	-	50,412,132	-	50,412,132	2.96%	1,492,199
12	364-Poles, Towers & Fixtures	75,140,861	-	-	75,140,861	-	75,140,861	3.61%	2,712,585
13	365-Overhead Conductors & Devices	92,313,723	-	-	92,313,723	-	92,313,723	3.62%	3,341,757
14	366-Underground Conduit	2,587,958	-	-	2,587,958	-	2,587,958	2.16%	55,900
15	367-Underground Conductors & Devices	23,862,963	-	-	23,862,963	-	23,862,963	2.85%	680,094
16	368.0-Line Transformers	29,259,308	-	-	29,259,308	-	29,259,308	2.46%	719,779
17	368.1-Line Transformer Installations	25,947,042	-	-	25,947,042	-	25,947,042	2.30%	596,782
18	369-Services	25,642,632	-	-	25,642,632	-	25,642,632	2.43%	623,116
19	370.0-Meters	11,764,062	-	-	11,764,062	-	11,764,062	8.76%	1,030,532
20	370.1-Meter Installations	7,165,765	-	-	7,165,765	-	7,165,765	5.51%	394,834
21	371-Installations On Customer Premises	2,404,367	-	-	2,404,367	-	2,404,367	8.03%	193,071
22	373-Street Lighting & Signal Systems	3,580,954	-	-	3,580,954	-	3,580,954	1.49%	53,356
23	Total Distribution Plant	354,932,857	-	2,677,472	352,255,384	-	352,255,384	3.39%	11,946,172
24	General Plant								
25	389-General & Misc. Structure ⁽¹⁾	1,363,295	(9,679)	1,353,616	-	-	-	N/A	N/A
26	390-Structures ⁽¹⁾	19,114,262	(482,234)	-	18,632,028	-	18,632,028	1.85%	344,693
27	391.1-Office Furniture & Equipment	1,289,877	76,307	-	1,366,184	-	1,366,184	5.95%	81,224
28	391.3-Computer Equipment	-	-	-	-	-	-	N/A	N/A
29	392-Transportation Equip	1,073,517	-	-	1,073,517	1,073,517	-	N/A	N/A
30	393-Stores Equip	90,657	4,536	-	95,192	-	95,192	1.75%	1,670
31	394-Tools, Shop & Garage Eq	2,429,892	-	-	2,429,892	-	2,429,892	3.40%	82,572
32	395-Laboratory Equipment	948,530	-	-	948,530	-	948,530	2.97%	28,137
33	397-Communication Equip	5,005,568	-	-	5,005,568	-	5,005,568	4.34%	217,198
34	398-Miscellaneous Equip	102,943	-	-	102,943	-	102,943	0.93%	962
35	Total General Plant	31,418,541	(411,070)	1,353,616	29,653,855	1,073,517	28,580,338	2.65%	756,456
36	Total Plant in Service	\$ 408,325,192	\$ (411,070)	\$ 25,948,308	\$ 381,965,814	\$ 1,073,517	\$ 380,892,297	3.36%	\$ 12,713,185
37	Reserve Adjustment For Amortization ⁽²⁾								
38	390-Structures								(173)
39	391.1-Office Furniture & Equipment								66,592
40	391.3-Computer Equipment								(869)
41	393-Stores Equip								908
42	394-Tools, Shop & Garage Eq								22,424
43	395-Laboratory Equipment								58
44	397-Communication Equip								(1,754)
45	398-Miscellaneous Equip								(617)
46	Total Reserve Adjustment for Amortization								86,569
47	Total Pro Forma Depreciation Expense (Line 36 + Line 46)								12,799,754
48	Annualized Test Year Expense ⁽³⁾								13,589,503
49	Increase (Decrease) In Depreciation Expense								\$ (789,749)

Notes

(1) Refer to Schedule RevReq-4-3 and Schedule RevReq-4-4

(2) Refer to testimony and schedules of Mr. Allis

(3) Refer to Schedule RevReq-3-16, Page 1 of 2, Line 34

UNITIL ENERGY SYSTEMS, INC.
DEPRECIATION ANNUALIZATION
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-16 Revised
Page 2 of 3

LINE NO.	(1) DESCRIPTION	(2) PLANT BALANCE 12/31/2020	(3) ADJUSTMENTS	(4) LESS NON DEPRECIABLE	(5) DEPRECIABLE PLANT	(6) LESS ITEMS CHARGED TO CLEARING ACCOUNT	(7) DEPRECIABLE PLANT CHARGED TO DEPRECIATION EXPENSE	(8) SETTLED DEPRECIATION RATES ⁽⁴⁾	(9) PROPOSED PROFORMED EXPENSE
1	Intangible Plant								
2	301-Organization	\$ 380	\$ -	\$ 380	\$ -	\$ -	\$ -	N/A	N/A
3	303-Misc Intangible Plant	21,916,840	-	21,916,840	-	-	-	N/A	N/A
4	Total Intangible Plant	21,917,220	-	21,917,220	-	-	-	N/A	N/A
5	Other Production Plant:								
6	343-Movers	56,575	-	-	56,575	-	56,575	10.00%	5,658
7	Total Other Production Plant	56,575	-	-	56,575	-	56,575	10.00%	5,658
8	Distribution Plant								
9	360-Land & Land Rights	2,677,472	-	2,677,472	-	-	-	N/A	N/A
10	361-Structures & Improvements	2,173,616	-	-	2,173,616	-	2,173,616	2.36%	51,297
11	362-Station Equipment	50,412,132	-	-	50,412,132	-	50,412,132	2.86%	1,441,787
12	364-Poles, Towers & Fixtures	75,140,861	-	-	75,140,861	-	75,140,861	3.60%	2,705,071
13	365-Overhead Conductors & Devices	92,313,723	-	-	92,313,723	-	92,313,723	3.66%	3,378,682
14	366-Underground Conduit	2,587,958	-	-	2,587,958	-	2,587,958	2.09%	54,088
15	367-Underground Conductors & Devices	23,862,963	-	-	23,862,963	-	23,862,963	2.73%	651,459
16	368.0-Line Transformers	29,259,308	-	-	29,259,308	-	29,259,308	2.75%	804,631
17	368.1-Line Transformer Installations	25,947,042	-	-	25,947,042	-	25,947,042	2.50%	648,676
18	369-Services	25,642,632	-	-	25,642,632	-	25,642,632	3.75%	961,599
19	370.0-Meters	11,764,062	-	-	11,764,062	-	11,764,062	4.93%	579,968
20	370.1-Meter Installations	7,165,765	-	-	7,165,765	-	7,165,765	5.00%	358,288
21	371-Installations On Customer Premises	2,404,367	-	-	2,404,367	-	2,404,367	7.33%	176,240
22	373-Street Lighting & Signal Systems	3,580,954	-	-	3,580,954	-	3,580,954	5.50%	196,952
23	Total Distribution Plant	354,932,857	-	2,677,472	352,255,384	-	352,255,384	3.41%	12,008,738
24	General Plant								
25	389-General & Misc. Structure ⁽¹⁾	1,363,295	(9,679)	1,353,616	-	-	-	N/A	N/A
26	390-Structures ⁽¹⁾	19,114,262	(482,234)	-	18,632,028	-	18,632,028	1.82%	339,103
27	391.1-Office Furniture & Equipment	1,289,877	76,307	-	1,366,184	-	1,366,184	5.95%	81,288
28	391.3-Computer Equipment	-	-	-	-	-	-	N/A	N/A
29	392-Transportation Equip	1,073,517	-	-	1,073,517	1,073,517	-	N/A	N/A
30	393-Stores Equip	90,657	4,536	-	95,192	-	95,192	1.75%	1,666
31	394-Tools, Shop & Garage Eq	2,429,892	-	-	2,429,892	-	2,429,892	3.39%	82,373
32	395-Laboratory Equipment	948,530	-	-	948,530	-	948,530	2.97%	28,171
33	397-Communication Equip	5,005,568	-	-	5,005,568	-	5,005,568	4.34%	217,242
34	398-Miscellaneous Equip	102,943	-	-	102,943	-	102,943	0.93%	957
35	Total General Plant	31,418,541	(411,070)	1,353,616	29,653,855	1,073,517	28,580,338	2.63%	750,800
36	Total Plant in Service	\$ 408,325,192	\$ (411,070)	\$ 25,948,308	\$ 381,965,814	\$ 1,073,517	\$ 380,892,297	3.35%	\$ 12,765,196
37	Reserve Adjustment For Amortization ⁽²⁾								
38	390-Structures								(173)
39	391.1-Office Furniture & Equipment								66,592
40	391.3-Computer Equipment								(869)
41	393-Stores Equip								923
42	394-Tools, Shop & Garage Eq								23,424
43	395-Laboratory Equipment								380
44	397-Communication Equip								(153)
45	398-Miscellaneous Equip								(609)
46	Total Reserve Adjustment for Amortization								89,515
47	Total Pro Forma Depreciation Expense (Line 36 + Line 46)								12,854,711
48	Annualized Test Year Expense ⁽³⁾								13,589,503
49	Increase (Decrease) In Depreciation Expense								\$ (734,792)

Notes

(1) Refer to Schedule RevReq-4-3 and Schedule RevReq-4-4

(2) Refer to testimony and schedules of Mr. Allis

(4) Refer to DOE 5-12 Attachment 2

UNITIL ENERGY SYSTEMS, INC.
AMORTIZATION OF THEORETICAL DEPRECIATION RESERVE IMBALANCE
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-16 Revised
Page 3 of 3

LINE NO.	(1)	(2)
	DESCRIPTION	TOTAL
1	Depreciation Reserve Imbalance ⁽¹⁾	\$ (7,652,721)
2	Recovery Period	6 years
3	Annual Recovery	\$ (1,275,454)

Notes

(1) Refer to DOE 5-12 Attachment 1

UNITIL ENERGY SYSTEMS, INC.
AMORTIZATION ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-17

LINE NO.	(1) DESCRIPTION	(2) TOTAL
1	Unitil Energy Systems Rate Year Software Amortization ⁽¹⁾	\$ 1,585,103
2	USC Allocated Rate Year Software Amortization ⁽²⁾	162,109
3	Total Rate Year Software Amortization	<u>1,747,212</u>
4	Unitil Energy Systems Test Year Software Amortization ⁽³⁾	\$ 1,392,138
5	Unitil Energy Systems Test Year Adjustment	11,313
6	USC Allocated Test Year Software Amortization ⁽⁴⁾	105,171
7	Total 2020 Test Year Software Amortization	<u>1,508,621</u>
8	Test Year Amortization Expense Adjustment (Line 3 - Line 7)	<u><u>\$ 238,591</u></u>

Notes

(1) Workpaper W7.2 Line 76

(2) Workpaper W7.4 Line 20

(3) Workpaper W7.1 Line 89

(4) Workpaper W7.3 Line 20

UNITIL ENERGY SYSTEMS, INC.
AMORTIZATION ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-17 Revised

LINE NO.	(1) DESCRIPTION	(2) TOTAL
1	Unitil Energy Systems Rate Year Software Amortization ⁽¹⁾	\$ 1,561,013
2	USC Allocated Rate Year Software Amortization ⁽²⁾	124,930
3	Total Rate Year Software Amortization	<u>1,685,943</u>
4	Unitil Energy Systems Test Year Software Amortization ⁽³⁾	\$ 1,392,138
5	Unitil Energy Systems Test Year Adjustment	11,313
6	USC Allocated Test Year Software Amortization ⁽⁴⁾	105,171
7	Total 2020 Test Year Software Amortization	<u>1,508,621</u>
8	Test Year Amortization Expense Adjustment (Line 3 - Line 7)	<u>\$ 177,322</u>

Notes

(1) Workpaper W7.2 Line 76

(2) Workpaper W7.4 Line 20

(3) Workpaper W7.1 Line 89

(4) Workpaper W7.3 Line 20

UNITIL ENERGY SYSTEMS, INC.
EXCESS ACCUMULATED DEFERRED INCOME TAX ("ADIT") FLOW BACK
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-18

LINE NO.	(1)	(2)
	DESCRIPTION	TOTAL
1	Annual Amortization Expense Reduction Related to Excess ADIT Flowback ⁽¹⁾	\$ (999,795)

Notes

(1) Refer to Exhibit JAG-6

UNITIL ENERGY SYSTEMS, INC.
PROPERTY TAXES
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-19

	(1)	(2)	(3)	(4)	(5)
LINE NO.	MUNICIPALITY & STATE	TAXATION PERIOD	LOCAL TAX RATE	ASSESSED VALUATION	TOTAL TAXES ⁽¹⁾
1	Allenstown	4/1 - 3/31	\$ 27.27	\$ 72,800	\$ 1,985
2	Atkinson	1/1 - 12/31	16.24	6,404,700	104,012
3	Boscawen	4/1 - 3/31	24.91	9,837,900	245,062
4	Bow	4/1 - 3/31	23.69	13,389,400	317,195
5	Brentwood	4/1 - 3/31	21.36	189,400	4,046
6	Canterbury	4/1 - 3/31	25.38	3,125,400	79,323
7	Chichester	1/1 - 12/31	21.27	5,774,800	122,830
8	Concord	7/1 - 6/30	24.89	61,631,200	1,534,001
9	Concord	7/1 - 6/30	26.76	83,600	2,237
10	Concord	7/1 - 6/30	28.13	10,358,200	291,376
11	Danville	4/1 - 3/31	24.14	3,885,600	93,798
12	Dunbarton	4/1 - 3/31	20.40	565,000	11,526
13	East Kingston	4/1 - 3/31	20.50	6,782,600	139,043
14	Epsom	4/1 - 3/31	19.92	4,750,000	94,620
15	Exeter	4/1 - 3/31	24.49	613,300	15,020
16	Exeter - Land Only	4/1 - 3/31	22.50	23,387,900	526,228
17	Greenland	4/1 - 3/31	14.58	30,500	445
18	Hampstead	4/1 - 3/31	19.63	464,700	9,122
19	Hampton--Class 4000	4/1 - 3/31	13.93	22,489,300	313,276
20	Hampton--Class 5000	4/1 - 3/31	14.43	11,076,800	159,838
21	Hampton Falls	4/1 - 3/31	19.33	4,260,400	82,354
22	Hopkinton	4/1 - 3/31	27.41	477,700	13,094
23	Kensington	4/1 - 3/31	18.61	10,060,284	187,222
24	Kingston	4/1 - 3/31	18.94	19,784,300	369,094
25	Loudon	4/1 - 3/31	20.73	616,800	12,786
26	Newton	4/1 - 3/31	19.10	6,078,600	116,101
27	North Hampton	4/1 - 3/31	14.80	137,300	2,032
28	Pembroke	4/1 - 3/31	22.77	421,800	9,604
29	Plaistow	4/1 - 3/31	19.60	15,501,960	303,838
30	Salisbury	4/1 - 3/31	22.55	2,689,000	60,637
31	Seabrook	4/1 - 3/31	13.90	19,802,000	275,249
32	South Hampton	4/1 - 3/31	17.14	2,572,400	44,091
33	Stratham	4/1 - 3/31	17.14	9,749,400	167,105
34	Webster	4/1 - 3/31	20.28	2,838,900	57,573
35	State Property Tax ⁽²⁾	4/1 - 3/31			1,644,889
36	Total			\$ 279,903,944	\$ 7,410,651
37	Plus: New Exeter DOC Adjustment ⁽³⁾		\$ 24.49	\$ 15,517,171	\$ 380,016
38	Less: Removal of Old Kensington DOC		\$ 18.61	\$ 1,015,306	\$ 18,895
39	Adjusted Test Year Property Tax Expense				\$ 7,771,772
40	Test Year Property Taxes ^{(4) (5)}				\$ 7,065,052
41	Less: Test Year Property Tax Abatements ⁽⁴⁾				38,265
42	Total Test Year Property Tax Expense				\$ 7,026,787
43	Total Property Tax Increase (Line 39 - Line 42)				\$ 744,985

Notes

- (1) Based on final 2020 property tax bills. Company will update for final 2021 property tax bills during pendency of case
(2) Based on current estimated 2021 State Property Tax. Amount will be updated during pendency of case
(3) Estimated Exeter DOC valuation to be updated with actual town valuation during proceeding
(4) Test Year Property Taxes (Line 40) adjusted to exclude inadvertent property tax abatement entry of \$4,172.67. This amount was included in the Property Tax Abatements (Line 41) to correct
(5) Test Year Property Taxes reduced by \$12,230.60 to remove accrual adjustment entry related to 2019

UNITIL ENERGY SYSTEMS, INC.
PROPERTY TAXES
12 MONTHS ENDED DECEMBER 31, 2021

Schedule RevReq-3-19 Revised

	(1)	(2)	(3)	(4)	(5)
LINE NO.	MUNICIPALITY & STATE	TAXATION PERIOD	LOCAL TAX RATE	ASSESSED VALUATION	TOTAL TAXES ⁽¹⁾
1	Allenstown	4/1 - 3/31	\$ 29.46	\$ 63,100	\$ 1,859
2	Atkinson	1/1 - 12/31	10.94	7,944,500	86,913
3	Boscawen	4/1 - 3/31	26.51	10,599,500	280,993
4	Bow	4/1 - 3/31	23.63	13,055,600	308,504
5	Brentwood	4/1 - 3/31	20.46	179,400	3,671
6	Canterbury	4/1 - 3/31	18.88	3,349,900	63,246
7	Chichester	1/1 - 12/31	21.19	5,990,200	126,932
8	Concord	7/1 - 6/30	23.46	78,140,600	1,833,178
9	Concord (Penacook)	7/1 - 6/30	26.41	13,188,000	348,295
10	Danville	4/1 - 3/31	18.66	5,607,900	104,643
11	Dunbarton	4/1 - 3/31	21.47	552,300	11,858
12	East Kingston	4/1 - 3/31	20.16	6,979,800	140,713
13	Epsom	4/1 - 3/31	21.81	4,750,000	103,598
14	Exeter	4/1 - 3/31	22.02	25,950,800	571,437
15	Greenland	4/1 - 3/31	16.73	26,400	442
16	Hampstead	4/1 - 3/31	20.86	398,100	8,304
17	Hampton--Class 4000	4/1 - 3/31	13.90	22,502,800	312,789
18	Hampton--Class 5000	4/1 - 3/31	14.69	11,083,500	162,817
19	Hampton Falls	4/1 - 3/31	19.10	5,324,600	101,700
20	Hopkinton	4/1 - 3/31	28.98	465,900	13,502
21	Kensington	4/1 - 3/31	16.80	17,025,350	286,025
22	Kingston	4/1 - 3/31	19.34	19,784,300	382,628
23	Loudon	4/1 - 3/31	17.44	417,700	7,285
24	Newton	4/1 - 3/31	19.15	6,825,400	130,706
25	North Hampton	4/1 - 3/31	14.60	119,200	1,740
26	Pembroke	4/1 - 3/31	22.19	382,200	8,481
27	Plaistow	4/1 - 3/31	17.29	14,823,100	256,292
28	Salisbury	4/1 - 3/31	21.68	2,857,700	61,955
29	Seabrook	4/1 - 3/31	12.09	352,200	263,776
30	South Hampton	4/1 - 3/31	18.08	3,106,000	56,156
31	Stratham	4/1 - 3/31	16.73	8,624,300	144,285
32	Webster	4/1 - 3/31	20.36	2,503,600	50,973
33	State Property Tax	4/1 - 3/31			1,656,954
34	Total			\$ 292,973,950	\$ 7,892,651
35	Less: Removal of Old Kensington DOC		\$ 16.80	\$ 1,015,272	\$ 17,057
36	Adjusted Test Year Property Tax Expense				\$ 7,875,594
37	Test Year Property Taxes ^{(2) (3)}				\$ 7,065,052
38	Less: Test Year Property Tax Abatements ⁽²⁾				38,265
39	Total Test Year Property Tax Expense				\$ 7,026,787
40	Total Property Tax Increase (Line 36 - Line 39)				\$ 848,807

Notes

(1) Based on final 2021 property tax bills

(2) Test Year Property Taxes (Line 37) adjusted to exclude inadvertent property tax abatement entry of \$4,172.67. This amount was included in the Property Tax Abatements (Line 38) to correct

(3) Test Year Property Taxes reduced by \$12,230.60 to remove accrual adjustment entry related to 2019

UNITIL ENERGY SYSTEMS, INC.
PAYROLL TAX ADJUSTMENT - WAGE INCREASES
 12 MONTHS ENDED DECEMBER 21, 2020

Schedule RevReq-3-20
 Page 1 of 2

	(1)	(2)	(3)	(4)
LINE NO.	DESCRIPTION	Social Security	Medicare	Total
1	Increase in O&M Payroll / Compensation due to Annual Rate Increases ⁽¹⁾	\$ 709,516	\$ 709,516	
2	Payroll Tax Rates	<u>6.20%</u>	<u>1.45%</u>	
3	Increase in Payroll Taxes	<u>\$ 43,990</u>	<u>\$ 10,288</u>	<u>\$ 54,278</u>

Notes

(1) See Schedule RevReq 3-2 P1

UNITIL ENERGY SYSTEMS, INC.
PAYROLL TAX ADJUSTMENT - WAGE INCREASES
12 MONTHS ENDED DECEMBER 21, 2020

Schedule RevReq-3-20 Revised
Page 1 of 2

LINE NO.	(1) DESCRIPTION	(2) Social Security	(3) Medicare	(4) Total
1	Increase in O&M Payroll / Compensation due to Annual Rate Increases ⁽¹⁾	\$ 709,516	\$ 709,516	
2	Less Pay Increase Amounts in Excess of Taxable Limit ⁽²⁾			
3	Unitil Energy Systems, Inc. ⁽³⁾	(24,788)		
4	Unitil Service Corp. ⁽⁴⁾	(35,544)		
5	O&M Payroll / Compensation Increase Subject to Payroll Taxes	649,183	709,516	
6	Payroll Tax Rates	6.20%	1.45%	
7	Increase in Payroll Taxes	\$ 40,249	\$ 10,288	\$ 50,537

Notes

(1) See Schedule RevReq 3-2 P1

(2) 2021 Social Security Wage Limit of \$142,800

(3) Refer to Workpaper 8.1

(4) Refer to Workpaper 8.2

UNITIL ENERGY SYSTEMS, INC.
 PAYROLL TAX ADJUSTMENT - EMPLOYEE RETENTION CREDIT
 EMPLOYEE RETENTION CREDIT ("ERC") & FAMILY FIRST CORONAVIRUS RESPONSE ACT ("FFCRA")
 12 MONTHS ENDED DECEMBER 21, 2020

Schedule RevReq-3-20
 Page 2 of 2

(1)		(2)
LINE NO.	DESCRIPTION	TOTAL
1	ERC & FFCRA - UES	\$ (143,511)
2	Capitalization Rate	64.25%
3	Capitalized Amount	(92,206)
4	Net Expense - UES	(51,305)
5	<u>Unitil Service ERC Allocated to UES</u>	
6	Total Unitil Service ERC	\$ (279,213)
7	UES Apportionment	27.50%
8	Expense Apportioned to UES	\$ (76,784)
9	Capitalization Rate	28.45%
10	UES Capitalization	(21,845)
11	UES Net ERC	\$ (54,939)
12	Removal of Total ERC & FFCRA from Test Year	\$ 106,244

UNITIL ENERGY SYSTEMS, INC.
COMPUTATION OF FEDERAL AND STATE INCOME TAXES
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-21
Page 1 of 4

LINE NO.	(1) DESCRIPTION	(2) AMOUNT	(3) SETTLEMENT UPDATE	(4) TEST YEAR AS PROFORMED
1	<u>Increases / (Decreases) To Revenue</u>			
2	Non-Distribution Bad Debt	\$ (143,623)	\$ -	\$ (143,623)
3	Unbilled Revenue	(137,189)	-	(137,189)
4	New DOC Rent Revenue	313,007	-	313,007
5	Late Fee Adjustment	180,938	-	180,938
6	Remove Wheeling Revenue	-	(49,952)	(49,952)
7	Total Revenue Adjustments	\$ 213,133	\$ (49,952)	\$ 163,181
8	<u>Increases / (Decreases) To Expenses</u>			
9	Payroll	\$ 709,516	\$ (356,250)	\$ 353,265
10	VMP Expense	1,406,427	(989,500)	416,927
11	Medical & Dental Insurances	483,155	(74,466)	408,689
12	Pension	62,288	-	62,288
13	PBOP	(41,636)	-	(41,636)
14	SERP	85,989	-	85,989
15	401K	41,844	(21,354)	20,490
16	Deferred Comp Expense	64,957	-	64,957
17	Property & Liability Insurances	72,468	(6,014)	66,454
18	DOC Expense Adjustment	(1,968)	-	(1,968)
19	NHPUC Regulatory Assessment	159,383	212,154	371,537
20	Dues & Subscriptions	(14,473)	-	(14,473)
21	Pandemic Costs	(39,857)	-	(39,857)
22	Claims & Litigation Adjustment	44,072	-	44,072
23	Severance Expense	(40,395)	-	(40,395)
24	Distribution Bad Debt	134,563	(38,844)	95,719
25	Non-Distribution Bad Debt	(143,623)	-	(143,623)
26	Arrearage Management Program (AMP) Implementation Cost	-	-	-
27	Inflation Allowance	128,368	(128,368)	-
28	NH DOE Audit Adjustment #8	-	(20,028)	(20,028)
29	NH DOE Audit Adjustment Removed (VMP)	-	20,334	20,334
30	Removal of Better Investing Invoice	-	(815)	(815)
31	Update for Normalized Communications Expense	-	18,290	18,290
32	Update for 2021 Lease Payments	-	24,038	24,038
33	Settlement Adjustments	-	(1,464,346)	(1,464,346)
34	Depreciation Annualization	908,712	-	908,712
35	Proposed Depreciation Rates	(789,749)	54,957	(734,792)
36	Amortize Reserve Imbalance	-	(1,275,454)	(1,275,454)
37	Software Amortization	238,591	(61,269)	177,322
38	Excess ADIT Flowback	(999,795)	-	(999,795)
39	Property Taxes	744,985	103,822	848,807
40	Payroll Taxes - Wage Increases	54,278	(3,741)	50,537
41	Payroll Taxes - Employee Retention Credits	106,244	-	106,244
42	Change In Interest Exp (Refer to Schedule RevReq-3-21 Page 2)	352,512	62,599	415,111
43	Total Expense Adjustments	\$ 3,726,854	\$ (3,944,254)	\$ (217,400)
44	Increase / (Decrease) In Taxable Income	\$ (3,513,721)	\$ 3,894,302	\$ 380,581
45	Effective Federal Income Tax Rate ⁽¹⁾	19.38%	19.38%	19.38%
46	NH State Tax Rate ⁽²⁾	7.70%	7.70%	7.70%
47	<u>Federal Income & NH State Tax</u>			
48	Effective Federal Income Tax	\$ (681,065)	\$ 754,833	\$ 73,768
48	NH State Tax	(270,557)	299,861	29,305
49	Increase (Decrease) In Income Taxes	\$ (951,621)	\$ 1,054,694	\$ 103,073
50	<u>Notes</u>			
50	Federal Income Tax Rate	21.00%	21.00%	21.00%
51	Federal Benefit of State Tax -(Line 49 * Line 52)	-1.62%	-1.62%	-1.62%
52	(1) Effective Federal Income Tax Rate	19.38%	19.38%	19.38%
53	(2) State Income Tax Rate	7.70%	7.70%	7.70%
54	Unitil Energy Systems Tax Rate (Line 51 + Line 52)	27.08%	27.08%	27.08%

UNITIL ENERGY SYSTEMS, INC.
CHANGE IN INTEREST EXPENSE APPLICABLE TO INCOME TAX COMPUTATION
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-21
Page 2 of 4

LINE NO.	(1) DESCRIPTION	(2) AMOUNT	(3) SETTLEMENT UPDATE	(5) TEST YEAR AS PROFORMED
1	Rate-making Interest Synchronization:			
2	Rate Base ⁽¹⁾	\$ 226,030,082	\$ (2,397,083)	\$ 223,632,999
3	Cost of Debt In Proposed Rate of Return ⁽²⁾	2.58%	0.06%	2.64%
4	Interest Expense for Rate-making	5,830,578	62,599	5,893,177
5	Test Year Interest Expense:			
6	Interest Charges (427-432)	\$ 5,478,066	\$ -	\$ 5,478,066
7	Increase / (Decrease) in Interest Expense	\$ 352,512	\$ 62,599	\$ 415,111

Notes

(1) Schedule RevReq-4

(1) Schedule RevReq-5

UNITIL ENERGY SYSTEMS, INC.
COMPUTATION OF FEDERAL AND STATE INCOME TAXES
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-21
Page 3 of 4

LINE NO	(1) DESCRIPTION	(2) TEST YEAR ACTUAL	(3) PRO-FORMA ADJUSTMENTS	(4) TEST YEAR UTILITY
1	Net Income	\$ 8,133,382	\$ -	\$ 8,133,382
2	Federal Income Tax-Current	(1,161,380)	-	(1,161,380)
3	NH State Income Tax-Current	(1,088,917)	-	(1,088,917)
4	NH State Business Enterprise Credit Against NH BPT	78,000	-	78,000
5	Deferred Federal Income Tax	3,329,959	-	3,329,959
6	Deferred State Income Tax	1,873,334	-	1,873,334
7	Net Income Before Income Taxes	11,164,379	-	11,164,379
8	<u>Permanent Items</u>			
9	Lobbying	34,375	-	34,375
10	Parking Lot Disallowance	1,368	-	1,368
11	Penalties	-	-	-
12	State Regulatory Asset Amortization	-	-	-
13	Unallowable Meals	107	-	107
14	Total Permanent Items	35,850	-	35,850
15	<u>Temporary Differences</u>			
16	Accrued Revenue	666,606	-	666,606
17	Bad Debt	394,494	-	394,494
18	Bad Debt Reg Asset	(143,623)	-	(143,623)
19	Debt Discount	1,920	-	1,920
20	Deferred Rate Case Costs	(5,850)	-	(5,850)
21	DER Investment Amortization	11,020	-	11,020
22	Indenture Costs	28,704	-	28,704
23	FASB 87-Pensions	(394,249)	-	(394,249)
24	Prepaid Property Taxes	192,963	-	192,963
25	PBOP SFAS 106	757,586	-	757,586
26	Storm Restoration	1,470,280	-	1,470,280
27	Utility Plant Differences	(1,867,587)	-	(1,867,587)
28	Total Temporary Differences	1,112,264	-	1,112,264
29	<u>Federal And State Tax Differences</u>			
30	Tax Depreciation	(5,044,874)	-	(5,044,874)
31	Total Federal And State Tax Differences	(5,044,874)	-	(5,044,874)
32	State Taxable Base Income	7,267,619	-	7,267,619
33	State Business Profits Tax - Current	559,607	-	559,607
34	Less: Business Enterprise Tax	78,000	-	78,000
35	Total State Tax Expense	481,607	-	481,607
36	Federal Taxable Income Base Before Federal And State Tax Differences	6,708,012	-	6,708,012
37	Less: Federal And State Tax Differences	(5,044,874)	-	(5,044,874)
38	Federal Taxable Income Base	11,752,886	-	11,752,886
39	Federal Income Tax-Current	2,468,106	-	2,468,106
40	<u>Summary Of Utility Income Taxes:</u>			
41	Federal Income Tax-Current	2,449,098	-	2,449,098
42	Federal Income Tax-Prior	(4,293,279)	-	(4,293,279)
43	Federal Income Tax-NOL	663,793	-	663,793
44	Federal Amount To Non-Distribution Operations	19,008	(19,008)	-
45	State Business Profits Tax-Current	474,055	-	474,055
46	State Business Profits Tax-Prior	(1,570,523)	-	(1,570,523)
47	State Amount To Non-Distribution Operations	7,551	(7,551)	-
48	Deferred Federal Income Tax	(297,166)	-	(297,166)
49	Deferred Federal Income Tax-Prior	4,290,918	-	4,290,918
50	Deferred Federal Income Tax-NOL	(663,793)	-	(663,793)
51	Deferred State Business Profits Tax	302,811	-	302,811
52	Deferred State Business Profits Tax-Prior	1,570,523	-	1,570,523
53	Total Income Taxes	\$ 2,952,997	\$ (26,560)	\$ 2,926,437

UNITIL ENERGY SYSTEMS, INC.
PRIOR YEAR INCOME TAXES
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-21
Page 4 of 4

(1)		(2)
LINE NO	DESCRIPTION	ACTUAL
1	Remove Prior Year Federal Income Taxes	\$ 4,293,279
2	Remove Prior Year State Income Taxes	1,570,523
3	Remove Prior Year Deferred Federal Income Taxes	(4,290,918)
4	Remove Prior Year Deferred State Income Taxes	(1,570,523)
5	Total	<u>\$ 2,361</u>

UNITIL ENERGY SYSTEMS, INC.
NEW HAMPSHIRE DOE AUDIT ADJUSTMENTS & OTHER
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-3-22

LINE NO.	(1) DESCRIPTION	(2) AMOUNT
1	<u>Audit Issue #2</u>	
2	Prop & Liab. Capitalization Rate Update (Workpaper 5.6 Revised)	\$ (1,007)
3	Total Audit Issue #2 Reduction	\$ (1,007)
4	<u>Audit Issue #8</u>	
5	A - 13 Months of Comm Expense	\$ (800)
6	C - Legal Invoice Allocation	(7,599)
7	E - Maintenance Expense ⁽¹⁾	(11,418)
8	H - Allocation Issue	(69)
9	I - Allocation Issue	(142)
10	Total Audit Issue #8 Reductions	\$ (20,028)
11	<u>Audit Issue - Removed</u>	
12	VMP Expense Adjustment ⁽²⁾	\$ 20,334
13	Total Audit Issue - Removed Reduction	\$ 20,334
14	<u>Better Investing Invoice Adjustment</u>	
15	Better Investing Invoice	\$ 4,100
16	UES Apportionment	28.17%
17	Expense Apportioned to UES	\$ 1,155
18	Capitalization Rate	29.42%
19	UES Capitalization	340
20	USC Allocable to UES Net Better Investing Expense Removed from Test Year	\$ (815)
21	<u>Storm Related Communications Costs</u>	
22	Normalized Storm Related Communications Costs	\$ 18,290
23	<u>Lease Payment Increase</u>	
24	2020 Lease Payments	\$ 539,536
25	2021 Lease Payments	563,574
26	Lease Payment Increase	\$ 24,038

Notes:

(1) Company only agrees to remove \$11,418, which relate to 2019 invoices

(2) Refer to Audit Report Page 89

UNITIL ENERGY SYSTEMS, INC.
RATE BASE
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-4

LINE NO.	(1) DESCRIPTION	(2) REFERENCE	(3) TEST YEAR AVERAGE ⁽¹⁾	(4) 5 QUARTER AVERAGE	(5) RATE BASE AT DECEMBER 31, 2020	(6) PRO FORMA ADJUSTMENTS	(7) PRO FORMA RATE BASE AT DECEMBER 31, 2020
1	Utility Plant In Service	Schedule RevReq-4-1	\$ 385,883,446	\$ 378,293,580	\$ 408,325,193	\$ (411,070)	\$ 407,914,123
2	Less: Reserve for Depreciation	Schedule RevReq-4-1	134,753,201	136,143,968	138,059,087	-	138,059,087
3	Net Utility Plant		251,130,244	242,149,612	270,266,106	(411,070)	269,855,036
4	Add: M&S Inventories	Schedule RevReq-4-1	\$ 2,022,364	\$ 1,998,245	\$ 2,032,252	\$ (34,007)	\$ 1,998,245
5	Cash Working Capital ⁽²⁾	Schedule RevReq-4-2	2,383,150	2,383,150	2,383,150	689,237	3,072,387
6	Prepayments	Schedule RevReq-4-1	4,840,442	4,956,633	4,508,744	(156,803)	4,351,941
7	Sub-Total		9,245,956	9,338,028	8,924,147	498,427	9,422,574
8	Less: Net Deferred Income Taxes	Schedule RevReq-4-1	\$ 36,365,292	\$ 36,267,391	\$ 38,338,666	\$ (71,351)	\$ 38,267,315
9	Less: Excess Deferred Income Taxes	Schedule RevReq-4-1	16,601,346	16,601,346	16,601,346	-	16,601,346
10	Plus: Deferred Income Taxes Debit	Schedule RevReq-4-1	146,198	134,890	150,098	-	150,098
11	Less: Customers Deposits	Schedule RevReq-4-1	482,702	480,878	371,830	-	371,830
12	Less: Customer Advances	Schedule RevReq-4-1	539,816	498,063	554,217	-	554,217
13	Rate Base		\$ 206,533,242	\$ 197,774,851	\$ 223,474,292	\$ 158,707	\$ 223,632,999
14	Net Operating Income Applicable To Rate Base		\$ 11,613,315	\$ 11,613,315	\$ 11,613,315		\$ 12,303,574
15	Rate of Return		5.62%	5.87%	5.20%		5.50%

Notes

(1) Two Point Average

(2) Computed Working Capital Based on Test Year O&M Expenses

UNITIL ENERGY SYSTEMS, INC.
RATE BASE ITEMS
QUARTERLY BALANCES

Schedule RevReq-4-1

LINE NO.	(1) DESCRIPTION	(2) DECEMBER 31 2019	(3) MARCH 31 2020	(4) JUNE 30 2020	(5) SEPTEMBER 30 2020	(6) DECEMBER 31 2020	(7) 5 QUARTER AVERAGE
1	Utility Plant in Service						
2	Classified	\$ 350,524,447	\$ 356,913,902	\$ 357,270,455	\$ 361,417,472	\$ 379,030,364	\$ 361,031,328
3	Completed Construction Not Classified	12,917,251	13,216,745	15,748,937	15,133,497	29,294,829	17,262,252
4	Total Utility Plant in Service	363,441,698	370,130,647	373,019,392	376,550,969	408,325,193	378,293,580
5	Depreciation & Amortization Reserves	\$ (131,447,315)	\$ (134,081,053)	\$ (137,117,184)	\$ (140,015,203)	\$ (138,059,087)	\$ (136,143,968)
6	Add:						
7	M&S Inventories						
8	Materials and Supplies	1,174,870	1,262,158	1,389,123	1,192,748	1,206,272	1,245,034
9	Stores	189,428	259,182	177,187	39,287	201,952	173,407
10	Clearing Accounts	648,177	1,405,667	670,379	(449,234)	624,028	579,803
11	Total M&S Inventories	\$ 2,012,476	\$ 2,927,007	\$ 2,236,689	\$ 782,802	\$ 2,032,252	\$ 1,998,245
12	Prepayments	5,172,139	5,243,990	4,888,628	4,969,664	4,508,744	4,956,633
13	Cash Working Capital	2,383,150	2,383,150	2,383,150	2,383,150	2,383,150	2,383,150
14	Less: Rate Base Deferred Taxes						
15	Total Deferred Income Taxes	16,461,001	15,482,438	17,529,426	18,327,330	20,259,723	17,611,984
16	Less: Storm Damage DFIT	1,527,288	1,446,855	1,340,817	1,223,261	1,129,092	1,333,463
17	Less: SFAS 158 DIT	(13,086,349)	(12,969,759)	(13,006,813)	(13,045,482)	(14,498,720)	(13,321,425)
18	Less: SFAS 106 DIT	2	2	2	479,390	0	95,879
19	Less: SFAS 158 DIT	1	1	1	133,801	0	26,761
20	Less: Prepaid Property Taxes	459,538	125,886	374,327	226,716	407,278	318,749
21	Less: (ASC 740) Gross up ⁽¹⁾	(6,150,857)	(6,150,857)	(6,150,857)	(6,150,857)	(6,150,857)	(6,150,857)
22	Less: Rate Case Expense	(1)	(1)	(1)	(1)	1,584	316
23	Less: Bad Debt Regulatory Asset	20,080	16,172	15,393	15,393	58,978	25,203
24	Less: Accrued Revenue - Purchased Power	(700,619)	(1,322,203)	(1,914,021)	(1,954,342)	973,702	(983,497)
25	Total Rate Base Deferred Taxes	\$ 34,391,918	\$ 34,336,343	\$ 36,870,579	\$ 37,399,450	\$ 38,338,666	\$ 36,267,391
26	Less: Excess Deferred Income Taxes ⁽¹⁾	16,601,346	16,601,346	16,601,346	16,601,346	16,601,346	16,601,346
27	Plus: Deferred Taxes Debit	142,298	120,514	129,066	132,475	150,098	134,890
28	Less: Customer Deposits	593,573	545,176	470,020	423,792	371,830	480,878
29	Less: Customer Advances	525,416	444,982	476,559	489,144	554,217	498,063
30	Rate Base	<u>\$ 189,592,193</u>	<u>\$ 194,796,409</u>	<u>\$ 191,121,237</u>	<u>\$ 189,890,125</u>	<u>\$ 223,474,292</u>	<u>\$ 197,774,851</u>

Notes:

(1) ASC 740 Gross up excluded from Total Rate Base Deferred Taxes (Line 11), but included in Excess Deferred Income Tax Line (Line 18)

UNITIL ENERGY SYSTEMS, INC.
RATE BASE ITEMS
QUARTERLY BALANCES

Schedule RevReq-4-1 Revised

LINE NO.	(1) DESCRIPTION	(2) DECEMBER 31 2019	(3) MARCH 31 2020	(4) JUNE 30 2020	(5) SEPTEMBER 30 2020	(6) DECEMBER 31 2020	(7) 5 QUARTER AVERAGE
1	Utility Plant in Service						
2	Classified	\$ 350,524,447	\$ 356,913,902	\$ 357,270,455	\$ 361,417,472	\$ 379,030,364	\$ 361,031,328
3	Completed Construction Not Classified	12,917,251	13,216,745	15,748,937	15,133,497	29,294,829	17,262,252
4	Total Utility Plant in Service	363,441,698	370,130,647	373,019,392	376,550,969	408,325,193	378,293,580
5	Depreciation & Amortization Reserves	\$ (131,447,315)	\$ (134,081,053)	\$ (137,117,184)	\$ (140,015,203)	\$ (138,059,087)	\$ (136,143,968)
6	Add:						
7	M&S Inventories						
8	Materials and Supplies	1,174,870	1,262,158	1,389,123	1,192,748	1,206,272	1,245,034
9	Stores	189,428	259,182	177,187	39,287	201,952	173,407
10	Clearing Accounts	648,177	1,405,667	670,379	(449,234)	624,028	579,803
11	Total M&S Inventories	\$ 2,012,476	\$ 2,927,007	\$ 2,236,689	\$ 782,802	\$ 2,032,252	\$ 1,998,245
12	Prepayments	5,068,962	4,741,277	4,426,769	4,666,449	4,351,941	4,651,080
13	Cash Working Capital	2,383,150	2,383,150	2,383,150	2,383,150	2,383,150	2,383,150
14	Less: Rate Base Deferred Taxes						
15	Total Deferred Income Taxes	16,461,001	15,482,438	17,529,426	18,327,330	20,259,723	17,611,984
16	Less: Storm Damage DFIT	1,527,288	1,446,855	1,340,817	1,223,261	1,129,092	1,333,463
17	Less: SFAS 158 DIT	(13,086,349)	(12,969,759)	(13,006,813)	(13,045,482)	(14,498,720)	(13,321,425)
18	Less: SFAS 106 DIT	2	2	2	479,390	0	95,879
19	Less: SFAS 158 DIT	1	1	1	133,801	0	26,761
20	Less: Prepaid Property Taxes	459,538	125,886	374,327	226,716	407,278	318,749
21	Less: (ASC 740) Gross up ⁽¹⁾	(6,150,857)	(6,150,857)	(6,150,857)	(6,150,857)	(6,150,857)	(6,150,857)
22	Less: Rate Case Expense	(1)	(1)	(1)	(1)	1,584	316
23	Less: Bad Debt Regulatory Asset	20,080	16,172	15,393	15,393	58,978	25,203
24	Less: Accrued Revenue - Purchased Power	(700,619)	(1,322,203)	(1,914,021)	(1,954,342)	973,702	(983,497)
25	Total Rate Base Deferred Taxes	\$ 34,391,918	\$ 34,336,343	\$ 36,870,579	\$ 37,399,450	\$ 38,338,666	\$ 36,267,391
26	Less: Excess Deferred Income Taxes ⁽¹⁾	16,601,346	16,601,346	16,601,346	16,601,346	16,601,346	16,601,346
27	Plus: Deferred Taxes Debit	142,298	120,514	129,066	132,475	150,098	134,890
28	Less: Customer Deposits	593,573	545,176	470,020	423,792	371,830	480,878
29	Less: Customer Advances	525,416	444,982	476,559	489,144	554,217	498,063
30	Rate Base	<u>\$ 189,489,015</u>	<u>\$ 194,293,696</u>	<u>\$ 190,659,379</u>	<u>\$ 189,586,910</u>	<u>\$ 223,317,488</u>	<u>\$ 197,469,298</u>

Notes:

(1) ASC 740 Gross up excluded from Total Rate Base Deferred Taxes (Line 11), but included in Excess Deferred Income Tax Line (Line 18)

UNITIL ENERGY SYSTEMS, INC.
CASH WORKING CAPITAL
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-4-2

LINE NO.	(1) DESCRIPTION	(2) REFERENCE	(3) TEST YEAR ACTUAL	(4) PROFORMA ADJUSTMENTS	(5) SETTLEMENT UPDATE	(6) TEST YEAR AS PROFORMED
1	O&M Expense	Schedule RevReq-2	22,222,234	2,061,610	(2,786,325)	21,497,520
2	Tax Expense	Schedule RevReq-2	4,889,822	8,941,277	(375,413)	13,455,685
3	Total		<u>\$ 27,112,056</u>	<u>\$ 11,002,887</u>	<u>\$ (3,161,738)</u>	<u>\$ 34,953,205</u>
4	Cash Working Capital Requirement:					
5	Other O&M Expense Days Lag ⁽¹⁾ / 366	32.17 days	<u>8.79%</u>	<u>8.79%</u>	<u>8.79%</u>	<u>8.79%</u>
6	Total Cash Working Capital	Line 5 X Line 3	<u>\$ 2,383,150</u>	<u>\$ 967,154</u>	<u>\$ (277,917)</u>	<u>\$ 3,072,387</u>

Notes

(1) Refer to Lead-Lag Study in Direct Testimony of Daniel Hurstak

UNITIL ENERGY SYSTEMS, INC.
KENSINGTON DISTRIBUTION OPERATING CENTER ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-4-3

LINE NO.	(1) DESCRIPTION	(2) AMOUNT
1	Kensington DOC Value as of 12/31/2020	
2	389-General & Misc. Structure	\$ (9,679)
3	390-Structures	(978,535)
4	Total Kensington DOC Value as of 12/31/2020	\$ (988,214)
5	Net Tax Value as of 12/31/2020	\$ 715,083
6	Change in Accumulated Deferred Taxes ⁽¹⁾	(71,351)

Notes

(1) (Line 3 + Line 5) x Effective Tax Rate of 27.083%

UNITIL ENERGY SYSTEMS, INC.
EXETER DISTRIBUTION OPERATING CENTER ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-4-4

	(1)	(2)
LINE NO.	DESCRIPTION	AMOUNT
1	Exeter DOC Additions 1/1/2021-2/28/2021	
2	390-Structures	\$ 496,301
3	391.1-Office Furniture & Equipment	76,307
4	393-Stores Equip	4,536
5	Total Exeter DOC Additions 1/1/2021-2/28/2021	\$ 577,144

UNITIL ENERGY SYSTEMS, INC.
EXCESS ACCUMULATED DEFERRED INCOME TAXES ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-4-5

LINE NO.	(1) DESCRIPTION	(2) AMOUNT
1	Major Storm Cost Reserve Balance as of 12/31/2020	\$ -
2	Excess ADIT flow back for 2018-2020 ⁽¹⁾	-
3	Adjusted Major Storm Cost Reserve Balance as of 12/31/2020	-
4	Reduction to Excess Deferred Income Tax Liability	-
5	Increase to Accumulated Deferred Income Taxes ⁽²⁾	-
6	Net Decrease to Excess Deferred Income Tax Liability	-

Notes

(1) Refer to Exhibit JAG-6

(2) - Line 4 x Effective Tax Rate of 27.083%

UNITIL ENERGY SYSTEMS, INC.
WEIGHTED AVERAGE COST OF CAPITAL
5 QUARTER AVERAGE ENDED DECEMBER 31, 2020 PRO FORMA

Schedule RevReq-5

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LINE NO.	DESCRIPTION	AMOUNT	PROFORMA ADJUSTMENT	PROFORMED AMOUNT	WEIGHT	COST OF CAPITAL	WEIGHTED COST OF CAPITAL	REFERENCE
1	Common Stock Equity				52.00%	9.20%	4.78%	Schedule RevReq 5-1
2	Preferred Stock Equity				0.00%	6.00%	0.00%	Schedule RevReq 5-1 and 5-6
3	Long Term Debt				48.00%	5.49%	2.64%	Schedule RevReq 5-1 and 5-4
4	Short Term Debt				0.00%	1.68%	0.00%	Schedule RevReq 5-1 and 5-5
5	Total	\$ -	\$ -	\$ -	100.00%		7.42%	

UNITIL ENERGY SYSTEMS, INC.
CAPITAL STRUCTURE FOR RATEMAKING PURPOSES
5-QUARTER AVERAGE ENDED DECEMBER 31, 2020 PRO FORMA

Schedule RevReq-5-1

LINE NO.	(1) DESCRIPTION	(2) DECEMBER 31 2019	(3) MARCH 31 2020	(4) JUNE 30 2020	(5) SEPTEMBER 30 2020	(6) DECEMBER 31 2020	(7) 5 QUARTER AVERAGE	(8) PROFORMA ADJUSTMENT	(9) PROFORMA AMOUNT
1	Common Stock Equity								
2	Common Stock	\$ 2,442,426	\$ 2,442,426	\$ 2,442,426	\$ 2,442,426	\$ 2,442,426	\$ 2,442,426	\$ -	\$ 2,442,426
3	Premium on Capital Stock	1,005,875	1,005,875	1,005,875	1,005,875	1,005,875	1,005,875	-	1,005,875
4	Misc. Paid In Capital	51,028,170	51,028,170	56,028,170	56,028,170	58,778,170	54,578,170	-	54,578,170
5	Common Stock Expense	(94,845)	(94,845)	(94,845)	(94,845)	(94,845)	(94,845)	-	(94,845)
6	Retained Earnings	42,949,034	42,237,826	42,838,727	44,310,367	44,220,302	43,311,251	-	43,311,251
7	Total Common Stock Equity	97,330,660	96,619,452	102,220,353	103,691,992	106,351,928	101,242,877	-	101,242,877
8	Preferred Stock Equity	188,700	188,700	188,700	188,700	188,700	188,700	-	188,700
9	Long-Term Debt	87,500,000	82,500,000	82,500,000	108,000,000	106,500,000	93,400,000	(3,500,000)	89,900,000
10	Short-Term Debt ⁽¹⁾	-	-	-	-	-	-	-	-
11	Total	<u>\$ 185,019,360</u>	<u>\$ 179,308,152</u>	<u>\$ 184,909,053</u>	<u>\$ 211,880,692</u>	<u>\$ 213,040,628</u>	<u>\$ 194,831,577</u>	<u>\$ (3,500,000)</u>	<u>\$ 191,331,577</u>
12	Capital Structure Ratios								
13	Common Stock Equity	52.61%	53.88%	55.28%	48.94%	49.92%	51.96%		52.91%
14	Preferred Stock Equity	0.10%	0.11%	0.10%	0.09%	0.09%	0.10%		0.10%
15	Long-Term Debt	47.29%	46.01%	44.62%	50.97%	49.99%	47.94%		46.99%
16	Short-Term Debt ⁽¹⁾	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		0.00%
17	Total	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>	<u>100.00%</u>		<u>100.00%</u>

Notes

(1) For ratemaking purposes the Company has imputed zero short-term debt

**UNITIL ENERGY SYSTEMS, INC.
HISTORICAL CAPITAL STRUCTURE
DECEMBER 31, 201X**

Schedule RevReq-5-2

LINE NO.	(1) DESCRIPTION	(2) 2015	(3) 2016	(4) 2017	(5) 2018	(6) 2019
1	Common Stock Equity	\$ 77,284,950	\$ 79,155,139	\$ 80,739,631	\$ 83,926,900	\$ 97,330,660
2	Preferred Stock Equity	189,800	189,300	189,300	189,300	188,700
3	Long-Term Debt	<u>77,000,000</u>	<u>74,000,000</u>	<u>72,500,000</u>	<u>96,000,000</u>	<u>87,500,000</u>
4	Total	<u>\$ 154,474,750</u>	<u>\$ 153,344,439</u>	<u>\$ 153,428,931</u>	<u>\$ 180,116,200</u>	<u>\$ 185,019,360</u>
5	Short-Term Debt (Year-End)	8,774,322	16,772,688	21,386,504	-	13,065,032

**UNITIL ENERGY SYSTEMS, INC.
HISTORICAL CAPITALIZATION RATIOS
DECEMBER 31, 201X**

Schedule RevReq-5-3

LINE NO.	(1) DESCRIPTION	(2)	(3)	(4)	(5)	(6)
		2015	2016	2017	2018	2019
1	Common Stock Equity	50.03%	51.62%	52.62%	46.60%	52.61%
2	Preferred Stock Equity	0.12%	0.12%	0.12%	0.11%	0.10%
3	Long-Term Debt	49.85%	48.26%	47.25%	53.30%	47.29%
4	Total	100.00%	100.00%	100.00%	100.00%	100.00%

UNITIL ENERGY SYSTEMS, INC.
WEIGHTED AVERAGE COST OF LONG-TERM DEBT
DECEMBER 31, 2020 PRO FORMA

Schedule RevReq-5-4

LINE NO.	(1) ISSUE	(2) DATE ISSUED	(4) TERM	(5) FACE VALUE	(6) OUTSTANDING AMOUNT	(7) PROFORMA ADJUSTMENT	(8) PROFORMED OUTSTANDING AMOUNT	(9) ISSUANCE COSTS	(10) NET PROCEEDS RATIO [(5)-(9)/(5)]	(11) UNAMORTIZED ISSUANCE COSTS	(12) NET PROCEEDS OUTSTANDING (8)-(11)	(13) ANNUAL ISSUANCE COST	(14) ANNUAL INTEREST COST Rate * (8)	(15) TOTAL ANNUAL COST (13)+(14)	(16) COST RATE BASED ON NET PROCEEDS (15)/[(8)-(11)]
1	8.49% Series I	10/14/1994	30 Yrs	\$ 6,000,000	\$ 1,200,000	\$ (600,000)	\$ 600,000	\$ 141,750	97.64%	\$ 18,034	\$ 581,966	\$ 4,756	\$ 50,940	\$ 55,696	9.57%
2	6.96% Series J	9/1/1998	30 Yrs	10,000,000	8,000,000	(1,000,000)	7,000,000	343,727	96.56%	88,011	6,911,989	11,479	487,200	498,679	7.21%
3	8.00% Series K	5/1/2001	30 Yrs	7,500,000	7,500,000	-	7,500,000	236,989	96.84%	50,381	7,449,619	4,876	600,000	604,876	8.12%
4	8.49% Series L	10/14/1994	30 Yrs	9,000,000	1,800,000	(900,000)	900,000	193,809	97.85%	24,599	875,401	6,488	76,410	82,898	9.47%
5	6.96% Series M	9/1/1998	30 Yrs	10,000,000	8,000,000	(1,000,000)	7,000,000	230,507	97.69%	59,076	6,940,924	7,706	487,200	494,906	7.13%
6	8.00% Series N	5/1/2001	30 Yrs	7,500,000	7,500,000	-	7,500,000	111,917	98.51%	40,280	7,459,720	3,898	600,000	603,898	8.10%
7	6.32% Series O	9/26/2006	30 Yrs	15,000,000	15,000,000	-	15,000,000	280,242	98.13%	146,737	14,853,263	9,341	948,000	957,341	6.45%
8	4.18% Series Q	11/30/2018	30 Yrs	30,000,000	30,000,000	-	30,000,000	535,964	98.21%	498,784	29,501,216	17,865	1,254,000	1,271,865	4.31%
9	3.58% Series R	9/15/2020	20 Yrs	27,500,000	27,500,000	-	27,500,000	173,526	99.37%	170,634	27,329,366	8,676	984,500	993,176	3.63%
10	12th Supplemental	12/1/2002	24 Yrs					464,633		158,265	(158,265)	21,582		21,582	
11	Total			\$ 122,500,000	\$ 106,500,000	\$ (3,500,000)	\$ 103,000,000	\$ 2,713,064		\$ 1,254,801	\$ 101,745,199			\$ 5,584,917	5.49%

UNITIL ENERGY SYSTEMS, INC.
COST OF SHORT-TERM DEBT
12 MONTHS ENDED DECEMBER 31, 2020

Schedule RevReq-5-5

LINE NO.	(1) MONTH	(2) MONTH-END AMOUNT OUTSTANDING	(3) AVERAGE DAILY BORROWINGS	(4) MONTHLY SHORT-TERM INTEREST	(5) INTEREST RATE ⁽¹⁾
1	January 2020	15,981,465	13,423,371	\$ 32,462	2.86%
2	February 2020	18,329,433	15,403,679	34,383	2.82%
3	March 2020	25,006,584	22,479,815	40,533	2.13%
4	April 2020	26,439,328	24,786,356	38,939	1.92%
5	May 2020	26,575,577	25,292,157	29,279	1.37%
6	June 2020	23,423,291	23,096,051	25,174	1.33%
7	July 2020	26,686,489	25,491,071	28,529	1.32%
8	August 2020	29,757,846	29,264,455	32,399	1.31%
9	September 2020	4,767,278	17,205,102	18,331	1.30%
10	October 2020	8,896,119	7,217,071	7,906	1.29%
11	November 2020	6,996,466	6,214,346	6,564	1.29%
12	December 2020	8,176,368	<u>6,924,815</u>	7,590	<u>1.29%</u>
13	Average for the Year		18,066,524		1.68%

Notes

(1) The Interest Rate is calculated as follows: [Column (4) / # of days in month * 366] / Column (3).

UNITIL ENERGY SYSTEMS, INC.
WEIGHTED AVERAGE COST OF PREFERRED STOCK
DECEMBER 31, 2020

Schedule RevReq-5-6

LINE NO.	(1) SERIES	(2) DATE ISSUED	(3) FACE VALUE	(4) ISSUANCE COSTS	(5) NET PROCEEDS RATIO [(3)-(4)/(3)]	(6) OUTSTANDING AMOUNT	(7) UNAMORTIZED ISSUANCE COSTS	(8) NET PROCEEDS OUTSTANDING (6)-(7)	(9) ANNUAL ISSUANCE COST	(10) ANNUAL DIVIDEND EXPENSE Rate * (6)	(11) TOTAL ANNUAL COST (11)+(12)	(12) COST RATE BASED ON NET PROCEEDS (11)/[(6)-(7)]
1	6.00%	1905-1926	\$ 188,700	N/A	100.00%	\$ 188,700	N/A	\$ 188,700	\$ -	\$ 11,322	\$ 11,322	6.00%
2	Total		<u>\$ 188,700</u>	<u>\$ -</u>		<u>\$ 188,700</u>	<u>\$ -</u>	<u>\$ 188,700</u>	<u>\$ -</u>	<u>\$ 11,322</u>	<u>\$ 11,322</u>	<u>6.00%</u>

**UNITIL ENERGY SYSTEMS, INC.
COST OF COMMON EQUITY CAPITAL
12 MONTHS ENDED DECEMBER 31, 2020**

Schedule RevReq-5-7

**THE INFORMATION CONCERNING THE COST OF COMMON EQUITY CAPITAL IS PROVIDED
IN THE TESTIMONY AND EXHIBITS OF MS. JENNIFER NELSON**

UNITIL ENERGY SYSTEMS, INC.
DOCKET DE 21-030
REVENUE REQUIREMENT WORKPAPERS

ELECTRIC FLOWTHRU INCOME STATEMENTS BY MECHANISM
 ACTUAL DATA

Workpaper - Flowthrough Detail
 For Periods Ending December 31, 2020

	EE ODR	LIEAP	Co-Gen QF	External Delivery	Stranded Cost	Default Service - Non G1	Default Service - G1	RPS Non G1	RPS G1	RGGI	Storm Recovery	EE BB	Lost Base Rev	Total Flowthru	Total Base	Total Base & Flowthru
OPERATING REVENUES																
Electric Service Revenue:																
Residential (440)	\$ 2,690,815	\$ (283,407)	\$ -	\$ 15,005,975	\$ (86,685)	\$ 36,633,258	\$ -	\$ 3,310,436	\$ -	\$ -	\$ 434,307	\$ -	\$ 377,337	\$ 58,082,035	\$ 31,580,284	\$ 89,662,319
Regular General (4421)	1,651,704	475,964	-	9,243,182	(49,753)	11,028,353	-	1,145,666	-	-	266,529	-	231,601	23,993,246	16,910,027	40,903,272
Large General (4422)	1,667,409	479,651	-	9,356,659	(54,721)	-	2,875,933	-	344,074	-	268,605	-	233,787	15,171,397	7,736,414	22,907,810
Public Street Light (444)	39,793	11,272	-	222,330	(1,303)	284,961	-	29,452	-	-	6,542	-	5,754	598,803	1,823,495	2,422,298
Sales to Public Auth (445)	130	37	-	734	(17)	262	-	27	-	-	21	-	18	1,212	6,333	7,545
Sales for Resale (447)	-	-	1,521,144	-	-	-	-	-	-	-	-	-	-	1,521,144	-	1,521,144
Other Sales (449)	533,356	(468,878)	(24,268)	1,430,204	(151,553)	(2,122,134)	147,482	(146,890)	(10,482)	(39,104)	-	(2,285)	(24,068)	(878,620)	280,812	(587,808)
Total Electric Service Revenue	\$ 6,583,206	\$ 214,640	\$ 1,496,876	\$ 35,259,083	\$ (344,033)	\$ 45,824,701	\$ 3,023,415	\$ 4,338,691	\$ 333,592	\$ (39,104)	\$ 976,004	\$ (2,285)	\$ 824,430	\$ 98,489,216	\$ 58,337,364	\$ 156,826,580
Other Operating Revenues:																
Late Payment Charges (450)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	94,600	94,600
Misc. Service Revenues (451)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	194,996	194,996
Rent-elect. Property (454)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	585,200	585,200
Other Electric Rev (456)	947,170	-	-	-	-	-	-	-	-	128,893	-	2,285	-	1,078,347	143,733	1,222,080
Total Other Operating Revenues	\$ 947,170	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 128,893	\$ -	\$ 2,285	\$ -	\$ 1,078,347	\$ 1,018,528	\$ 2,096,875
TOTAL OPERATING REVENUES	\$ 7,530,376	\$ 214,640	\$ 1,496,876	\$ 35,259,083	\$ (344,033)	\$ 45,824,701	\$ 3,023,415	\$ 4,338,691	\$ 333,592	\$ 89,789	\$ 976,004	\$ -	\$ 824,430	\$ 99,567,563	\$ 59,355,892	\$ 158,923,455
OPERATING EXPENSES																
Operation & Maint. Expenses:																
Purchased Power (555-557)	-	-	1,496,876	(1,500,014)	(344,033)	45,346,245	2,969,642	4,427,065	340,488	-	-	-	-	52,736,269	284,252	53,020,521
Transmission (560-579)	-	-	-	35,400,175	-	-	-	-	-	-	-	-	-	35,400,175	68,559	35,468,734
Distribution (580-599)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9,476,199	9,476,199
Cust. Accounting (901-905)	-	-	-	-	-	319,643	2,029	-	-	-	-	-	-	321,671	3,965,244	4,286,916
Cust. Service (907-910)	7,208,391	-	-	-	-	-	-	-	-	89,789	-	-	-	7,298,180	28,775	7,326,955
Admin. & General (920-935)	-	214,640	-	510,513	-	44,888	55,333	-	-	-	-	-	-	825,374	8,925,457	9,750,830
Total O & M Expenses	\$ 7,208,391	\$ 214,640	\$ 1,496,876	\$ 34,410,673	\$ (344,033)	\$ 45,710,776	\$ 3,027,003	\$ 4,427,065	\$ 340,488	\$ 89,789	\$ -	\$ -	\$ -	\$ 96,581,669	\$ 22,748,486	\$ 119,330,155
Other Operating Expenses:																
Deprtn. (403)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12,680,791	12,680,791
Amort. (404-407)	-	-	-	83,266	-	-	-	-	-	-	976,004	-	-	-	2,203,158	3,262,428
Taxes-Other Than Inc. (408)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7,166,678	7,166,678
Income Taxes-Federal (409)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,180,388)	(1,180,388)
State Income Tax (409)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,096,468)	(1,096,468)
Def. Income Taxes (410,411)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,203,294	5,203,294
Total Other Operating Expenses	\$ -	\$ -	\$ -	\$ 83,266	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 976,004	\$ -	\$ -	\$ 1,059,270	\$ 24,977,064	\$ 26,036,335
TOTAL OPERATING EXPENSES	\$ 7,208,391	\$ 214,640	\$ 1,496,876	\$ 34,493,939	\$ (344,033)	\$ 45,710,776	\$ 3,027,003	\$ 4,427,065	\$ 340,488	\$ 89,789	\$ 976,004	\$ -	\$ -	\$ 97,640,939	\$ 47,725,551	\$ 145,366,489
NET UTILITY OPERATING INCOME	\$ 321,985	\$ -	\$ -	\$ 765,144	\$ -	\$ 113,925	\$ (3,589)	\$ (88,374)	\$ (6,896)	\$ -	\$ -	\$ -	\$ 824,430	\$ 1,926,625	\$ 11,630,341	\$ 13,556,966
OTHER INCOME & DEDUCTIONS																
Other Income:																
Other (419, 421)	-	-	-	(522,056)	-	(113,925)	3,589	88,374	6,896	-	-	-	-	(537,123)	907,764	370,641
Other Income Deduc. (425, 426)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	272,574	272,574
Income Tax, Other Inc & Ded	-	-	-	-	-	-	-	-	-	-	-	-	-	-	26,560	26,560
Net Other Income & Deductions	\$ -	\$ -	\$ -	\$ (522,056)	\$ -	\$ (113,925)	\$ 3,589	\$ 88,374	\$ 6,896	\$ -	\$ -	\$ -	\$ -	\$ (537,123)	\$ 608,630	\$ 71,508
GROSS INCOME	\$ 321,985	\$ -	\$ -	\$ 243,087	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 824,430	\$ 1,389,502	\$ 12,238,971	\$ 13,628,474
Interest Charges (427 - 432)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,495,092	5,495,092
NET INCOME	\$ 321,985	\$ -	\$ -	\$ 243,087	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 824,430	\$ 1,389,502	\$ 6,743,880	\$ 8,133,382
Less: Pref. Dividend Req.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11,322	11,322
EARN. AVAIL. FOR COMMON STOCK	\$ 321,985	\$ -	\$ -	\$ 243,087	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 824,430	\$ 1,389,502	\$ 6,732,558	\$ 8,122,060

UNITIL ENERGY SYSTEMS, INC.
LATE PAYMENT REVENUE ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 1.1

LINE NO.	(1)	(2)
	DESCRIPTION	TOTAL
1	Normalized Late Payment Revenue ⁽¹⁾	\$ 275,537
2	Test Year Late Payment Revenue	94,600
3	Late Payment Revenue Adjustment	<u>\$ 180,938</u>

Notes

(1) Normalized Late Payment Revenue based on 2019 calendar year activity

UNITIL ENERGY SYSTEMS, INC.
UNION PAYROLL ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 2.1

LINE NO.	(1)	(2)
	DESCRIPTION	TOTAL
1	Payroll - Five Months Ended May 31, 2020	\$ 1,917,269
2	2020 Salary & Wage Increase ⁽¹⁾	3.00%
3	Union Payroll Annualization	<u>\$ 57,518</u>

Notes

(1) Average Union increase of 3% effective June 1, 2020

UNITIL ENERGY SYSTEMS, INC.
UNION AND NONUNION PAYROLL/COMPENSATION ⁽¹⁾
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 2.2

LINE NO.	(1)	(2)
	DESCRIPTION	TOTAL
1	Union Weekly Payroll	\$ 4,793,090
2	Total Nonunion Payroll ⁽²⁾	<u>1,405,138</u>
3	Total Payroll ⁽³⁾	<u>6,198,228</u>
4	Payroll Capitalization ⁽³⁾	<u>(3,972,999)</u>
5	Test Year O&M Payroll	<u>\$ 2,225,229</u>

Notes

(1) Payroll Allocation to Union and Non-Union based on ADP 2020 Year End Payroll Registers

(2) Includes Incentive Compensation at Target of \$104,079

(3) Refer to Workpaper 2.3

UNITIL ENERGY SYSTEMS, INC.
PAYROLL SUMMARY
FOR COMPUTATION OF PAYROLL BENEFIT RELATED OVERHEADS

Workpaper 2.3

LINE NO.	DESCRIPTION	(1)	(2)
			2020 INCENTIVE COMP AT TARGET
1	O&M PAYROLL:		
2	OPERATIONS		929,656
3	MAINTENANCE		883,050
4	TOTAL O&M PAYROLL		<u>1,812,706</u>
5	CONSTRUCTION PAYROLL:		
6	DIRECT		1,735,013
7	INDIRECT		1,355,228
8	TOTAL CONSTRUCTION PAYROLL		<u>3,090,241</u>
9	OTHER PAYROLL:		
10	CLEARING ACCOUNTS		182,391
11	UNPRODUCTIVE TIME		761,241
12	MOBILE DATA SYSTEMS (MDS)		247,571
13	INCENTIVE COMPENSATION at TARGET		104,079
14	TEMPORARY SERVICES		12,750
15	OTHER ⁽¹⁾		23,411
16	TOTAL OTHER PAYROLL		<u>1,331,442</u>
17	TOTAL PAYROLL		<u><u>6,234,389</u></u>
18	O&M PAYROLL:		
19	OPERATIONS		929,656
20	MAINTENANCE		883,050
21	ALLOCATED CLEARING		52,528
22	ALLOCATED UNPRODUCTIVE		114,186
23	ALLOCATED MDS		231,237
24	ALLOCATED INCENTIVE COMPENSATION		14,571
25	TOTAL O&M PAYROLL		<u>2,225,229</u>
26	CONSTRUCTION PAYROLL:		
27	DIRECT		1,735,013
28	INDIRECT		1,355,228
29	ALLOCATED CLEARING		129,862
30	ALLOCATED UNPRODUCTIVE		647,055
31	ALLOCATED MDS		16,334
32	ALLOCATED INCENTIVE COMPENSATION		89,508
33	TOTAL CONSTRUCTION PAYROLL		<u>3,972,999</u>
34	TOTAL PAYROLL, NET OF OTHER PAYROLL		<u><u>6,198,228</u></u>
35	TOTAL OTHER PAYROLL:		
36	BELOW THE LINE PAYROLL ⁽²⁾		12,750
37	OTHER ⁽¹⁾		23,411
38	TOTAL OTHER PAYROLL		<u>36,161</u>
39	TOTAL PAYROLL, WITH INCENTIVE COMP ADJ TO TARGET		<u><u>6,234,389</u></u>

UNITIL ENERGY SYSTEMS, INC.
PAYROLL - INCENTIVE COMPENSATION ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 2.4

LINE NO.	(1) Description	(2) Amount
1	<u>Unitil Energy Services, Inc. Payroll:</u>	
2	Adjustment to reflect Incentive Compensation at Target	
3	Test Year Accrued Incentive Compensation	\$ 104,079
4	Incentive Compensation at Target	104,079
5	Test Year Accounting Adjustment to reflect Incentive Compensation at Target	-
6	Capitalized Incentive Compensation at	82.00% -
7	Test Year Incentive Comp Accounting Adjustment to O&M	-
8	<u>USC Payroll, allocated to Unitil Energy Systems, Inc.:</u>	
9	Adjustment to reflect Incentive Compensation at Target	
10	Test Year Accrued Incentive Compensation at USC	3,412,143
11	Test Year Accrued Incentive Compensation Percentage Billed to UES In 2020	27.50% 938,339
12	Incentive Compensation at Target	938,339
13	Test Year Accounting Adjustment to reflect Incentive Compensation at Target	-
14	Capitalized Incentive Compensation at	28.45% -
15	Test Year Incentive Comp Accounting Adjustment to O&M	-

UNITIL ENERGY SYSTEMS, INC.
MEDICAL AND DENTAL INSURANCE
FOR THE 12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.1

Line No.	Coverage	Employee Census ⁽¹⁾				2021 Rates ⁽²⁾				- Cost -					
		- Medical -		- Dental -		- Medical -		- Dental -		- Medical -		- Dental -			
		CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	Total	
1	Individual	6	2	6	12	\$ 792.45	\$ 1,033.07	\$ 46.56	\$ 45.21	\$ 4,755	\$ 2,066	\$ 279	\$ 543	\$ 7,643	
2	Two Person	10	12	7	18	1,362.76	1,859.73	83.34	80.82	13,628	22,317	583	1,455	37,983	
3	Family	8	12	5	23	1,849.91	2,564.50	147.21	141.43	14,799	30,774	736	3,253	49,562	
4	Total	24	26	18	53					33,182	55,157	1,599	5,250	95,187	
5	2021 Annual Cost Based on Employee Enrollments at December 31, 2020										398,179	661,883	19,185	63,002	1,142,249
6	Employee Contribution ⁽³⁾									(79,636)	(132,377)	(3,837)	(12,600)	(228,450)	
7	Net Cost									318,543	529,506	15,348	50,402	913,799	
8	Plus: Company Contribution to HSA									21,000	-	-	-	21,000	
9	Payments to Employees to Opt out									9,920	12,830	-	-	22,750	
10	Total HSA and Opt out Payments									30,920	12,830	-	-	43,750	
11	Proformed 2021 Medical Cost									349,463	542,336	15,348	50,402	957,549	
12	Projected Increase in Premium Rates Effective January 1, 2022 ⁽⁴⁾									29,562	48,810	614	2,016	81,002	
13	Proformed 2021 and 2022 Medical and Dental Cost									379,025	591,147	15,962	52,418	1,038,551	
14	Amount Chargeable to Capital ⁽⁵⁾									(296,639)	(468,326)	(12,706)	(41,724)	(819,396)	
15	Total Pro-formed Medical and Dental Insurance O&M Expense													219,155	
16	Less Test Year O&M Expense ⁽⁶⁾													95,921	
17	Total O&M Medical & Dental Insurance Adjustment													\$ 123,234	

Notes

(1) Employee Benefit Census as of December 31, 2020

(2) Anthem and Northeast Delta Dental monthly insurance rates, effective January 1, 2021

(3) Employee Contributions: 20%

(4) Estimated increase effective January 1, 2022

Medical Increase 9.00%

Dental Increase 4.00%

(5) Capitalization Rate: 63.68%

(6) Refer to Workpaper 3.2

UNITIL ENERGY SYSTEMS, INC.
MEDICAL AND DENTAL INSURANCE
FOR THE 12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.1 Revised

Line No.	Coverage	Employee Census ⁽¹⁾				2021 Rates ⁽²⁾				- Cost -				
		- Medical -		- Dental -		- Medical -		- Dental -		- Medical -		- Dental -		Total
		CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	
1	Individual	6	2	6	12	\$ 792.45	\$ 1,033.07	\$ 46.56	\$ 45.21	\$ 4,755	\$ 2,066	\$ 279	\$ 543	\$ 7,643
2	Two Person	10	12	7	18	1,362.76	1,859.73	83.34	80.82	13,628	22,317	583	1,455	37,983
3	Family	8	12	5	23	1,849.91	2,564.50	147.21	141.43	14,799	30,774	736	3,253	49,562
4	Total	24	26	18	53					33,182	55,157	1,599	5,250	95,187
5	2021 Annual Cost Based on Employee Enrollments at December 31, 2020									398,179	661,883	19,185	63,002	1,142,249
6	Employee Contribution ⁽³⁾									(79,636)	(132,377)	(3,837)	(12,600)	(228,450)
7	Net Cost									318,543	529,506	15,348	50,402	913,799
8	Plus: Company Contribution to HSA									21,000	-	-	-	21,000
9	Payments to Employees to Opt out									9,920	12,830	-	-	22,750
10	Total HSA and Opt out Payments									30,920	12,830	-	-	43,750
11	Proformed 2021 Medical Cost									349,463	542,336	15,348	50,402	957,549
12	Projected Increase in Premium Rates Effective January 1, 2022 ⁽⁴⁾									-	-	-	-	-
13	Proformed 2021 Medical and Dental Cost									349,463	542,336	15,348	50,402	957,549
14	Amount Chargeable to Capital ⁽⁵⁾									(273,250)	(429,657)	(12,217)	(40,120)	(755,244)
15	Total Pro-formed Medical and Dental Insurance O&M Expense													202,305
16	Less Test Year O&M Expense ⁽⁶⁾													95,921
17	Total O&M Medical & Dental Insurance Adjustment													\$ 106,384

Notes

(1) Employee Benefit Census as of December 31, 2020

(2) Anthem and Northeast Delta Dental monthly insurance rates, effective January 1, 2021

(3) Employee Contributions: 20%

(4) Actual rate change effective January 1, 2022

Medical Increase 0.00%

Dental Increase 0.00%

(5) Capitalization Rate: 63.68%

(6) Refer to Workpaper 3.2

UNITIL ENERGY SYSTEMS, INC.
MEDICAL INSURANCE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.2

LINE NO.	(1) Description	(2) Amount
1	Medical Insurance Expense	\$ 883,100
2	Benefits Cost Capitalized at	63.68% (562,358)
3	Subtotal Medical Costs	<u>320,742</u>
4	Employee Contribution	(203,241)
5	Drug Subsidy	(28,556)
6	Subtotal	<u>(231,797)</u>
7	Net Test Year Medical Insurance Expense	<u>88,945</u>
8	Dental Insurance Expense	52,306
9	Benefits Cost Capitalized at	63.68% (33,308)
10	Subtotal Dental Costs	<u>18,998</u>
11	Employee Contribution	(12,021)
12	Net Test Year Dental Costs	<u>6,976</u>
13	Net Test Year Medical & Dental Costs	<u><u>\$ 95,921</u></u>

UNITIL ENERGY SYSTEMS, INC.
MEDICAL AND DENTAL INSURANCE - UNITIL SERVICE CORP
FOR THE 12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.3

Line No.	Coverage	Employee Census ⁽¹⁾				2021 Rates ⁽²⁾				Costs				
		Medical		Dental		Medical		Dental		Medical		Dental		Total
		CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	
1	Individual	80	-	79	48	\$ 792.45	\$ 1,033.07	\$ 46.56	\$ 45.21	\$ 63,396	\$ -	\$ 3,678	\$ 2,170	\$ 69,244
2	Two Person	64	1	77	36	1,362.76	1,859.73	83.34	80.82	87,217	1,860	6,417	2,910	98,403
3	Family	82	1	100	79	1,849.91	2,564.50	147.21	141.43	151,693	2,565	14,721	11,173	180,151
4	Total	226	2	256	163					302,305	4,424	24,816	16,253	347,798
5	2021 Annual Cost Based on Employee Enrollments at December 31, 2020										3,627,663	53,091	297,797	4,173,582
6	Employee Contribution ⁽³⁾										(725,533)	(10,618)	(59,559)	(834,716)
7	Net Cost										2,902,130	42,473	238,238	3,338,865
8	Plus: Company Contribution to HSA										186,000	-	-	186,000
9	Payments to Employees to Opt out										178,400	-	-	178,400
10	Total HSA and Opt out Payments										364,400	-	-	364,400
11	Proformed 2021 Medical Cost										3,266,531	42,473	238,238	3,703,266
12	Projected Increase in Premium Rates Effective January 1, 2022 ⁽⁴⁾										277,248	3,823	9,530	296,841
13	Proformed 2021 and 2022 Medical and Dental Cost										3,543,778	46,295	247,767	4,000,106
12	Apportionment to UES at	27.50%								974,539	12,731	68,136	44,623	1,100,029
13	Amount Chargeable to Capital at		29.42%							(286,709)	(3,746)	(20,046)	(13,128)	(323,629)
14	Total Pro-formed Medical and Dental Insurance O&M Expense													776,401
15	Less Test Year O&M Expense ⁽⁵⁾													416,480
16	Total O&M Medical & Dental Insurance Adjustment													<u>\$ 359,921</u>

Notes

(1) Employee Benefit Census as of December 31, 2020.

(2) Health Plans, Inc. and Northeast Delta Dental monthly insurance rates, effective January 1, 2021.

(3) Employee Contributions: 20%

(4) Estimated increase effective January 1, 2022

Medical Increase 9.00%

Dental Increase 4.00%

(5) Refer to Workpaper 3.4

UNITIL ENERGY SYSTEMS, INC.
MEDICAL AND DENTAL INSURANCE - UNITIL SERVICE CORP
FOR THE 12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.3 Revised

Line No.	Coverage	Employee Census ⁽¹⁾				2021 Rates ⁽²⁾				Costs				
		Medical		Dental		Medical		Dental		Medical		Dental		Total
		CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	CDHP	PPO	Plus	Standard	
1	Individual	80	-	79	48	\$ 792.45	\$ 1,033.07	\$ 46.56	\$ 45.21	\$ 63,396	\$ -	\$ 3,678	\$ 2,170	\$ 69,244
2	Two Person	64	1	77	36	1,362.76	1,859.73	83.34	80.82	87,217	1,860	6,417	2,910	98,403
3	Family	82	1	100	79	1,849.91	2,564.50	147.21	141.43	151,693	2,565	14,721	11,173	180,151
4	Total	226	2	256	163					302,305	4,424	24,816	16,253	347,798
5	2021 Annual Cost Based on Employee Enrollments at December 31, 2020										3,627,663	53,091	297,797	4,173,582
6	Employee Contribution ⁽³⁾										(725,533)	(10,618)	(59,559)	(834,716)
7	Net Cost										2,902,130	42,473	238,238	3,338,865
8	Plus: Company Contribution to HSA										186,000	-	-	186,000
9	Payments to Employees to Opt out										178,400	-	-	178,400
10	Total HSA and Opt out Payments										364,400	-	-	364,400
11	Proformed 2021 Medical Cost										3,266,531	42,473	238,238	3,703,266
12	Projected Increase in Premium Rates Effective January 1, 2022 ⁽⁴⁾										-	-	-	-
13	Proformed 2021 Medical and Dental Cost										3,266,531	42,473	238,238	3,703,266
12	Apportionment to UES at 27.50%										898,296	11,680	65,515	1,018,398
13	Amount Chargeable to Capital at 29.42%										(264,279)	(3,436)	(19,275)	(299,613)
14	Total Pro-formed Medical and Dental Insurance O&M Expense													718,785
15	Less Test Year O&M Expense ⁽⁵⁾													416,480
16	Total O&M Medical & Dental Insurance Adjustment													<u>\$ 302,305</u>

Notes

(1) Employee Benefit Census as of December 31, 2020.

(2) Health Plans, Inc. and Northeast Delta Dental monthly insurance rates, effective January 1, 2021.

(3) Employee Contributions: 20%

(4) Actual rate change effective January 1, 2022

Medical Increase 0.00%

Dental Increase 0.00%

(5) Refer to Workpaper 3.4

UNITIL SERVICE CORP.
MEDICAL INSURANCE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 3.4

LINE NO.	(1) Description	(2) Medical	(3) Dental	(4) Total
1	Medical Insurance	\$ 2,587,331	\$ 304,575	\$ 2,891,906
2	Employee Contribution	(703,135)	(59,946)	(763,081)
3	Drug Subsidy	(34,106)	-	(34,106)
4	Subtotal	1,850,090	244,629	2,094,719
5	UES Apportionment at	28.17%	28.17%	28.17%
6	Expense Apportioned to UES	521,170	68,912	590,082
7	Capitalization Rate at	29.42%	29.42%	29.42%
8	UES Capitalization	(153,328)	(20,274)	(173,602)
9	Net USC Test Year Medical & Dental Costs Allocated to UES	\$ 367,842	\$ 48,638	\$ 416,480

Unitil Energy Systems, Inc.
Pension Expense
2020 Actual Expense Recorded and 2021 Forecast Expense

Workpaper 4.1

LINE NO.	(1) Description	(2) 2020 TEST YEAR	(3) 2021 FORECAST EXPENSE	(4) PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to UES	28.17%	28.17%	
A2	UES Capitalization Rates	63.68%	63.68%	
A3	USC Labor & Overhead to Construction	29.42%	29.42%	
A4	Total USC Pension Expense per Actuary	\$ 3,032,609	\$ 3,232,617	

Calculation of Pension Expense, net of amounts chargeable to capital

A. UES Pension Expense, net:

1	UES Pension Expense per Actuary	\$ 1,258,030	\$ 1,320,039	\$ 62,009
2	Less: Amounts chargeable to capital	(801,114)	(840,601)	(39,487)
3	Total UES Pension Expense, net	<u>\$ 456,916</u>	<u>\$ 479,438</u>	<u>\$ 22,522</u>

B. Unitil Service Pension Expense allocated to UES, net:

4	Unitil Service Pension Expense per Actuary	\$ 854,286	\$ 910,628	\$ 56,342
5	Less: Amounts chargeable to capital	(251,331)	(267,907)	(16,576)
6	Unitil Service Pension Expense allocated to UES, net	<u>\$ 602,955</u>	<u>\$ 642,721</u>	<u>\$ 39,766</u>
7	Total UES Pension Expense	<u>\$ 1,059,872</u>	<u>\$ 1,122,160</u>	<u>\$ 62,288</u>

Unitil Energy Systems, Inc.
PBOP Expense
2020 Actual Expense Recorded and 2021 Forecast Expense

Workpaper 4.2

LINE NO.	(1) Description	(2) 2020 TEST YEAR	(3) 2021 FORECAST EXPENSE	(4) PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to UES	28.17%	28.17%	
A2	UES Capitalization Rates	63.68%	63.68%	
A3	USC Labor & Overhead to Construction	29.42%	29.42%	
A4	Total USC PBOP Expense per Actuary	\$ 1,510,206	\$ 1,358,914	
<u>Calculation of PBOP Expense, net of amounts chargeable to capital</u>				
<u>A. UES PBOP Expense, net:</u>				
1	UES PBOP Expense per Actuary	\$ 1,626,222	\$ 1,594,405	\$ (31,817)
2	Less: Amounts chargeable to capital	(1,035,578)	(1,015,317)	20,261
3	Total UES PBOP Expense, net	<u>\$ 590,644</u>	<u>\$ 579,088</u>	<u>\$ (11,556)</u>
<u>B. Unitil Service PBOP Expense allocated to UES, net:</u>				
4	Unitil Service PBOP Expense per Actuary	\$ 425,425	\$ 382,806	\$ (42,619)
5	Less: Amounts chargeable to capital	(125,160)	(112,622)	12,538
6	Unitil Service PBOP Expense Allocated to UES, net	<u>\$ 300,265</u>	<u>\$ 270,185</u>	<u>\$ (30,080)</u>
7	Total UES PBOP Expense	<u>\$ 890,909</u>	<u>\$ 849,272</u>	<u>\$ (41,636)</u>

Unitil Energy Systems, Inc.
SERP Expense
2020 Actual Expense Recorded and 2021 Forecast Expense

Workpaper 4.3

	(1)	(2)	(3)	(4)
LINE NO.	DESCRIPTION	2020 TEST YEAR	2021 EXPENSE	PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to UES	28.17%	28.17%	
A2	UES Capitalization Rates	63.68%	63.68%	
A3	USC Labor & Overhead to Construction	29.42%	29.42%	
A4	Total USC SERP Expense per Actuary	\$ 1,924,767	\$ 2,357,253	
<u>Calculation of SERP Expense, net of Amounts Chargeable to Construction</u>				
<u>A. UES SERP Expense, net:</u>				
1	UES SERP Expense	\$ -	\$ -	\$ -
2	Less: Amounts chargeable to construction	-	-	-
3	UES SERP Expense, net	\$ -	\$ -	\$ -
<u>B. Unitil Service SERP Expense Allocated to UES, net:</u>				
4	Unitil Service SERP Expense	\$ 542,207	\$ 664,038	\$ 121,831
5	Less: Amounts chargeable to construction	(159,517)	(195,360)	(35,843)
6	Unitil Service SERP Expense Allocated to UES, net	\$ 382,690	\$ 468,678	\$ 85,989
7	Total UES SERP Expense	\$ 382,690	\$ 468,678	\$ 85,989

Unitil Energy Systems, Inc.
401K Expense
2020 Actual Expense Recorded and 2021 & 2022 Forecast Expense

Workpaper 4.4

Line No.	(1) Description	(2) 2020 TEST YEAR	(3) 2021 & 2022 FORECAST EXPENSE	(4) PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to UES	28.17%	28.17%	
A2	UES Capitalization Rates	63.68%	63.68%	
A3	USC Labor & Overhead to Construction	29.42%	29.42%	
A4	Total USC 401K Expense ⁽¹⁾	\$ 1,994,120	\$ 2,081,861	

Calculation of 401K Expense, net of Amounts Chargeable to Capital

A. UES 401K Expense, net:

1	UES 401K Expense 2021 Proformed ⁽²⁾	\$ 266,172	\$ 274,557	\$ 8,385
2	UES 401K Expense adjusted for 2022 wage increase ⁽²⁾	-	8,649	8,649
3	Total UES 401K Expense - Proformed	266,172	283,206	17,034
4	Less: Amounts chargeable to capital	(169,498)	(180,346)	(10,847)
5	Total UES 401K Expense, net	\$ 96,674	\$ 102,860	\$ 6,187

B. Unitil Service 401K Expense allocated to UES, net:

6	Unitil Service 401K Expense 2021 Proformed	\$ 561,744	\$ 586,460	\$ 24,717
7	Unitil Service 401K Adjusted for 2022 Wage Increase ⁽¹⁾	-	25,804	25,804
8	Total USC 401K Expense - Proformed	561,744	612,264	50,521
9	Less: Amounts chargeable to capital	(165,265)	(180,128)	(14,863)
10	Unitil Service 401K Expense Allocated to UES, net	\$ 396,479	\$ 432,136	\$ 35,658
11	Total UES 401K Expense	\$ 493,152	\$ 534,997	\$ 41,844

Notes

(1) Unitil Service Corp. - Actual 2022 Payroll Increase of 4.56%

(2) See Workpaper 4.5 Revised

Unitil Energy Systems, Inc.
401K Expense
2020 Actual Expense Recorded and 2021 & 2022 Forecast Expense

Workpaper 4.4 Revised

Line No.	(1) Description	(2) 2020 TEST YEAR	(3) 2021 & 2022 FORECAST EXPENSE	(4) PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to UES	28.17%	28.17%	
A2	UES Capitalization Rates	63.68%	63.68%	
A3	USC Labor & Overhead to Construction	29.42%	29.42%	
A4	Total USC 401K Expense ⁽¹⁾	\$ 1,994,120	\$ 2,081,861	

Calculation of 401K Expense, net of Amounts Chargeable to Capital

A. UES 401K Expense, net:

1	UES 401K Expense 2021 Proformed ⁽²⁾	\$ 266,172	\$ 274,557	\$ 8,385
2	UES 401K Expense adjusted for 2022 wage increase	-	-	-
3	Total UES 401K Expense - Proformed	266,172	274,557	8,385
4	Less: Amounts chargeable to capital	(169,498)	(174,838)	(5,339)
5	Total UES 401K Expense, net	\$ 96,674	\$ 99,719	\$ 3,045

B. Unitil Service 401K Expense allocated to UES, net:

6	Unitil Service 401K Expense 2021 Proformed	\$ 561,744	\$ 586,460	\$ 24,717
7	Unitil Service 401K Adjusted for 2022 Wage Increase ⁽¹⁾	-	-	-
8	Total USC 401K Expense - Proformed	561,744	586,460	24,717
9	Less: Amounts chargeable to capital	(165,265)	(172,537)	(7,272)
10	Unitil Service 401K Expense Allocated to UES, net	\$ 396,479	\$ 413,924	\$ 17,445
11	Total UES 401K Expense	\$ 493,152	\$ 513,643	\$ 20,490

Notes

(1) Unitil Service Corp. - Average 2020/2021 Payroll Increase of 4.40%

(2) See Workpaper 4.5

Unitil Energy Systems, Inc.
401K Adjustment
2020 & 2021 Weighted Average Pay Increase

Workpaper 4.5

	(1)	(2)	(3)	(4)	(5)	(6)
LINE NO.	DESCRIPTION	2020 ANNUALIZED PAYROLL	2021 AVERAGE PAY INCREASE ⁽¹⁾	WEIGHTED AVERAGE INCREASE	2022 AVERAGE PAY INCREASE ⁽²⁾	WEIGHTED AVERAGE INCREASE
1	Nonunion	\$ 1,405,138	3.65%	0.82%	3.65%	0.82%
2	Union	\$ 4,850,608	3.00%	2.33%	3.00%	2.33%
3	Total	\$ 6,255,746		3.15%		3.15%

Notes

(1) Refer to Schedule RevReq-3-2, Page 1 of 2 for 2021 Payroll Increases

(2) Refer to Schedule RevReq-3-2, Page 1 of 2 for 2022 Payroll Increase

Unitil Energy Systems, Inc.
401K Adjustment
2020 & 2021 Weighted Average Pay Increase

Workpaper 4.5 Revised

	(1)	(2)	(3)	(4)	(5)	(6)
LINE NO.	DESCRIPTION	2020 ANNUALIZED PAYROLL	2021 AVERAGE PAY INCREASE ⁽¹⁾	WEIGHTED AVERAGE INCREASE	2022 AVERAGE PAY INCREASE ⁽²⁾	WEIGHTED AVERAGE INCREASE
1	Nonunion	\$ 1,405,138	3.65%	0.82%	3.76%	0.84%
2	Union	\$ 4,850,608	3.00%	2.33%	3.00%	2.33%
3	Total	\$ 6,255,746		3.15%		3.17%

Notes

(1) Refer to Schedule RevReq-3-2 Revised, Page 1 of 2 for 2021 Payroll Increases

(2) Refer to Schedule RevReq-3-2 Revised, Page 1 of 2 for 2022 Payroll Increase

Unitil Energy Systems, Inc.
Deferred Compensation Plan Expense
2020 Actual Expense Recorded and 2021 & 2022 Forecast Expense

Workpaper 4.6

Line No.	(1) Description	(2) 2020 TEST YEAR	(3) 2021 & 2022 FORECAST EXPENSE	(4) PROFORMA ADJUSTMENT
A1	USC Labor & Overhead Charged to UES	28.17%	28.17%	
A2	UES Capitalization Rates	63.68%	63.68%	
A3	USC Labor & Overhead to Construction	29.42%	29.42%	
A4	Total USC Eligible Base Compensation	\$ 369,511	\$ 2,802,136	
A5	Total USC Eligible Incentive Compensation (at target)	\$ 241,091	\$ 952,203	
<u>Calculation of Deferred Compensation Expense, net of Amounts Chargeable to Construction</u>				
<u>A. UES Deferred Compensation Expense, net:</u>				
1	UES Deferred Comp Expense 2021 Proformed	\$ -	\$ -	\$ -
2	UES Deferred Comp Expense adjusted for 2022 wage increase	-	-	-
3	Total UES Deferred Comp Expense - Proformed	-	-	-
4	Less: Amounts chargeable to capital	-	-	-
5	Total UES Deferred Comp Expense, net	\$ -	\$ -	\$ -
<u>B. Unitil Service Deferred Comp Expense allocated to UES, net:</u>				
6	Unitil Service 2020 Deferred Comp. Expense	\$ 36,951	\$ 280,214	\$ 243,263
7	Unitil Service Deferred Comp Expense Allocated to UES	10,409	78,936	68,527
8	Unitil Service Deferred Incentive Compensation Expense	24,109	95,220	71,111
9	Unitil Service Deferred Incentive Compensation Expense Allocated to UES	6,792	26,824	20,032
10	Unitil Service Deferred Comp. Adjusted for 2021 Wage Increase ⁽¹⁾	-	3,473	3,473
11	Total Unitil Service Deferred Comp Expense Allocated to UES - Proformed	17,201	109,233	92,032
12	Less: Amounts Chargeable to Construction	(5,061)	(32,136)	(27,075)
13	Unitil Service Deferred Comp Expense Allocated to UES, net	\$ 12,140	\$ 77,097	\$ 64,957
14	Total UES Deferred Comp Expense	\$ 12,140	\$ 77,097	\$ 64,957

Notes

(1) Unitil Service Corp - Estimated 2020 Average Payroll Increase of 4.40%

UNITIL ENERGY SYSTEMS, INC.
PROPERTY AND LIABILITY INSURANCES ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 5.1

LINE NO.	DESCRIPTION	AMOUNT ⁽¹⁾
	Current Coverage Periods	
	Property:	
1	All Risk	\$ 111,753
2	Crime	2,374
3	K&E	325
4	Total Property	<u>\$ 114,452</u>
	Liability:	
5	Workers' Compensation	\$ 61,293
6	Excess	435,017
7	Automobile	37,164
8	Directors & Officers	74,047
9	Cyber	21,919
10	Fiduciary	7,253
11	Total Liability	<u>\$ 636,692</u>
12	Total Property & Liability Insurances (Lines 4 Plus 11)	751,145
13	Less: Amounts Chargeable to Capital	<u>422,627</u>
14	Amount to O&M Expense	328,517
15	Less Test Year O&M Expense	<u>273,026</u>
16	O&M Property and Liability Insurance Increase	<u><u>\$ 55,491</u></u>

NOTES

(1) See Workpaper W5.3

UNITIL ENERGY SYSTEMS, INC.
PROPERTY AND LIABILITY INSURANCES ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 5.1 Revised

LINE NO.	DESCRIPTION	AMOUNT ⁽¹⁾
	Current Coverage Periods	
	Property:	
1	All Risk	\$ 99,663
2	Crime	2,374
3	K&E	325
4	Total Property	<u>\$ 102,362</u>
	Liability:	
5	Workers' Compensation	\$ 63,749
6	Excess	412,325
7	Automobile	35,466
8	Directors & Officers	85,816
9	Cyber	31,744
10	Fiduciary	5,848
11	Total Liability	<u>\$ 634,949</u>
12	Total Property & Liability Insurances (Lines 4 Plus 11)	737,310
13	Less: Amounts Chargeable to Capital	<u>424,692</u>
14	Amount to O&M Expense	312,618
15	Less Test Year O&M Expense	<u>268,601</u>
16	O&M Property and Liability Insurance Increase	<u><u>\$ 44,017</u></u>

NOTES

(1) See Workpaper W5.3

UNITIL ENERGY SYSTEMS, INC.
PROPERTY AND LIABILITY INSURANCES ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2015

Workpaper 5.2

LINE NO.	DESCRIPTION	UNITIL SERVICE CORP. TOTAL ⁽¹⁾	AMOUNT TO UES	UES TOTAL
	USC Cost For Current Coverage Periods			
	Property:			
1	All Risk	\$ 8,805		\$ 2,421
2	Crime	682		188
3	K&E	130		36
4	Total Property	<u>\$ 9,617</u>	27.50%	<u>\$ 2,645</u>
	Liability:			
5	Workers' Compensation	\$ 59,336		\$ 16,317
6	Excess	108,060		29,717
7	Automobile	8,401		2,310
8	Directors and Officers	19,925		5,479
9	Cyber	5,898		1,622
10	Fiduciary	1,952		537
11	Total Liability	<u>\$ 203,573</u>	27.50%	<u>\$ 55,982</u>
12	Total USC Property & Liability Insurances			58,627
13	Less Amount Chargeable to Capital		29.42%	<u>17,248</u>
14	Total Property & Liability Insurances to O&M Expense			<u>41,379</u>
15	Less Test Year O&M Expense			<u>24,402</u>
16	O&M Property and Liability Insurance Increase			<u>\$ 16,977</u>

NOTES

(1) See Workpaper W5.3

UNITIL ENERGY SYSTEMS, INC.
PROPERTY AND LIABILITY INSURANCES ADJUSTMENT
12 MONTHS ENDED DECEMBER 31, 2015

Workpaper 5.2 Revised

LINE NO.	DESCRIPTION	UNITIL SERVICE CORP. TOTAL ⁽¹⁾	AMOUNT TO UES	UES TOTAL
	USC Cost For Current Coverage Periods			
	Property:			
1	All Risk	\$ 7,274		\$ 2,000
2	Crime	1,013		279
3	K&E	130		36
4	Total Property	<u>\$ 8,416</u>	27.50%	<u>\$ 2,315</u>
	Liability:			
5	Workers' Compensation	\$ 71,346		\$ 19,620
6	Excess	118,410		32,563
7	Automobile	7,708		2,120
8	Directors and Officers	24,644		6,777
9	Cyber	9,116		2,507
10	Fiduciary	<u>1,679</u>		<u>462</u>
11	Total Liability	<u>\$ 232,904</u>	27.50%	<u>\$ 64,049</u>
12	Total USC Property & Liability Insurances			66,363
13	Less Amount Chargeable to Capital		29.42%	<u>19,524</u>
14	Total Property & Liability Insurances to O&M Expense			<u>46,839</u>
15	Less Test Year O&M Expense			<u>24,402</u>
16	O&M Property and Liability Insurance Increase			<u>\$ 22,437</u>

NOTES

(1) See Workpaper W5.3

		CASUALTY											PROPERTY						TOTAL
		AL	NH-WC	XL*	XL	XL	Cyber	FL	D&O	D&O	D&O	CASUALTY	ARP	CRIME	K&E	TRANSIT	TOTAL		
		(prem)	(prem)	(prem)	(brkr) ⁽³⁾	Surplus Tax	(prem)	(prem)	(prem)	Surplus Tax	(brkr) ⁽³⁾	TOTAL	(prem) ⁽⁴⁾	(prem)	(prem)	(prem) ⁽⁴⁾	PROP		
UES	2018a	25,546	91,767	303,454	9,321	9,104	10,984	4,414	44,258	1,328	5,604	505,780	64,987	1,861	341	5,267	72,455	578,235	
	2019a	24,522	93,044	333,707	10,793	10,011	10,649	4,731	43,719	1,333	5,546	538,057	69,166	1,834	325	7,813	79,137	617,194	
	2020a	27,110	76,716	353,388	16,498	10,602	12,963	4,731	52,871	1,586	-	556,465	84,960	1,882	325	-	87,167	643,632	
	2021a/b ⁽¹⁾	35,225	58,096	384,418	16,375	11,533	21,919	7,253	72,413	1,634	-	608,864	111,753	2,374	325	-	114,452	723,317	
	2022e ⁽²⁾	37,164	61,293	405,574	17,276	12,167							636,692					114,452	751,145
USC	2018a	5,933	97,653	123,302	3,787	3,699	3,948	1,794	17,983	540	2,277	260,917	5,399	756	116		6,270	267,187	
	2019a	8,029	92,581	133,432	4,316	4,003	4,327	1,892	17,481	533	2,218	268,811	5,581	733	130		6,444	275,255	
	2020a	7,120	85,858	95,093	4,439	2,853	3,488	1,892	14,227	427	-	215,397	6,489	506	130		7,125	222,522	
	2021a/b ⁽¹⁾	9,206	65,019	110,396	4,702	3,312	5,898	1,952	19,486	440	-	220,410	8,805	682	130		9,617	230,026	
	2022e ⁽²⁾	8,401	59,336	100,747	4,291	3,022						203,573					9,617	213,189	

NOTES

(1) 2021 premiums reflect actuals for automobile, workers compensation, excess liability, cyber, crime, K&E and transit

2021 premiums reflect budgeted amounts for fiduciary, directors & officers and all risk property and will be updated with actuals

(2) 2022 premiums reflect annual growth rate from 2018 to 2020 for UES and USC automobile, workers compensation and excess liability

2022 premiums for these three categories above will be updated with actuals while all other categories assume 2021 premium amounts

(3) In 2020 the Company changed brokers and now the D&O broker fee is included in the XL broker fee

(4) In 2020 the Company changed brokers and now the transit premium is included in the all risk property premium

		CASUALTY												PROPERTY						
		AL (prem)	NH-WC (prem)	XL* (prem)	XL (brkr) ⁽³⁾	XL Surplus Tax	Cyber (prem)	Cyber Surplus Tax	FL (prem)	D&O (prem)	D&O Surplus Tax	D&O (brkr) ⁽³⁾	D&O Side A	CASUALTY TOTAL	ARP (prem) ⁽⁴⁾	CRIME (prem)	K&E (prem)	TRANSIT (prem) ⁽⁴⁾	TOTAL PROP	TOTAL
UES	2018a	25,546	91,767	303,454	9,321	9,104	10,984		4,414	44,258	1,328	5,604	-	505,780	64,987	1,861	341	5,267	72,455	578,235
	2019a	24,522	93,044	333,707	10,793	10,011	10,649		4,731	43,719	1,333	5,546	-	538,057	69,166	1,834	325	7,813	79,137	617,194
	2020a	27,110	76,716	353,388	16,498	10,602	12,963		4,731	52,871	1,586	-	-	556,465	84,960	1,882	325	-	87,167	643,632
	2021a ⁽¹⁾	35,466	63,749	384,418	16,375	11,533	30,818	926	5,848	64,553	1,937	-	19,327	634,949	99,663	2,374	325	-	102,362	737,310
	2022a ⁽²⁾			396,308	17,612	11,889								648,433					102,362	750,795
USC	2018a	5,933	97,653	123,302	3,787	3,699	3,948		1,794	17,983	540	2,277	-	260,917	5,399	756	116	-	6,270	267,187
	2019a	8,029	92,581	133,432	4,316	4,003	4,327		1,892	17,481	533	2,218	-	268,811	5,581	733	130	-	6,444	275,255
	2020a	7,120	85,858	95,093	4,439	2,853	3,488		1,892	14,227	427	-	-	215,397	5,489	506	130	-	6,125	221,522
	2021a ⁽¹⁾	7,708	71,346	110,396	4,702	3,312	8,850	266	1,679	18,538	556	-	5,550	232,904	7,274	1,013	130	-	8,416	241,320
	2022a ⁽²⁾			101,073	4,492	3,032								223,091					8,416	231,507

NOTES

(1) 2021 premiums reflect actuals for all policies

(1) 2022 premiums reflect January 1, 2022 XL policy

(3) In 2020 the Company changed brokers and now the D&O broker fee is included in the XL broker fee

(4) In 2020 the Company changed brokers and now the transit premium is included in the all risk property premium

UNITIL SERVICE CORP.
PROPERTY & LIABILITY INSURANCE TEST YEAR COSTS
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 5.4

DESCRIPTION	TOTAL
USC O&M Test Year	
12-30-08-00-9240100 PROPERTY INSURANCE	\$ 5,519
12-30-08-00-9250100 INJURIES & DAMAGES	<u>120,204</u>
Total	\$ <u>125,723</u>
UES Apportionment	<u>27.50%</u>
UES Amount	\$ 34,574
Capitalization Rate	<u>29.42%</u>
Capitalization Amount	\$ 10,172
O&M Expense Amount	<u><u>24,402</u></u>

**UES - OPERATING FACILITY
COMPUTATION OF BUILDING OVERHEAD
12 MONTHS ENDED DECEMBER 31, 2020**

Workpaper 5.5

<u>SQUARE FOOTAGE OF SERVICE CENTER UPDATED:</u>		Dec-20	ALLOCATION OF
DESCRIPTION	SQ FT	%	SERVICE CENTER OVERHEADS
SERVICE CENTER ALLOCATED:			
General Area Capitalized (184.00.00)	25,919	31.02%	8,595
			63.68%
			5,473
Stock Area Capitalized (163.00.00)	19,127	22.89%	6,343
			90.00%
			5,709
<u>Garage Area Capitalized:</u>			
Auto-184.01.00	0	0.00%	0
Light Truck-184.02.00	20,273	24.27%	6,723
Heavy Truck-184.03.00	9,282	11.11%	3,078
Sub-Total Garage Area	29,555	35.38%	9,801
Ratio of Garage Area Capitalized			63.68%
Garage Area Capitalized			6,241
Total Service Center to DOC	74,601	89.29%	17,423
<u>Non-DOC Space:</u>			
Exclude: none	8,946	10.71%	JE782
TOTAL SERVICE CENTER	83,547	100.00%	924.00.01

<u>(b) DETERMINATION OF SERVICE CENTER PROPERTY INSURANCE:</u>		
BUDGETED ALL RISK PROPERTY INSURANCE		88,470
RATIO OF SERVICE CENTER TO TOTAL PROPERTY		31.32%
TOTAL SERVICE CENTER PROPERTY INSURANCE		27,705
Service Center Property Insurance Capitalization Ratio		62.89%

	<u>ASSET RPT 1025. Accts 101 & 106 12/31/20</u>		
	SERVICE	ALL	SERVICE
	CENTER	STRUCTURE	RATIO
STRUCTURES - DISTRIBUTION ACCT. 361		2,173,616	
STRUCTURES-ADMIN ACCT. 390	19,114,262	19,114,262	
GENERAL PLANT - (TOTAL LESS COMM. EQ)	4,861,899	4,861,899	
(ACCT. 391,393,394,395,398)			
DISTR. PLANT - STATION (362)		50,412,132	
TOTAL COST	23,976,161	76,561,909	31.32%

**VEHICLE CLEARING ACCOUNT
TOTAL CHARGES & TOTAL CLEARINGS TO EXPENSE & CAPITAL
12 MONTHS ENDED DECEMBER 31, 2020**

Workpaper 5.6

Total Clearings from Clearing Account:

	Expense	Capital	UES Total GL	Total Sch 12	Variance
Jan-20	49,152	52,974	102,125	102,125	-
Feb-20	36,457	42,705	79,162	79,162	-
Mar-20	38,294	36,396	74,690	74,690	-
Apr-20	78,350	61,901	140,251	140,251	-
May-20	55,237	51,110	106,347	106,347	-
Jun-20	54,669	46,389	101,058	101,058	-
Jul-20	54,380	80,659	135,039	135,039	-
Aug-20	58,668	63,409	122,077	122,077	-
Sep-20	41,817	53,338	95,155	95,155	-
Oct-20	27,614	37,600	65,213	65,213	-
Nov-20	16,131	29,010	45,142	45,142	-
Dec-20	83,871	21,875	105,746	105,746	-
	<u>594,638</u>	<u>577,366</u>	<u>1,172,004</u>	<u>1,172,004</u>	

Capitalization Rate 49.26%

**VEHICLE CLEARING ACCOUNT
AUTO LIABILITY INSURANCE**

Auto Liability Insurance Payments into Clearing Account ⁽¹⁾

Jan-20	2,711
Feb-20	2,711
Mar-20	2,711
Apr-20	2,711
May-20	2,711
Jun-20	2,711
Jul-20	2,711
Aug-20	
Sep-20	
Oct-20	
Nov-20	7,045
Dec-20	3,523
Total	<u><u>29,545</u></u>

(1) Payments during test year (Jan-Jul) were for 2019-2020 coverage year 10/1/19-9/30/20
Payments in November & December 2020 are for 10/1/20 - 9/30/21 coverage year

Auto Liability Insurance Expense through Clearing Account

	<u>UES</u>
Gross Amount	29,545
Cap. Rates	49.26%
Cap. Amount	<u>14,555</u>
O&M Amount	<u><u>14,990</u></u>

VEHICLE CLEARING ACCOUNT
TOTAL CHARGES & TOTAL CLEARINGS TO EXPENSE & CAPITAL
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 5.6 Revised

Total Clearings from Clearing Account:

	Expense	Capital	UES Total GL	Total Sch 12	Variance
Jan-20	35,918	66,208	102,125	102,125	-
Feb-20	28,810	50,353	79,162	79,162	-
Mar-20	24,891	49,799	74,690	74,690	-
Apr-20	45,254	94,996	140,251	140,251	-
May-20	39,485	66,862	106,347	106,347	-
Jun-20	40,122	60,936	101,058	101,058	-
Jul-20	50,995	84,044	135,039	135,039	-
Aug-20	37,111	84,966	122,077	122,077	-
Sep-20	35,961	59,144	95,105	95,105	-
Oct-20	23,591	39,025	62,616	62,616	-
Nov-20	18,371	27,011	45,382	45,382	-
Dec-20	12,748	23,092	35,841	35,841	-
	<u>393,256</u>	<u>706,436</u>	<u>1,099,691</u>	<u>1,099,691</u>	

Capitalization Rate 64.24%

VEHICLE CLEARING ACCOUNT
AUTO LIABILITY INSURANCE

Auto Liability Insurance Payments into Clearing Account ⁽¹⁾

Jan-20	2,711
Feb-20	2,711
Mar-20	2,711
Apr-20	2,711
May-20	2,711
Jun-20	2,711
Jul-20	2,711
Aug-20	
Sep-20	
Oct-20	
Nov-20	7,045
Dec-20	3,523
Total	<u><u>29,545</u></u>

(1) Payments during test year (Jan-Jul) were for 2019-2020 coverage year 10/1/19-9/30/20
Payments in November & December 2020 are for 10/1/20 - 9/30/21 coverage year

Auto Liability Insurance Expense through Clearing Account

	<u>UES</u>
Gross Amount	29,545
Cap. Rates	64.24%
Cap. Amount	<u>18,979</u>
O&M Amount	<u><u>10,565</u></u>

UNITIL ENERGY SYSTEMS, INC.
INFLATION ALLOWANCE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 6.1

Source: Energy Information Administration
Short-Term Energy Outlook
Publication Date: February 9, 2021

Table 1. U.S. Energy Markets Summary

	2019												2020											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Macroeconomic																								
Real Gross Domestic Product (billion chained 2012 dollars - SAAR)	18,915	18,953	18,984	18,990	19,019	19,053	19,103	19,142	19,180	19,269	19,267	19,226	19,309	19,065	18,658	17,427	17,191	17,289	17,720	18,485	19,584	18,688	18,728	18,763
Percent change from prior year	2.3	2.3	2.2	2	1.9	1.9	2	2.1	2.1	2.6	2.4	2	2.1	0.6	-1.7	-8.2	-9.6	-9.3	-7.2	-3.4	2.1	-3	-2.8	-2.4
GDP Implicit Price Deflator (Index, 2012=100)	111.3	111.5	111.7	112.0	112.2	112.4	112.5	112.6	112.7	112.9	113.0	113.1	113.4	113.4	113.3	112.8	112.8	113.0	113.3	113.8	114.4	114.2	114.3	114.4
Percent change from prior year	2.1	2.0	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.8	1.7	1.5	0.7	0.5	0.5	0.7	1.0	1.5	1.2	1.2	1.2
Real Disposable Personal Income (billion chained 2012 dollars - SAAR)	14,841	14,864	14,856	14,817	14,810	14,827	14,840	14,912	14,934	14,936	14,997	14,960	15,070	15,163	14,949	17,287	16,454	16,150	16,237	15,693	15,786	15,665	15,467	15,588
Percent change from prior year	3.5	3.4	2.9	2.4	2.0	1.9	1.6	1.8	2.0	1.8	2.1	0.8	1.5	2.0	0.6	16.7	11.1	8.9	9.4	5.2	5.7	4.9	3.1	4.2
Manufacturing Production Index (Index, 2012=100)	106.9	106.3	106.3	105.4	105.5	106.1	105.7	106.4	105.7	105.1	106.1	106.4	106.2	106.1	100.8	84.8	88.1	95.0	99.0	100.4	100.4	101.7	102.6	103.6
Percent change from prior year	2.7	1.1	1	-0.4	0.5	0.3	-0.5	-0.3	-1	-1.5	-0.7	-1.1	-0.7	-0.2	-5.2	-19.5	-16.5	-10.5	-6.3	-5.6	-5	-3.2	-3.3	-2.6
Weather																								
U.S. Heating Degree-Days	859	719	632	288	158	34	5	10	41	254	589	715	740	652	484	358	156	25	5	7	58	247	422	748
U.S. Cooling Degree-Days	9	18	18	42	130	227	373	336	243	75	16	14	15	13	43	43	106	248	398	356	181	83	32	7
	2021												2022											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Macroeconomic																								
Real Gross Domestic Product (billion chained 2012 dollars - SAAR)	18,781	18,818	18,861	18,902	18,963	19,036	19,141	19,222	19,300	19,370	19,444	19,517	19,593	19,662	19,727	19,790	19,849	19,904	19,955	20,004	20,050	20,091	20,134	20,177
Percent change from prior year	-2.7	-1.3	1.1	8.5	10.3	10.1	8	4	-1.4	3.6	3.8	4	4.3	4.5	4.6	4.7	4.7	4.6	4.3	4.1	3.9	3.7	3.5	3.4
GDP Implicit Price Deflator (Index, 2012=100)	114.5	114.6	114.8	115.0	115.1	115.3	115.5	115.6	115.8	116.0	116.2	116.3	116.5	116.6	116.8	117.1	117.3	117.5	117.7	118.0	118.2	118.4	118.6	118.8
Percent change from prior year	1	1.1	1.3	1.9	2.1	2.1	1.9	1.6	1.2	1.6	1.6	1.6	1.7	1.8	1.8	1.8	1.9	1.9	2	2	2.1	2.1	2.1	2.1
Real Disposable Personal Income (billion chained 2012 dollars - SAAR)	16,277	16,371	16,286	15,683	15,499	15,391	15,455	15,433	15,419	15,405	15,413	15,437	15,502	15,533	15,559	15,569	15,591	15,615	15,644	15,669	15,695	15,711	15,742	15,778
Percent change from prior year	8	8	8.9	-9.3	-5.8	-4.7	-4.8	-1.7	-2.3	-1.7	-0.3	-1	-4.8	-5.1	-4.5	-0.7	0.6	1.5	1.2	1.5	1.8	2	2.1	2.2
Manufacturing Production Index (Index, 2012=100)	103.8	104.2	104.4	104.1	104.2	104.4	104.6	104.9	105.2	105.6	106.0	106.5	107.0	107.5	107.9	108.4	108.8	109.1	109.4	109.6	109.9	110.1	110.3	110.5
Percent change from prior year	-2.2	-1.8	3.5	22.7	18.3	9.9	5.6	4.5	4.8	3.8	3.3	2.8	3.1	3.2	3.4	4.1	4.4	4.6	4.6	4.5	4.5	4.2	4	3.8
Weather																								
U.S. Heating Degree-Days	785	679	550	308	134	28	7	10	53	239	485	769	848	684	558	314	134	28	7	10	53	239	485	769
U.S. Cooling Degree-Days	6	12	24	43	127	247	359	333	183	68	22	11	11	12	23	40	127	247	359	333	184	68	22	11

Notes:

The approximate break between historical and forecast values is shown with estimates and forecasts in italics.

UNITIL ENERGY SYSTEMS, INC.
INFLATION ALLOWANCE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 6.1 Revised

Source: Energy Information Administration
Short-Term Energy Outlook
Publication Date: December 7, 2021

Table 1. U.S. Energy Markets Summary

	2019												2020											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Macroeconomic																								
Real Gross Domestic Product (billion chained 2012 dollars - SAAR)	18,833	18,833	18,833	18,983	18,983	18,983	19,113	19,113	19,113	19,202	19,202	19,202	18,952	18,952	18,952	17,258	17,258	17,258	18,561	18,561	18,561	18,768	18,768	18,768
Percent change from prior year	2.2	2.2	2.2	2.1	2.1	2.1	2.3	2.3	2.3	2.6	2.6	2.6	0.6	0.6	0.6	-9.1	-9.1	-9.1	-2.9	-2.9	-2.9	-2.3	-2.3	-2.3
GDP Implicit Price Deflator (Index, 2012=100)	111.5	111.5	111.5	112.1	112.1	112.1	112.5	112.5	112.5	112.9	112.9	112.9	113.4	113.4	113.4	113.0	113.0	113.0	114.0	114.0	114.0	114.6	114.6	114.6
Percent change from prior year	2.0	2.0	2.0	1.8	1.8	1.8	1.7	1.7	1.7	1.6	1.6	1.6	1.7	1.7	1.7	0.7	0.7	0.7	1.3	1.3	1.3	1.5	1.5	1.5
Real Disposable Personal Income (billion chained 2012 dollars - SAAR)	14,714	14,742	14,733	14,678	14,674	14,686	14,704	14,778	14,808	14,821	14,886	14,844	14,977	15,069	14,844	17,171	16,333	16,057	16,152	15,554	15,643	15,568	15,367	15,394
Percent change from prior year	3.5	3.5	3.0	2.4	2.1	1.9	1.6	1.8	2.1	2.0	2.3	0.8	1.8	2.2	0.8	17.0	11.3	9.3	9.8	5.3	5.6	5.0	3.2	3.7
Manufacturing Production Index (Index, 2012=100)	100.7	100.2	100.1	99.3	99.4	99.6	99.2	99.8	99.1	98.4	99.3	99.2	99.0	99.0	94.7	79.7	83.4	89.6	93.3	94.6	94.6	96.0	96.7	97.3
Percent change from prior year	0.6	-0.9	-1.1	-2.5	-1.7	-2.1	-2.7	-2.3	-2.9	-3.2	-2	-2.2	-1.7	-1.1	-5.4	-19.8	-16.1	-10.1	-6	-5.1	-4.6	-2.5	-2.6	-1.9
Weather																								
U.S. Heating Degree-Days	862	722	634	289	159	34	5	10	41	255	591	718	741	654	485	360	157	26	5	7	59	249	423	752
U.S. Cooling Degree-Days	9	18	18	42	129	226	372	335	242	75	16	14	15	12	42	42	105	246	396	355	179	82	31	7
	2021												2022											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Macroeconomic																								
Real Gross Domestic Product (billion chained 2012 dollars - SAAR)	19,056	19,056	19,056	19,368	19,368	19,368	19,465	19,465	19,465	19,600	19,673	19,750	19,836	19,915	19,994	20,075	20,150	20,224	20,300	20,365	20,423	20,470	20,519	20,565
Percent change from prior year	0.5	0.5	0.5	12.2	12.2	12.2	4.9	4.9	4.9	4.4	4.8	5.2	4.1	4.5	4.9	3.6	4	4.4	4.3	4.6	4.9	4.4	4.3	4.1
GDP Implicit Price Deflator (Index, 2012=100)	115.8	115.8	115.8	117.5	117.5	117.5	119.2	119.2	119.2	119.9	120.3	120.6	120.9	121.2	121.4	121.6	121.8	122.0	122.1	122.3	122.5	122.7	122.9	123.1
Percent change from prior year	2.1	2.1	2.1	4.1	4.1	4.1	4.6	4.6	4.6	4.6	4.9	5.2	4.4	4.6	4.8	3.4	3.6	3.8	2.5	2.6	2.8	2.3	2.2	2.1
Real Disposable Personal Income (billion chained 2012 dollars - SAAR)	16,989	15,548	19,120	16,103	15,598	15,518	15,618	15,588	15,335	15,321	15,267	15,238	15,245	15,259	15,291	15,360	15,411	15,462	15,528	15,574	15,611	15,629	15,659	15,689
Percent change from prior year	13.4	3.2	28.8	-6.2	-4.5	-3.4	-3.3	0.2	-2	-1.6	-0.6	-1	-10.3	-1.9	-20	-4.6	-1.2	-0.4	-0.6	-0.1	1.8	2	2.6	3
Manufacturing Production Index (Index, 2012=100)	98.8	95.0	98.3	98.2	99.1	98.9	100.5	100.0	99.4	100.7	100.9	101.2	101.6	102.1	102.6	103.1	103.6	104.2	104.9	105.4	105.9	106.4	106.8	107.2
Percent change from prior year	-0.2	-4.1	3.7	23.2	18.8	10.4	7.7	5.7	5	4.9	4.4	4	2.9	7.5	4.4	5	4.6	5.4	4.4	5.4	6.6	5.7	5.9	5.9
Weather																								
U.S. Heating Degree-Days	805	795	508	309	151	12	5	6	40	181	479	776	842	679	556	316	144	32	7	11	59	254	501	786
U.S. Cooling Degree-Days	10	12	28	36	100	274	346	356	199	85	16	11	11	12	24	42	120	237	347	323	176	62	20	10

Notes:
The approximate break between historical and forecast values is shown with estimates and forecasts in italics.

**Inflation Adjustment
Test Year USC Amortizations**

Workpaper 6.2

	2020
12-30-10-00-404-03-00 SOFTWARE AMORT - OTHER	\$ 343,313
12-30-10-00-404-04-00 FINANCIAL REPORT WRITER AMORTIZATION	7,350
12-30-10-00-404-23-00 POWER TAX SYSTEM AMORT	30,284
12-30-10-00-404-25-00 AMORTIZATION - PAYMENT SYSTEM	1,492
Total	\$ 382,438
 UES Allocation	 28.17%
 Amount Billed to UES	 107,733

**Inflation Adjustment
Test Year Facility Leases**

Workpaper 6.3

	2020
12-30-10-00-9310100 BUILDING RENT	\$ 1,252,284
12-30-10-00-9310700 CALL CENTER RENT	158,796
12-30-10-00-9310800 PORTSMOUTH RENT EXPENSE	203,988
Total	\$ 1,615,068
 UES Allocation	 28.17%
 Amount Billed to UES	 454,965

UNITIL ENERGY SYSTEMS, INC.
TEST YEAR AMORTIZATION EXPENSE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 7.1

LINE NO.	(1) DESCRIPTION	(2) BEGINNING UNAMORTIZED BALANCE 2020 ⁽¹⁾	(3) 2020 AMORTIZATION EXPENSE	(4) ENDING UNAMORTIZED BALANCE 2020
1	Unitil Energy Systems 303-Intangible Plant:			
2	2014 Web Map Improvements	\$ 45	\$ 45	\$ -
3	Enhance critical financial systems	1,453	1,453	-
4	Desktop Client Mgmt	148	148	-
5	2014 Gen Software Enhancements	311	311	-
6	EETS Enhancements 2014	114	114	-
7	Electric Inspections	10,429	10,429	-
8	Milsoft IVR Upgrade	322	322	-
9	MV90xi Upgrade from 2.0 SP1 tp 5.0	4,517	4,517	-
10	2015 IT Infrastructure	11,310	8,482	2,827
11	303-00/ 1/2 : Intangible Software 5 yr	1,936	1,162	774
12	Municipal Maps & Reports	10,557	6,334	4,223
13	MV-90 xi TCIP Network Function/Lisc	3,833	2,300	1,533
14	First Responder - iRestore	48,180	24,090	24,090
15	Enhancements for Third Party Attach	7,083	3,400	3,683
16	Electric Inspections	17,661	7,849	9,812
17	General Software Enhancements	5,036	2,238	2,798
18	2015 Cyber Security Enhancements11	172	76	95
19	2016 IT Infrastructure	28,173	12,521	15,652
20	GPS OMS - Interface	1,553	690	863
21	2016 Cyber Security Enhancements	264	118	147
22	Unify Workforce Management System	7,418	3,297	4,121
23	General Software Enhancements	4,170	1,853	2,317
24	DPU ORP System	10,868	4,830	6,038
25	303-00/ 1/2 : Intangible Software 5 yr	68,677	23,546	45,130
26	EETS Enhancements	19,346	6,633	12,713
27	303-00/ 1/2 : Intangible Software 5 yr	2,525	842	1,683
28	24 Hr Damage Assess. & Field Rest.	43,631	13,425	30,206
29	2017 Cyber Security	2,366	710	1,656
30	2017 IT Infrastructure	10,374	3,112	7,262
31	Electronic Time Sheet Phase One	6,275	1,793	4,482
32	Eintake Migration	20,026	5,589	14,437
33	AMI Command Center Version Upgrade	7,422	1,936	5,486
34	Meter Data Archiving Plan	2,871	749	2,122
35	Upgrade OMS Webpage	5,390	1,320	4,070
36	Powerplan Updated License	72,023	17,638	54,385
37	303-00/ 1/2 : Intangible Software 5 yr	73,752	19,240	54,513
38	IS Project Tracker Replacement	6,999	1,826	5,173
39	Legacy Interface Job Rewrite	3,765	941	2,824
40	General Software Enhancements - 2018	16,888	4,222	12,666
41	UPS Reporting	971	228	742
42	Reset In Service Date	N/A	(11,313)	N/A
43	2018 IT Infrastructure	38,777	9,665	20,119
44	2018 Cyber Security Enhancements	5,491	1,432	4,058
45	WebOps Replacements - Year 1 of 3	15,895	3,974	11,921
46	Dev/ Staging Refresh	9,380	1,908	7,472
47	OMS Regulatory Reports	6,459	1,314	5,146
48	Microsoft Exchange Upgrade	4,279	870	3,409
49	Electronic Time Sheet Phase 2	23,922	4,865	19,056
50	Metersense Upgrade 4.2 to 4.3	491	100	391
51	FCS Upgrade	971	198	774
52	Power Plant Assets	44,323	18,996	25,327
53	Power Plant Assets	30,339	13,002	17,336
54	OMS ABB Purchase	296,165	101,542	194,623
55	OMS Integration & Implementation	184,760	63,346	121,414
56	OMS Osmose Field Survey	66,874	22,928	43,946
57	OMS Internal Labor	8,264	2,833	5,431
58	Power Plant Asset Upgrade	31,634	8,077	23,558
59	Meter Data Management	1,898,800	239,848	1,658,951
60	TESS Replacement	7,023	759	6,264
61	FCS Upgrade	10,361	889	9,472
62	2019 General Software Enhancements	18,921	3,808	14,851
63	WebOps Replacement - Year 2 of 3	21,675	4,146	17,190
64	Reporting Blanket	35,245	6,877	27,832
65	2019 Infrastructure PC & Network	314,152	62,386	246,600
66	Regulatory Work Blanket	8,972	1,078	7,860
67	GIS Overlay Electronic Inspection	19,040	3,808	14,915
68	OMS Upgrade to V9.	4,457	371	4,086
69	GIS Enhancements	6,520	543	5,977
70	Generator Interconnection Database	49,881	10,086	38,961
71	2019 Voice System Replacement	383,511	38,479	341,805
72	2019 Interface Enhancements	21,083	2,065	18,850
73	2019 Customer Facing Enhancements	371,975	37,455	331,506
74	303-00/ 1/2 : Intangible Software 5 yr	17,338	3,468	9,536
75	E-intake Functionality to GEM	28,776	480	28,297
76	EE Tracking & Reporting Syst	81,190	1,353	79,837
77	MV90xi Upgrade v4.5 to 6.0	15,326	255	15,071
78	Replace MV-90 Communication Bank Modules	5,172	922	4,194
79	AMI Command Center Upgrade	37,259	621	36,638
80	Metersense Upgrade 2020	567	9	548
81	Reporting Blanket	37,767	629	37,137
82	Cyber Security Enhancements	36,913	615	36,298
83	Power Plan Upgrade	111,894	1,865	110,029
84	2020 IT Infrastructure Budget	492,478	8,208	484,270
85	2020 Customer Facing Enhancements	232,051	3,868	228,183
86	2020 Interface Enhancements	50,185	836	49,349
87	2020 General Software Enhancements	1,488	25	1,463
88	2017 CIS Amortization	9,199,227	512,318	8,686,909
89	Total UES Amortization Expense for Account 303	\$ 14,826,115	\$ 1,392,138	\$ 13,395,382

NOTES

(1) Projects Installed in 2020 Reflect Total Project Cost

UNITIL ENERGY SYSTEMS, INC.
RATE YEAR AMORTIZATION EXPENSE

Workpaper 7.2

LINE NO.	(1) DESCRIPTION	(2) TOTAL PROJECT COST	(3) ANNUAL AMORTIZATION EXPENSE
1	Unitil Energy Systems 303-Intangible Plant:		
2	First Responder - iRestore	120,450	24,090
3	Enhancements for Third Party Attach	17,000	3,400
4	Electric Inspections	39,247	7,849
5	General Software Enhancements	11,191	2,238
6	2015 Cyber Security Enhancements11	381	76
7	2016 IT Infrastructure	62,607	12,522
8	GPS OMS - Interface	3,450	690
9	2016 Cyber Security Enhancements	588	118
10	Unify Workforce Management System	16,484	3,297
11	General Software Enhancements	9,266	1,853
12	DPU ORP System	24,150	4,830
13	303-00/ 1/2 : Intangible Software 5 yr	117,732	23,546
14	EETS Enhancements	33,165	6,633
15	303-00/ 1/2 : Intangible Software 5 yr	4,207	841
16	24 Hr Damage Assess. & Field Rest.	67,124	13,425
17	2017 Cyber Security	3,549	710
18	2017 IT Infrastructure	15,561	3,112
19	Electronic Time Sheet Phase One	8,964	1,793
20	Eintake Migration	27,943	5,589
21	AMI Command Center Version Upgrade	9,681	1,936
22	Meter Data Archiving Plan	3,744	749
23	Upgrade OMS Webpage	6,600	1,320
24	Powerplan Updated License	88,191	17,638
25	303-00/ 1/2 : Intangible Software 5 yr	96,044	19,240
26	IS Project Tracker Replacement	9,129	1,826
27	Legacy Interface Job Rewrite	4,775	941
28	General Software Enhancements - 2018	22,077	4,222
29	UPS Reporting	1,142	228
30	2018 IT Infrastructure	49,114	9,665
31	2018 Cyber Security Enhancements	7,175	1,432
32	WebOps Replacements - Year 1 of 3	22,788	3,974
33	Dev/ Staging Refresh	9,539	1,908
34	OMS Regulatory Reports	6,569	1,314
35	Microsoft Exchange Upgrade	4,352	870
36	Electronic Time Sheet Phase 2	24,327	4,865
37	Metersense Upgrade 4.2 to 4.3	499	100
38	FCS Upgrade	985	198
39	Power Plant Assets	189,956	18,996
40	Power Plant Assets	130,023	13,002
41	OMS ABB Purchase	1,015,424	101,542
42	OMS Integration & Implementation	633,462	63,346
43	OMS Osmose Field Survey	229,282	22,928
44	OMS Internal Labor	28,334	2,833
45	Power Plant Asset Upgrade	80,769	8,077
46	Meter Data Management	2,398,484	239,848
47	TESS Replacement	7,593	759
48	FCS Upgrade	10,361	2,320
49	2019 General Software Enhancements	18,921	3,637
50	WebOps Replacement - Year 2 of 3	21,675	4,126
51	Reporting Blanket	35,245	6,680
52	2019 Infrastructure PC & Network	314,152	60,392
53	Regulatory Work Blanket	8,972	2,007
54	GIS Overlay Electronic Inspection	19,040	3,808
55	OMS Upgrade to V9.	4,457	891
56	GIS Enhancements	6,520	1,304
57	Generator Interconnection Database	49,881	9,948
58	2019 Voice System Replacement	383,511	37,630
59	2019 Interface Enhancements	21,083	2,114
60	2019 Customer Facing Enhancements	371,975	37,178
61	303-00/ 1/2 : Intangible Software 5 yr	17,338	3,468
62	E-intake Functionality to GEM	28,776	5,755
63	EE Tracking & Reporting Syst	81,190	16,238
64	MV90xi Upgrade v4.5 to 6.0	15,326	3,065
65	Replace MV-90 Communication Bank Modules	5,172	11,735
66	AMI Command Center Upgrade	37,259	7,452
67	Metersense Upgrade 2020	557	111
68	Reporting Blanket	37,767	7,553
69	Cyber Security Enhancements	36,913	7,383
70	Power Plan Upgrade	111,894	22,379
71	2020 IT Infrastructure Budget	492,478	98,496
72	2020 Customer Facing Enhancements	232,051	46,410
73	2020 Interface Enhancements	50,185	10,037
74	2020 General Software Enhancements	1,488	298
75	2017 CIS Amortization	9,701,357	512,318
76	Total UES Amortization Expense for Account 303	\$ 17,778,662	\$ 1,585,103

UNITIL ENERGY SYSTEMS, INC.
RATE YEAR AMORTIZATION EXPENSE

Workpaper 7.2 Revised

LINE NO.	(1) DESCRIPTION	(2)	(3)
		TOTAL PROJECT COST	ANNUAL AMORTIZATION EXPENSE
1	Unitil Energy Systems 303-Intangible Plant:		
2	Enhancements for Third Party Attach	17,000	3,400
3	Electric Inspections	39,247	7,849
4	General Software Enhancements	11,191	2,238
5	2015 Cyber Security Enhancements	381	76
6	2016 IT Infrastructure	62,607	12,522
7	GPS OMS - Interface	3,450	690
8	2016 Cyber Security Enhancements	588	118
9	Unify Workforce Management System	16,484	3,297
10	General Software Enhancements	9,266	1,853
11	DPU ORP System	24,150	4,830
12	303-00/ 1/2 : Intangible Software 5 yr	117,732	23,546
13	EETS Enhancements	33,165	6,633
14	303-00/ 1/2 : Intangible Software 5 yr	4,207	841
15	24 Hr Damage Assess. & Field Rest.	67,124	13,425
16	2017 Cyber Security	3,549	710
17	2017 IT Infrastructure	15,561	3,112
18	Electronic Time Sheet Phase One	8,964	1,793
19	Eintake Migration	27,943	5,589
20	AMI Command Center Version Upgrade	9,681	1,936
21	Meter Data Archiving Plan	3,744	749
22	Upgrade OMS Webpage	6,600	1,320
23	Powerplan Updated License	88,191	17,638
24	303-00/ 1/2 : Intangible Software 5 yr	96,044	19,240
25	IS Project Tracker Replacement	9,129	1,826
26	Legacy Interface Job Rewrite	4,775	941
27	General Software Enhancements - 2018	22,077	4,222
28	UPS Reporting	1,142	228
29	2018 IT Infrastructure	49,114	9,665
30	2018 Cyber Security Enhancements	7,175	1,432
31	WebOps Replacements - Year 1 of 3	22,788	3,974
32	Dev/ Staging Refresh	9,539	1,908
33	OMS Regulatory Reports	6,569	1,314
34	Microsoft Exchange Upgrade	4,352	870
35	Electronic Time Sheet Phase 2	24,327	4,865
36	Metersense Upgrade 4.2 to 4.3	499	100
37	FCS Upgrade	985	198
38	Power Plant Assets	189,956	18,996
39	Power Plant Assets	130,023	13,002
40	OMS ABB Purchase	1,015,424	101,542
41	OMS Integration & Implementation	633,462	63,346
42	OMS Osmose Field Survey	229,282	22,928
43	OMS Internal Labor	28,334	2,833
44	Power Plant Asset Upgrade	80,769	8,077
45	Meter Data Management	2,398,484	239,848
46	TESS Replacement	7,593	759
47	FCS Upgrade	10,361	2,320
48	2019 General Software Enhancements	18,921	3,637
49	WebOps Replacement - Year 2 of 3	21,675	4,126
50	Reporting Blanket	35,245	6,680
51	2019 Infrastructure PC & Network	314,152	60,392
52	Regulatory Work Blanket	8,972	2,007
53	GIS Overlay Electronic Inspection	19,040	3,808
54	OMS Upgrade to V9.	4,457	891
55	GIS Enhancements	6,520	1,304
56	Generator Interconnection Database	49,881	9,948
57	2019 Voice System Replacement	383,511	37,630
58	2019 Interface Enhancements	21,083	2,114
59	2019 Customer Facing Enhancements	371,975	37,178
60	303-00/ 1/2 : Intangible Software 5 yr	17,338	3,468
61	E-intake Functionality to GEM	28,776	5,755
62	EE Tracking & Reporting Syst	81,190	16,238
63	MV90xi Upgrade v4.5 to 6.0	15,326	3,065
64	Replace MV-90 Communication Bank Modules	5,172	11,735
65	AMI Command Center Upgrade	37,259	7,452
66	Metersense Upgrade 2020	557	111
67	Reporting Blanket	37,767	7,553
68	Cyber Security Enhancements	36,913	7,383
69	Power Plan Upgrade	111,894	22,379
70	2020 IT Infrastructure Budget	492,478	98,496
71	2020 Customer Facing Enhancements	232,051	46,410
72	2020 Interface Enhancements	50,185	10,037
73	2020 General Software Enhancements	1,488	298
74	2017 CIS Amortization	9,701,357	512,318
75	Total UES Amortization Expense for Account 303	\$ 17,658,212	\$ 1,561,013

UNITIL ENERGY SYSTEMS, INC.
TEST YEAR USC AMORTIZATION EXPENSE
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper 7.3

LINE NO.	DESCRIPTION	(1)	(2)	(3)	(4)
		BEGINNING UNAMORTIZED BALANCE 2020 ⁽¹⁾	2020 AMORTIZATION EXPENSE	ENDING UNAMORTIZED BALANCE 2020	
1	Financial Report Writer Replacement	\$ 7,350	\$ 7,350	\$ -	
2	Flexi Upgrade	10,798	5,890	4,908	
3	Dataview Upgrade	4,553	2,602	1,951	
4	Powertax Repair Module	75,709	30,284	45,425	
5	USC Time & Billing Enhancements	32,287	12,108	20,179	
6	PC & Furniture 032018	310,955	143,517	167,437	
7	Software - Facilities WO&PM Tracking/Reporting	17,052	4,991	12,061	
8	PC & Furniture 082018	312,111	120,817	191,294	
9	Upgrade C-Series Bottomline Check Printing	5,597	1,492	4,104	
10	ADP Vacation Enhancements	2,635	687	1,948	
11	General Infrastructure Enhancements	9,113	2,377	6,736	
12	2018 Flexi upgrade	16,530	4,048	12,482	
13	Flexi Report Writer	6,370	1,560	4,810	
14	USC Furn & Equipment - Hamp&CSC	4,263	867	3,396	
15	IT Control Testing Automation	320,088	21,339	298,749	
16	HR & Payroll Record Scanning	26,917	1,794	25,122	
17	USC 2019 Furniture & PC's	310,711	20,714	289,996	
18	Total	\$ 1,473,037	\$ 382,438	\$ 1,090,598	
19	UES Apportionment		27.50%		
20	Total Billed to Unitil Energy Systems		105,171		

NOTES

(1) Projects Installed in 2020 Reflect Total Project Cost

**UNITIL ENERGY SYSTEMS, INC.
RATE YEAR USC AMORTIZATION EXPENSE**

Workpaper 7.4

LINE NO.	DESCRIPTION	(1)	(2)	(3)
			TOTAL PROJECT COST	ANNUAL AMORTIZATION EXPENSE
1	Powertax Repair Module		151,418	30,284
2	USC Time & Billing Enhancements		58,522	12,108
3	PC & Furniture 032018		574,070	143,517
4	Software - Facilities WO&PM Tracking/Reporting		24,953	4,991
5	PC & Furniture 082018		483,268	120,817
6	Upgrade C-Series Bottomline Check Printing		7,462	1,492
7	ADP Vacation Enhancements		3,437	115
8	General Infrastructure Enhancements		11,887	396
9	2018 Flexi upgrade		20,241	4,048
10	Flexi Report Writer		7,800	1,560
11	USC Furn & Equipment - Hamp&CSC		4,335	867
12	IT Control Testing Automation		320,088	64,018
13	HR & Payroll Record Scanning		26,917	5,383
14	USC 2019 Furniture & PC's		310,711	62,142
15	SOX Modernization		75,517	15,103
16	USC Time & Billing Upgrade/Replacement		587,704	117,541
17	2020 Flexi Upgrade		25,531	5,106
18	Total		<u>\$ 2,693,861</u>	<u>\$ 589,489</u>
19	UES Apportionment			27.50%
20	Total Billed to Unitil Energy Systems			<u>162,109</u>

**UNITIL ENERGY SYSTEMS, INC.
RATE YEAR USC AMORTIZATION EXPENSE**

Workpaper 7.4 Revised

LINE NO.	DESCRIPTION	(1)	(2)	(3)
			TOTAL PROJECT COST	ANNUAL AMORTIZATION EXPENSE
1	Powertax Repair Module		151,418	30,284
2	USC Time & Billing Enhancements		58,522	12,108
3	PC & Furniture 032018		574,070	143,517
4	Software - Facilities WO&PM Tracking/Reporting		24,953	4,991
5	PC & Furniture 082018		483,268	120,817
6	Upgrade C-Series Bottomline Check Printing		7,462	1,492
7	ADP Vacation Enhancements ⁽¹⁾		3,437	687
8	General Infrastructure Enhancements ⁽¹⁾		11,887	2,377
9	2018 Flexi upgrade		20,241	4,048
10	Flexi Report Writer		7,800	1,560
11	USC Furn & Equipment - Hamp&CSC		4,335	867
12	IT Control Testing Automation		320,088	64,018
13	HR & Payroll Record Scanning		26,917	5,383
14	USC 2019 Furniture & PC's		310,711	62,142
15	SOX Modernization ⁽²⁾		75,517	-
16	USC Time & Billing Upgrade/Replacement ⁽²⁾		625,663	-
17	2020 Flexi Upgrade ⁽²⁾		25,531	-
18	Total		<u>\$ 2,731,820</u>	<u>\$ 454,292</u>
19	UES Apportionment			27.50%
20	Total Billed to Unitil Energy Systems			<u>124,930</u>

Notes:

(1) Refer to DOE 5-14 part c

(2) Refer to Energy Tech Session 1-06 Revised

**UNITIL ENERGY SYSTEMS, INC.
PAYROLL TAX ADJUSTMENT
12 MONTHS ENDED DECEMBER 21, 2020**

Workpaper 8.1

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
LINE NO.	2020 Wages Subj. to Pay Increase ⁽¹⁾	Union Increases			Nonunion Increases		Total Proformed Wages	Wage Increase Exclusion
		2020	2021	2022	2021	2022		
		3.0%	3.0%	3.0%	3.65%	3.65%		
1	\$ 1,152,473	\$ 14,158	\$ 34,999	\$ 36,049	\$ 11,892	\$ 12,326	\$ 1,261,897	\$ 68,250
2	Amount Chargeable to Capital at		63.68%					(43,462)
3	Pay Increase to O&M not subject to SS tax - above 2021 annual limit of \$142,800							\$ 24,788

Notes

(1) For Unitil Energy Systems employees whose pay increases exceed the wage limit of \$142,800 subject to Social Security tax

**UNITIL ENERGY SYSTEMS, INC.
PAYROLL TAX ADJUSTMENT
UNITIL SERVICE CORP.
12 MONTHS ENDED DECEMBER 31, 2020**

Workpaper 8.2

LINE NO.	(1)	(2)	(3)	(4)	(5)
	2020 Wages Subj. to Pay Increase ⁽¹⁾	Pay Increases		Total Proformed Payroll	Payroll Increase Exclusion
		2021 4.40%	2022 4.40%		
1	\$ 7,922,472	\$ 348,589	\$ 363,927	\$ 8,634,988	\$ 178,772
2	Amount Charged to UES at		28.17%		50,360
3	Amount Chargeable to Capital at		29.42%		<u>(14,816)</u>
4	Pay Increase to O&M not subject to SS Tax above 2021 annual limit of \$142,800				<u>\$ 35,544</u>

Notes

(1) For Unitil Service Corp. employees whose pay increases exceed the wage limit of \$142,800 subject

UNITIL ENERGY SYSTEMS, INC.
SUMMARY OF ALLOCATORS
12 MONTHS ENDED DECEMBER 31, 2020

Workpaper Allocators

	<u>Allocation Factor</u>
USC Labor & OH Charged to UES (Payroll)	27.50%
USC Labor & OH Charged to UES (Benefits & Other)	28.17%
<u>Capitalization Rates</u>	
UES Payroll	64.25%
UES Benefits	63.68%
USC Labor & OH Charged to Construction (Payroll)	28.45%
USC Labor & OH Charged to Construction (Benefits)	29.42%
Incentive Compensation - UES	82.00%