

UNITIL ENERGY SYSTEMS, INC.

EXTERNAL DELIVERY CHARGE:
TRANSMISSION
NON-TRANSMISSION

LEAD/LAG STUDY

2022

Unitil Energy Systems, Inc.
EDC - Transmission & Non-Transmission
Revenue Lag Summary
Based on 2022 Data

Line No.	Description	Electric Number of Days Delay
1	Revenue Lag:	
2	Receipt of Electric Service to Meter Reading	15.21 days
3	Meter Reading to Recording of Accounts Receivable	1.05 days
4	Billing to Collection	36.37 days
5	Collection to Receipt of Available Funds	<u>1.63 days</u>
6	Subtotal Revenue Lag Days	<u>54.26 days</u>

Unitil Energy Systems, Inc.
Receipt of Electric Service to Meter Reading
Average Days Delay

January 1, 2022 to December 31, 2022 - Number of Days

December	
January	31
February	28
March	31
April	30
May	31
June	30
July	31
August	31
September	30
October	31
November	30
December	31

1 28 Day Month	1*28	28
4 30 Day Months	4*30	120
7 31 Day Months	7*31	<u>217</u>
	Total	<u><u>365</u></u> days

365 Days / 12 Months / 2 = 15.21 days

Unitil Energy Systems, Inc
Meter Reading to Recording of
Accounts Receivable

January 1, 2022 to December 31, 2022

Month	Average Days
January 2022	1.03
February 2022	1.01
March 2022	1.00
April 2022	1.09
May 2022	1.11
June 2022	1.26
July 2022	1.01
August 2022	1.01
September 2022	1.01
October 2022	1.02
November 2022	1.03
December 2022	1.05
Average	1.05

Unitil Energy Systems, Inc.
Meter Reading to Recording of
Accounts Receivable
Monthly Detail

January 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Weighted Days Lag
1	75,783	98.53%	1	0.99
2	314	0.41%	2	0.01
3	401	0.52%	3	0.02
4	184	0.24%	4	0.01
5	198	0.26%	5	0.01
6	15	0.02%	6	0.00
7	4	0.01%	7	0.00
8-14	11	0.01%	11	0.00
Over 14	-	0.00%	14	-
Total	76,910	100.00%		1.03

February 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Weighted Days Lag
1	76,654	99.54%	1	1.00
2	275	0.36%	2	0.01
3	36	0.05%	3	0.00
4	10	0.01%	4	0.00
5	5	0.01%	5	0.00
6	7	0.01%	6	0.00
7	1	0.00%	7	0.00
8 to 14	17	0.02%	11	0.00
Over 14	-	0.00%	14	-
Total	77,005	100.00%		1.01

March 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	76,798	99.68%	1	1.00
2	192	0.25%	2	0.00
3	35	0.05%	3	0.00
4	10	0.01%	4	0.00
5	-	0.00%	5	-
6	3	0.00%	6	0.00
7	4	0.01%	7	0.00
8 to 14	-	0.00%	11	-
Over 14	-	0.00%	14	-
Total	77,042	100.00%		1.00

April 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	70,520	91.44%	1	0.91
2	6,471	8.39%	2	0.17
3	85	0.11%	3	0.00
4	26	0.03%	4	0.00
5	8	0.01%	5	0.00
6	2	0.00%	6	0.00
7	-	0.00%	7	-
8 to 14	6	0.01%	11	0.00
Over 14	-	0.00%	14	-
Total	77,118	100.00%		1.09

May 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	69,356	90.20%	1	0.90
2	7,331	9.53%	2	0.19
3	46	0.06%	3	0.00
4	44	0.06%	4	0.00
5	42	0.05%	5	0.00
6	42	0.05%	6	0.00
7	14	0.02%	7	0.00
8 to 14	18	0.02%	11	0.00
Over 14	-	0.00%	14	-
Total	76,893	100.00%		1.11

June 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	57,546	74.85%	1	0.75
2	18,999	24.71%	2	0.49
3	166	0.22%	3	0.01
4	60	0.08%	4	0.00
5	30	0.04%	5	0.00
6	33	0.04%	6	0.00
7	15	0.02%	7	0.00
8 to 14	34	0.04%	11	0.00
Over 14	-	0.00%	14	-
Total	76,883	100.00%		1.26

Unitil Energy Systems, Inc.
Meter Reading to Recording of
Accounts Receivable
Monthly Detail

July 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	76,568	99.45%	1	0.99
2	248	0.32%	2	0.01
3	116	0.15%	3	0.00
4	37	0.05%	4	0.00
5	6	0.01%	5	0.00
6	4	0.01%	6	0.00
7	4	0.01%	7	0.00
8 to 14	7	0.01%	11	0.00
Over 14	-	0.00%	14	-
Total	76,990	100.00%		1.01

August 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	76,682	99.45%	1	0.99
2	167	0.22%	2	0.00
3	102	0.13%	3	0.00
4	96	0.12%	4	0.00
5	26	0.03%	5	0.00
6	21	0.03%	6	0.00
7	3	0.00%	7	0.00
8 to 14	5	0.01%	11	0.00
Over 14	1	0.00%	14	0.00
Total	77,103	100.00%		1.01

September 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	76,359	99.22%	1	0.99
2	352	0.46%	2	0.01
3	151	0.20%	3	0.01
4	41	0.05%	4	0.00
5	16	0.02%	5	0.00
6	17	0.02%	6	0.00
7	1	0.00%	7	0.00
8 to 14	22	0.03%	11	0.00
Over 14	-	0.00%	14	-
Total	76,959	100.00%		1.01

October 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	76,345	99.27%	1	0.99
2	280	0.36%	2	0.01
3	121	0.16%	3	0.00
4	102	0.13%	4	0.01
5	21	0.03%	5	0.00
6	13	0.02%	6	0.00
7	8	0.01%	7	0.00
8 to 14	17	0.02%	11	0.00
Over 14	1	0.00%	14	0.00
Total	76,908	100.00%		1.02

November 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	76,374	99.21%	1	0.99
2	123	0.16%	2	0.00
3	110	0.14%	3	0.00
4	86	0.11%	4	0.00
5	78	0.10%	5	0.01
6	95	0.12%	6	0.01
7	20	0.03%	7	0.00
8 to 14	98	0.13%	11	0.01
Over 14	1	0.00%	14	0.00
Total	76,985	100.00%		1.03

December 2022

Days Lag	Number of Meters	Percent of Meters	Days Lag Multiplier	Wtd Days Lag
1	73,551	95.51%	1	0.96
2	3,155	4.10%	2	0.08
3	173	0.22%	3	0.01
4	59	0	4	0.00
5	25	0.03%	5	0.00
6	26	0.03%	6	0.00
7	10	0.01%	7	0.00
8 to 14	8	0.01%	11	0.00
Over 14	-	0.00%	14	0.00
Total	77,007	100.00%		1.05

Unitil Energy Systems, Inc. Number Of Days Lag In Billing To Collection Twelve Months Average - January 1 to December 31, 2022 Monthly Summary Electric				
Month	Days in Month	Electric Sales Revenues	Daily Average (1) / Days))	Accounts Receivable Electric Sales
		(1)	(2)	(3)
2022				
January	31	22,815,873	735,996	25,674,236
February	28	21,924,405	783,014	26,405,349
March	31	20,670,870	666,802	24,992,272
April	30	17,413,428	580,448	23,171,166
May	31	17,122,250	552,331	22,626,857
June	30	17,127,206	570,907	21,181,228
July	31	18,231,772	588,122	22,428,351
August	31	21,064,081	679,486	23,092,888
September	30	17,321,097	577,370	20,443,976
October	31	13,814,835	445,640	16,798,977
Novemeber	30	13,846,852	461,562	16,432,398
December	31	19,541,579	630,374	21,271,439
Total		220,894,248	7,272,051	264,519,136
Average		18,407,854	606,004	22,043,261
Payment Lag Days ((3) / (2))				36.37

**Unitil Energy Systems, Inc.
Collection to Receipt of Available Funds**

Revenue Classification by Bank

Revenue is deposited into the remittance account on the day that the revenue is recorded as received.
The following day, the bank statement reflects the prior day's bank availability of funds.

Total Lag Days from Receipt of Funds to Notification of Availability of Funds 1.00 day

**Availability of Funds as reported on succeeding business day.
Source: Report on Previous Day Data, Citizens Bank**

2022	Percent of Funds				Weighted Lag Days		
	Available Same Day	1 Day Float	2-Day Float	Total	1 Day	2 Days	Total
	0 Days Lag	1 Day Lag	2 Days Lag				
January	43%	54%	4%	100%	0.54	0.07	0.61
February	42%	54%	4%	100%	0.54	0.07	0.62
March	40%	56%	4%	100%	0.56	0.07	0.64
April	43%	54%	4%	100%	0.54	0.07	0.61
May	41%	55%	4%	100%	0.55	0.08	0.63
June	39%	58%	3%	100%	0.58	0.06	0.64
July	42%	55%	3%	100%	0.55	0.06	0.62
August	43%	53%	3%	100%	0.53	0.06	0.60
September	43%	53%	3%	100%	0.53	0.07	0.60
October	39%	58%	4%	100%	0.58	0.07	0.65
November	39%	57%	5%	100%	0.57	0.09	0.66
December	33%	64%	4%	100%	0.64	0.07	0.71

Average Weighted Lag Days for Availability of Funds 0.63 days

Summary

Total Lag Days from Receipt of Funds to Notification of Availability of F	1.00 day
Average Weighted Lag Days for Availability of Funds	<u>0.63 days</u>
Total Lag Days from Collection to Availability of Funds:	<u>1.63 days</u>

Unitil Energy Systems, Inc.
 Remittance Accounts

January 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	30,271	236,607	28,426	
4	23,429	102,876	4,956	
5	563,577	374,038	5,745	
9	34,626	134,462	27,143	
10	117,812	366,180	12,876	
11	739,188	417,740	46,502	
12	240,747	309,598	7,207	
13	79,827	168,173	6,874	
14	119,684	385,133	21,178	
18	65,832	670,040	23,511	
19	88,478	151,388	24,800	
20	3,563	177,268	31,014	
21	125,589	385,164	5,007	
24	842,395	520,081	28,012	
25	27,428	59,700	18,846	
26	28,848	243,166	5,804	
27	24,509	272,454	7,774	
28	88,862	136,267	47,920	
31	4,607	445,684	26,019	
	4,629,225	6,760,727	355,823	10,805,281
% of Available Funds	43%	54%	4%	100%
Float Days	-0	-1	0	0.61
Weighted Float Days	-	0.54	0.07	0.61

February 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	30,928	184,304	11,922	
2	54,576	543,364	15,804	
3	84,230	309,629	13,683	
4	30,928	184,304	11,922	
7	166,440	852,864	45,874	
8	890,383	254,979	32,432	
9	280,055	396,380	24,439	
10	8,328	385,916	30,385	
11	118,448	189,235	29,203	
14	313,674	818,326	21,223	
15	969,743	278,388	32,582	
16	417,630	165,102	24,748	
17	22,871	185,607	5,840	
18	240,972	285,045	14,667	
22	65,567	781,104	18,298	
23	951,124	109,880	8,823	
24	18,844	282,081	21,581	
25	142,166	255,133	45,093	
28	200,030	427,862	45,708	
	5,235,224	6,860,476	452,198	12,487,898
% of Available Funds	42%	54%	4%	100%
Float Days	-0	-1	0	0.62
Weighted Float Days	-	0.54	0.07	0.62

March 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	(9,279)	88,182	38,850	
2	12,231	481,024	16,282	
3	23,246	286,449	8,563	
4	188,811	334,247	6,812	
7	75,439	497,672	14,738	
8	809,843	314,881	27,002	
9	338,071	225,362	24,787	
10	20,156	401,507	7,305	
11	137,668	460,757	20,076	
14	282,065	431,003	13,305	
15	970,681	374,382	32,203	
16	368,813	165,430	48,900	
17	(27,123)	489,316	21,386	
18	17,894	214,104	11,285	
21	95,545	409,000	5,408	
22	961,007	167,055	11,058	
23	318,883	238,850	16,757	
24	11,551	194,448	15,471	
26	3,744	87,872	5,071	
28	183,069	325,602	25,811	
29	179,269	268,411	28,316	
30	47,277	286,645	14,366	
31	32,384	307,210	39,844	
	6,038,513	7,051,828	457,473	13,545,932
% of Available Funds	40%	56%	4%	100%
Float Days	-0	-1	0	0.64
Weighted Float Days	-	0.56	0.07	0.64

April 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	(8,947)	397,700	1,993	
4	147,115	800,060	35,968	
5	27,465	101,413	26,521	
6	536,972	549,328	21,184	
7	37,791	629,762	70,664	
8	(39,484)	209,468	21,717	
11	391,151	738,788	34,928	
12	792,339	173,630	57,789	
13	281,077	268,419	4,262	
14	42,513	226,357	7,940	
15	113,888	171,882	3,869	
16	226,763	240,833	13,947	
19	36,896	313,164	16,207	
20	1,332,005	113,816	11,615	
21	22,715	132,380	17,113	
22	18,244	88,577	3,843	
25	241,988	286,438	23,249	
26	604,733	124,468	10,915	
27	27,546	347,588	5,942	
28	30,878	147,271	7,774	
29	54,982	296,661	24,746	
	4,947,029	6,268,401	420,004	11,635,034
% of Available Funds	43%	54%	4%	100%
Float Days	-0	-1	0	0.61
Weighted Float Days	-	0.54	0.07	0.61

May 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	18,200	446,661	38,128	
3	24,848	293,895	38,231	
4	32,777	379,324	18,635	
5	243,069	291,281	17,467	
6	14,802	188,818	12,201	
9	256,182	416,937	29,198	
10	698,545	376,205	30,210	
11	306,098	288,962	34,928	
12	24,144	323,691	9,156	
13	34,843	129,623	4,200	
16	329,078	392,002	3,707	
17	546,219	391,484	1,796	
18	20,775	122,071	67,393	
19	239,670	298,450	5,585	
20	367,070	77,951	4,527	
23	167,389	377,861	17,210	
24	533,005	71,497	15,479	
26	162,427	165,903	5,465	
26	16,462	65,967	6,182	
27	16,811	86,623	6,095	
31	48,278	401,180	28,059	
	4,184,870	5,588,338	383,862	10,155,069
% of Available Funds	41%	55%	4%	100%
Float Days	-0	-1	2	0.63
Weighted Float Days	-	0.55	0.08	0.63

June 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	18,900	228,804	12,276	
2	27,891	289,716	24,368	
3	32,777	164,697	20,885	
6	694,548	293,844	43,135	
7	444,645	814,281	32,018	
8	330,767	425,711	17,276	
9	235,560	381,723	11,170	
10	191,739	315,724	10,893	
13	167,738	498,245	13,838	
14	786,197	330,974	20,123	
16	323,080	233,224	18,710	
16	(23,164)	251,849	3,666	
17	4,467	173,596	2,382	
21	338,478	423,402	12,564	
22	928,669	277,431	10,158	
23	24,511	313,645	11,476	
24	16,972	122,424	7,862	
27	43,837	393,997	27,528	
28	278,998	89,047	20,076	
29	49,084	149,627	5,795	
30	19,188	140,322	9,389	
	4,197,542	6,268,008	355,064	10,800,632
% of Available Funds	39%	58%	3%	100%
Float Days	-0	-1	0	0.64
Weighted Float Days	-	0.58	0.06	0.64

Unit Energy Systems, Inc.
 Remittance Accounts

July 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	41,788	300,112	33,589	
5	30,048	339,723	37,975	
6	14,222	288,911	13,714	
7	410,232	2,161,166	13,644	
8	25,000	172,843	6,714	
11	439,685	807,186	49,185	
12	696,219	212,137	28,886	
13	202,285	448,088	29,399	
14	1,642	557,153	9,888	
15	21,901	209,995	10,332	
18	247,215	686,972	12,377	
19	1,012,880	30,375	19,921	
20	252,211	455,098	29,359	
21	5,668	83,784	2,482	
22	6,742	93,834	3,109	
25	227,321	290,779	9,456	
26	437,569	24,176	3,728	
27	29,845	90,755	3,332	
28	13,465	138,081	8,826	
29	19,629	356,597	7,364	
Total	4,174,379	5,642,354	375,271	13,042,003
% of Available Funds	42%	55%	3%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.53	0.07	0.62

August 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	481,194	403,959	27,291	
2	28,846	133,719	19,783	
3	52,746	270,001	23,622	
4	7,253	248,968	20,147	
5	891,277	433,663	41,426	
6	255,905	575,113	16,692	
9	816,469	385,249	11,906	
10	248,005	439,406	16,285	
11	20,089	291,515	15,042	
12	22,153	246,336	44,243	
13	238,138	373,907	32,253	
16	833,036	426,410	29,919	
17	311,468	324,461	8,970	
18	70,896	93,704	3,862	
19	12,484	274,114	3,039	
22	382,483	253,633	7,384	
23	650,256	264,007	2,569	
24	154,414	148,418	11,954	
25	56,061	304,170	7,827	
26	8,324	69,304	3,590	
29	176,843	198,927	15,061	
30	17,097	290,726	9,064	
31	25,754	228,270	10,758	
Total	6,871,924	8,605,548	374,859	19,856,129
% of Available Funds	43%	53%	3%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.53	0.07	0.60

September 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	91,911	231,332	13,714	
2	59,850	241,729	26,781	
6	72,588	515,317	19,162	
7	882,381	272,081	24,199	
8	64,757	321,968	31,450	
9	10,325	351,164	42,125	
12	385,575	723,869	58,169	
13	933,129	431,435	22,571	
14	230,721	372,281	12,433	
15	65,642	169,887	5,049	
16	8,516	116,043	48,181	
19	380,786	741,135	52,290	
20	1,016,702	354,594	6,335	
21	207,732	108,633	6,277	
22	13,201	323,226	6,084	
23	17,103	113,304	4,312	
26	284,891	316,910	5,720	
27	280,955	64,363	2,906	
28	62,200	253,737	11,845	
29	10,189	57,446	4,578	
30	38,190	194,659	6,883	
Total	5,086,325	6,285,963	406,585	11,768,873
% of Available Funds	43%	53%	3%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.53	0.07	0.60

October 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
3	41,614	387,560	37,722	
4	25,258	210,275	21,910	
5	16,872	164,623	8,239	
6	233,215	466,075	22,198	
7	31,053	522,322	10,315	
11	160,002	571,485	64,557	
12	887,629	77,976	13,121	
13	75,839	190,469	6,875	
14	18,371	455,268	48,656	
17	279,896	453,756	23,941	
18	689,795	545,921	9,194	
19	368,891	122,081	14,645	
20	32,686	355,887	3,594	
21	21,885	144,013	4,511	
24	201,892	294,576	7,711	
25	522,526	185,237	7,153	
26	15,240	173,583	7,664	
27	15,594	118,744	20,060	
28	(2,693)	261,897	2,877	
31	681,110	453,761	12,916	
Total	4,010,969	6,040,268	365,502	13,416,741
% of Available Funds	39%	58%	4%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.58	0.07	0.65

November 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	31,170	147,807	28,692	
2	13,980	261,006	31,444	
3	(2,635)	351,709	22,993	
4	11,688	173,602	22,752	
7	206,659	298,031	83,365	
8	551,550	329,922	25,838	
9	177,889	356,842	28,005	
10	61,586	343,647	6,721	
14	68,491	494,461	29,001	
15	787,809	324,954	8,813	
16	286,107	284,176	4,548	
17	13,981	128,208	36,043	
18	(15,888)	167,767	19,637	
21	27,698	350,914	5,247	
22	11,708	134,866	3,310	
23	568,162	66,823	3,001	
25	28,147	252,695	7,172	
28	20,693	175,723	30,482	
29	92,162	131,978	6,297	
30	17,144	59,482	4,456	
Total	3,203,550	4,747,212	392,565	8,366,326
% of Available Funds	39%	57%	2%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.57	0.09	0.66

December 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	16,128	82,905	21,075	
2	7,970	133,860	6,762	
5	62,797	312,068	11,711	
6	16,128	62,905	21,075	
7	18,740	237,838	37,178	
8	31,671	219,138	8,884	
9	25,763	533,065	6,501	
12	255,556	591,016	6,909	
13	559,722	227,652	31,765	
14	223,146	267,286	35,178	
15	(11,158)	284,791	16,140	
16	(9,139)	114,534	4,035	
19	284,289	227,234	2,353	
20	464,545	102,892	4,951	
21	18,356	99,232	1,684	
22	13,417	277,235	9,245	
23	204,436	282,703	6,828	
27	181,544	688,936	27,819	
28	425,161	119,290	12,818	
29	24,403	240,098	11,970	
30	13,230	141,862	9,909	
Total	2,831,380	5,113,580	300,738	8,045,698
% of Available Funds	33%	64%	4%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.64	0.07	0.71

Unitil Energy Systems, Inc.
Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022
Summary of Transmission

Line No	Supplier	Transmission Expense	(Lead) Lag Days	Weighted Dollar Days
1				
2				
3	Eversource	\$ 2,951,262	39.49	\$ 116,552,391
4	Eversource_2	3,210,211	76.74	246,343,656
5	Independent System Operator	28,671,048	57.35	1,644,183,244
6	Independent System Operator _2	439,054	57.34	25,175,413
7	Independent System Operator _3	170	57.89	9,824
8	Independent System Operator _4	45,819	57.48	2,633,710
9	Utility Services, Inc.	3,575	24.18	86,450
10	Total	<u>\$35,321,139</u>	<u>57.61</u>	<u>\$2,034,984,689</u>
11				
12				
13				
14				
15		Revenue (Lead) Lag Days	Expense (Lead) / Lag Days	Net (Lead) Lag Days
16		<u>54.26</u>	<u>57.61</u>	<u>(3.35)</u>
17				
18				
19				
20				

Unitil Energy Systems, Inc.
Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Eversource

#10-29-13-32-565-00-01

Line No	Month	Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 232,781	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	1/28/22 12:00 AM	42.50	\$ 9,893,211	WIRE
3	February-22	236,589	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	2/28/22 12:00 AM	42.50	10,055,021	WIRE
4	March-22	232,781	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	3/23/22 12:00 AM	36.00	8,380,131	WIRE
5	April-22	232,781	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	4/21/22 12:00 AM	35.50	8,263,741	WIRE
6	May-22	232,781	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	5/24/22 12:00 AM	38.00	8,845,694	WIRE
7	June-22	232,781	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	6/24/22 12:00 AM	38.50	8,962,085	WIRE
8	July-22	231,035	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	7/28/22 12:00 AM	42.00	9,703,487	WIRE
9	August-22	310,084	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	8/26/22 12:00 AM	40.50	12,558,404	WIRE
10	September-22	324,055	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	9/30/22 12:00 AM	44.50	14,420,426	WIRE
11	October-22	231,916	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	10/21/22 12:00 AM	35.00	8,117,047	WIRE
12	November-22	226,838	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	11/25/22 12:00 AM	39.50	8,960,120	WIRE
13	December-22	226,838	11/1/22 12:00 AM	12/1/22 12:00 AM	30	11/16/22 12:00 AM	12/23/22 12:00 AM	37.00	8,393,024	WIRE
14										
15		<u>\$ 2,951,262</u>			<u>365</u>			39.49	<u>\$ 116,552,391</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Eversource

#10-29-13-32-565-00-00

<u>Line No</u>	<u>Month</u>	<u>Transmission Expense</u>	<u>Service From</u>	<u>Service To</u>	<u>Total Days</u>	<u>Mid-Point Calculation Date</u>	<u>Payment Date</u>	<u>(Lead) Lag Days</u>	<u>Weighted Dollar Days</u>	<u>Payment Type</u>
1										
2	January-22	\$ -			-			-	\$ -	
3	February-22	-			-			-	-	
4	March-22	-			-			-	-	
5	April-22	341,270	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	4/1/22 12:00 AM	74.50	25,424,615	WIRE
6	April-22	309,630	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	4/28/22 12:00 AM	72.00	22,293,360	WIRE
7	June-22	277,615	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	6/17/22 12:00 AM	92.50	25,679,388	WIRE
8	July-22	225,533	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	7/1/22 12:00 AM	76.00	17,140,508	WIRE
9	August-22	251,479	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	8/5/22 12:00 AM	80.50	20,244,060	WIRE
10	August-22	365,279	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/26/22 12:00 AM	71.00	25,934,809	WIRE
11	September-22	457,013	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/30/22 12:00 AM	75.50	34,504,482	WIRE
12	October-22	-			-			-	-	WIRE
13	November-22	447,679	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	11/3/22 12:00 AM	78.50	35,142,802	WIRE
14	November-22	287,031	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	11/30/22 12:00 AM	75.00	21,527,325	WIRE
15	December-22	247,682	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	12/30/22 12:00 AM	74.50	18,452,309	WIRE
16									-	
17										
18		<u>\$ 3,210,211</u>						76.74	<u>\$ 246,343,656</u>	
19										
20										

Unitil Energy Systems, Inc.
Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Independent System Operator (ISO)

#10-29-13-32-565-01-00

Line No	Month	Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 2,192,965	11/1/21 12:00 AM	12/1/21 12:00 AM	30	11/16/21 12:00 AM	1/10/22 12:00 AM	55.00	\$ 120,613,065	WIRE
3	February-22	2,330,481	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	2/14/22 12:00 AM	59.50	138,663,625	WIRE
4	March-22	2,562,305	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	3/14/22 12:00 AM	56.50	144,770,224	WIRE
5	April-22	2,325,626	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	4/11/22 12:00 AM	55.00	127,909,446	WIRE
6	May-22	2,089,939	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	5/16/22 12:00 AM	60.50	126,441,314	WIRE
7	June-22	1,806,371	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	6/13/22 12:00 AM	58.00	104,769,543	WIRE
8	July-22	1,948,532	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	7/11/22 12:00 AM	55.50	108,143,532	WIRE
9	August-22	2,736,868	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/15/22 12:00 AM	60.00	164,212,088	WIRE
10	September-22	3,311,097	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/12/22 12:00 AM	57.50	190,388,050	WIRE
11	October-22	3,343,177	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	10/11/22 12:00 AM	55.50	185,546,305	WIRE
12	November-22	2,155,100	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	11/14/22 12:00 AM	59.00	127,150,921	WIRE
13	December-22	<u>1,868,586</u>	10/1/22 12:00 AM	11/1/22 12:00 AM	<u>31</u>	10/16/22 12:00 PM	12/12/22 12:00 AM	56.50	<u>105,575,131</u>	WIRE
14										
15		<u>\$ 28,671,048</u>			<u>365</u>			57.35	<u>\$ 1,644,183,244</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Independent System Operator (ISO)

#10-29-13-32-561-04-00

Line No	Month	Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 33,932	11/1/21 12:00 AM	12/1/21 12:00 AM	30	11/16/21 12:00 AM	1/10/22 12:00 AM	55.00	\$ 1,866,254	WIRE
3	February-22	36,416	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	2/14/22 12:00 AM	59.50	2,166,749	WIRE
4	March-22	39,597	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	3/14/22 12:00 AM	56.50	2,237,229	WIRE
5	April-22	35,933	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	4/11/22 12:00 AM	55.00	1,976,325	WIRE
6	May-22	31,797	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	5/16/22 12:00 AM	60.50	1,923,738	WIRE
7	June-22	27,238	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	6/13/22 12:00 AM	58.00	1,579,807	WIRE
8	July-22	29,785	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	7/11/22 12:00 AM	55.50	1,653,040	WIRE
9	August-22	41,461	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/15/22 12:00 AM	60.00	2,487,656	WIRE
10	September-22	50,537	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/12/22 12:00 AM	57.50	2,905,877	WIRE
11	October-22	51,338	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	10/11/22 12:00 AM	55.50	2,849,238	WIRE
12	November-22	32,735	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	11/14/22 12:00 AM	59.00	1,931,356	WIRE
13	December-22	28,286	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	12/12/22 12:00 AM	56.50	1,598,143	WIRE
14										
15		<u>\$ 439,054</u>			<u>365</u>			57.34	<u>\$ 25,175,413</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Independent System Operator (ISO)
#10-29-13-32-561-08-00

Line No	Month	Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 1	11/1/21 12:00 AM	12/1/21 12:00 AM	30	11/16/21 12:00 AM	1/10/22 12:00 AM	55.00	\$ 30	WIRE
3	February-22	26	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	2/14/22 12:00 AM	59.50	1,533	WIRE
4	March-22	36	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	3/14/22 12:00 AM	56.50	2,041	WIRE
5	April-22	1	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	4/11/22 12:00 AM	55.00	36	WIRE
6	May-22	0	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	5/16/22 12:00 AM	60.50	24	WIRE
7	June-22	103	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	6/13/22 12:00 AM	58.00	5,992	WIRE
8	July-22	0	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	7/11/22 12:00 AM	55.50	22	WIRE
9	August-22	1	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/15/22 12:00 AM	60.00	48	WIRE
10	September-22	0	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/12/22 12:00 AM	57.50	23	WIRE
11	October-22	1	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	10/11/22 12:00 AM	55.50	29	WIRE
12	November-22	0	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	11/14/22 12:00 AM	59.00	24	WIRE
13	December-22	0	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	12/12/22 12:00 AM	56.50	23	WIRE
14										
15		<u>\$ 170</u>			<u>365</u>			57.89	<u>\$ 9,824</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Independent System Operator (ISO)
#10-29-13-32-575-07-00

Line No	Month	Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 4,511	11/1/21 12:00 AM	12/1/21 12:00 AM	30	11/16/21 12:00 AM	1/10/22 12:00 AM	55.00	\$ 248,100	WIRE
3	February-22	4,555	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	2/14/22 12:00 AM	59.50	271,017	WIRE
4	March-22	3,395	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	3/14/22 12:00 AM	56.50	191,837	WIRE
5	April-22	2,950	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	4/11/22 12:00 AM	55.00	162,252	WIRE
6	May-22	3,915	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	5/16/22 12:00 AM	60.50	236,832	WIRE
7	June-22	3,813	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	6/13/22 12:00 AM	58.00	221,181	WIRE
8	July-22	3,075	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	7/11/22 12:00 AM	55.50	170,687	WIRE
9	August-22	4,397	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/15/22 12:00 AM	60.00	263,829	WIRE
10	September-22	3,782	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/12/22 12:00 AM	57.50	217,475	WIRE
11	October-22	3,679	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	10/11/22 12:00 AM	55.50	204,206	WIRE
12	November-22	3,472	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	11/14/22 12:00 AM	59.00	204,860	WIRE
13	December-22	4,273	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	12/12/22 12:00 AM	56.50	241,435	WIRE
14										
15		<u>\$ 45,819</u>			<u>365</u>			57.48	<u>\$ 2,633,710</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Utility Services Inc.
#10-29-12-32-561-05-00

Line No	Month	Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ -			-			-	\$ -	
3	February-22	325	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	2/24/22 12:00 AM	38.50	12,513	CHECK
4	February-22	325	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	2/24/22 12:00 AM	9.00	2,925	CHECK
5	March-22	325	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	3/31/22 12:00 AM	14.50	4,713	CHECK
6	April-22				-			-	-	
7	May-22				-			-	-	
8	June-22	325	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	6/27/22 12:00 AM	72.00	23,400	CHECK
9	June-22	325	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	6/27/22 12:00 AM	41.50	13,488	CHECK
10	June-22	325	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	6/27/22 12:00 AM	11.00	3,575	CHECK
11	July-22	325	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	8/4/22 12:00 AM	18.50	6,013	CHECK
12	August-22	325	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	8/25/22 12:00 AM	8.50	2,763	CHECK
13	September-22	325	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	9/29/22 12:00 AM	13.00	4,225	CHECK
14	October-22				-			-	-	
15	November-22	325	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	11/3/22 12:00 AM	17.50	5,688	CHECK
16	December-22	325	11/1/22 12:00 AM	12/1/22 12:00 AM	30	11/16/22 12:00 AM	12/8/22 12:00 AM	22.00	7,150	CHECK
17										
18		<u>\$ 3,575</u>						24.18	<u>\$ 86,450</u>	
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022
Summary of Non-Transmission

Line No	Supplier	Non-Transmission Expense	(Lead) Lag Days	Weighted Dollar Days
1				
2				
3	Independent System Operator	\$ 70	57.88	\$ 4,044
4	Independent System Operator _2	(11,192)	58.44	(654,049)
5	Independent System Operator _3	13,670	2.50	34,175
6	Independent System Operator _4	(40,542)	57.00	(2,310,930)
7	Energy Services Group LLC	133,450	35.97	4,799,772
8	CGI Technologies and Solutions, Inc.	182,139	44.23	8,055,917
9	Connecticut Municipal Electric	15,000	(4.67)	(70,000)
10	North American Energy	2,000	(254.50)	(509,000)
11	Systrends, Inc.	456	33.50	15,276
12	Patnaude	564	160.50	90,442
13	Pierce Atwood	4,969	64.32	319,588
14	Total	<u>\$ 300,583</u>	<u>32.52</u>	<u>\$ 9,775,235</u>
15				
16				
17				
18				
19		<u>Revenue (Lead) Lag Days</u>	<u>Expense (Lead) / Lag Days</u>	<u>Net (Lead) Lag Days</u>
20		54.26	32.52	21.74

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Independent System Operator (ISO)
#10-29-13-32-555-88-00

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 0	11/1/21 12:00 AM	12/1/21 12:00 AM	30	11/16/21 12:00 AM	1/10/22 12:00 AM	55.00	\$ 2	WIRE
3	February-22	28	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	2/14/22 12:00 AM	59.50	1,663	WIRE
4	March-22	38	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	3/14/22 12:00 AM	56.50	2,162	WIRE
5	April-22	(1)	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	4/11/22 12:00 AM	55.00	(76)	WIRE
6	May-22	0	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	5/16/22 12:00 AM	60.50	15	WIRE
7	June-22	4	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	6/13/22 12:00 AM	58.00	207	WIRE
8	July-22	0	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	7/11/22 12:00 AM	55.50	6	WIRE
9	August-22	(1)	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/15/22 12:00 AM	60.00	(35)	WIRE
10	September-22	(0)	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/12/22 12:00 AM	57.50	(9)	WIRE
11	October-22	(0)	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	10/11/22 12:00 AM	55.50	(26)	WIRE
12	November-22	3	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	11/14/22 12:00 AM	59.00	151	WIRE
13	December-22	(0)	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	12/12/22 12:00 AM	56.50	(16)	WIRE
14										
15		<u>\$ 70</u>			<u>365</u>			57.88	<u>\$ 4,044</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Independent System Operator (ISO)
#10-29-13-32-555-89-00

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ (552)	11/1/21 12:00 AM	12/1/21 12:00 AM	30	11/16/21 12:00 AM	1/10/22 12:00 AM	55.00	\$ (30,368)	WIRE
3	February-22	(4,846)	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	2/14/22 12:00 AM	59.50	(288,322)	WIRE
4	March-22	679	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	3/14/22 12:00 AM	56.50	38,379	WIRE
5	April-22	(663)	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	4/11/22 12:00 AM	55.00	(36,447)	WIRE
6	May-22	(557)	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	5/16/22 12:00 AM	60.50	(33,697)	WIRE
7	June-22	(3,429)	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	6/13/22 12:00 AM	58.00	(198,869)	WIRE
8	July-22	(586)	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	7/11/22 12:00 AM	55.50	(32,498)	WIRE
9	August-22	(539)	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/15/22 12:00 AM	60.00	(32,364)	WIRE
10	September-22	(561)	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/12/22 12:00 AM	57.50	(32,269)	WIRE
11	October-22	(157)	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	10/11/22 12:00 AM	55.50	(8,710)	WIRE
12	November-22	32	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	11/14/22 12:00 AM	59.00	1,894	WIRE
13	December-22	(14)	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	12/12/22 12:00 AM	56.50	(778)	WIRE
14										
15		<u>\$ (11,192)</u>			<u>365</u>			58.44	<u>\$ (654,049)</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Independent System Operator (ISO)
#10-29-01-32-928-01-01

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ -			-			-	\$ -	
3	February-22	-			-			-	-	
4	March-22	-			-			-	-	
5	April-22	-			-			-	-	
6	May-22	-			-			-	-	
7	June-22	-			-			-	-	
8	July-22	13,670	1/1/22 12:00 AM	1/1/23 12:00 AM	365	7/2/22 12:00 PM	7/5/22 12:00 AM	2.50	34,175	WIRE
9	August-22	-			-			-	-	
10	September-22	-			-			-	-	
11	October-22	-			-			-	-	
12	November-22	-			-			-	-	
13	December-22	-			-			-	-	
14										
15		<u>\$ 13,670</u>			<u>365</u>			2.50	<u>\$ 34,175</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Independent System Operator (ISO)
#10-29-13-32-555-01-10

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ -			-			-	\$ -	
3	February-22	-			-			-	-	
4	March-22	-			-			-	-	
5	April-22	-			-			-	-	
6	May-22	-			-			-	-	
7	June-22	(6,381)	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	6/13/22 12:00 AM	58.00	(370,101)	WIRE
8	July-22	(2,562)	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	7/11/22 12:00 AM	55.50	(142,189)	WIRE
9	August-22	(713)	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/15/22 12:00 AM	60.00	(42,807)	WIRE
10	September-22	(880)	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/12/22 12:00 AM	57.50	(50,593)	WIRE
11	October-22	(3,169)	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	10/11/22 12:00 AM	55.50	(175,906)	WIRE
12	November-22	(5,232)	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	11/14/22 12:00 AM	59.00	(308,711)	WIRE
13	December-22	<u>(21,604)</u>	10/1/22 12:00 AM	11/1/22 12:00 AM	<u>31</u>	10/16/22 12:00 PM	12/12/22 12:00 AM	56.50	<u>(1,220,623)</u>	WIRE
14										
15		<u>\$ (40,542)</u>						57.00	<u>\$ (2,310,930)</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Energy Services Group LLC
#10-29-13-32-923-12-00

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 10,982	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	1/19/22 12:00 AM	33.50	\$ 367,897	ACH
3	February-22	10,982	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	2/28/22 12:00 AM	42.50	466,735	ACH
4	March-22	3,060	2/24/22 12:00 AM	2/25/22 12:00 AM	1	2/24/22 12:00 PM	3/14/22 12:00 AM	17.50	53,550	ACH
5	March-22	10,982	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	3/23/22 12:00 AM	36.00	395,352	ACH
6	April-22	11,084	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	4/20/22 12:00 AM	34.50	382,398	ACH
7	May-22	1,020	4/18/22 12:00 AM	4/19/22 12:00 AM	1	4/18/22 12:00 PM	5/9/22 12:00 AM	20.50	20,910	ACH
8	May-22	11,084	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	5/11/22 12:00 AM	25.00	277,100	ACH
9	June-22	11,186	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	6/17/22 12:00 AM	31.50	352,359	ACH
10	June-22	1,020	6/21/22 12:00 AM	6/22/22 12:00 AM	1	6/21/22 12:00 PM	6/28/22 12:00 AM	6.50	6,630	ACH
11	July-22	-	-	-	-	-	-	-	-	-
12	August-22	11,186	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/3/22 12:00 AM	48.00	536,928	ACH
13	August-22	17,306	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	8/22/22 12:00 AM	36.50	631,669	ACH
14	September-22	11,359	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	9/26/22 12:00 AM	40.50	460,029	ACH
15	October-22	11,186	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	10/19/22 12:00 AM	33.00	369,138	ACH
16	November-22	11,013	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	11/29/22 12:00 AM	43.50	479,077	ACH
17	December-22	-	-	-	-	-	-	-	-	-
18										
19		<u>\$ 133,450</u>						35.97	<u>\$ 4,799,772</u>	
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: CGI Technologies and Solutions, Inc.
#10-29-13-32-923-12-00

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 14,693	12/1/21 12:00 AM	1/1/22 12:00 AM	31	12/16/21 12:00 PM	1/24/22 12:00 AM	38.50	\$ 565,669	ACH
3	February-22	14,703	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	2/28/22 12:00 AM	42.50	624,890	ACH
4	March-22	14,710	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	3/30/22 12:00 AM	43.00	632,512	ACH
5	April-22	14,716	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	5/4/22 12:00 AM	48.50	713,726	ACH
6	May-22	15,322	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	5/25/22 12:00 AM	39.00	597,558	ACH
7	June-22	15,393	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	6/27/22 12:00 AM	41.50	638,790	ACH
8	July-22	-	-	-	-	-	-	-	-	-
9	August-22	15,407	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	8/3/22 12:00 AM	48.00	739,530	ACH
10	August-22	15,426	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	9/1/22 12:00 AM	46.50	717,309	ACH
11	September-22	15,432	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	10/3/22 12:00 AM	47.50	733,020	ACH
12	October-22	15,439	9/1/22 12:00 AM	10/1/22 12:00 AM	30	9/16/22 12:00 AM	10/28/22 12:00 AM	42.00	648,438	ACH
13	November-22	15,444	10/1/22 12:00 AM	11/1/22 12:00 AM	31	10/16/22 12:00 PM	12/7/22 12:00 AM	51.50	795,366	ACH
14	December-22	15,455	11/1/22 12:00 AM	12/1/22 12:00 AM	30	11/16/22 12:00 AM	12/28/22 12:00 AM	42.00	649,110	ACH
15										
16		<u>\$ 182,139</u>			<u>365</u>			44.23	<u>\$ 8,055,917</u>	
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: CT Municipal Electric
#10-29-13-32-556-00-00

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 1,250	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	1/6/22 12:00 AM	(10.50)	\$ (13,125)	ACH
3	February-22	1,250	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	2/9/22 12:00 AM	(6.00)	(7,500)	ACH
4	March-22	1,250	3/1/22 12:00 AM	4/1/22 12:00 AM	31	3/16/22 12:00 PM	3/14/22 12:00 AM	(2.50)	(3,125)	ACH
5	April-22	1,250	4/1/22 12:00 AM	5/1/22 12:00 AM	30	4/16/22 12:00 AM	4/6/22 12:00 AM	(10.00)	(12,500)	ACH
6	May-22	1,250	5/1/22 12:00 AM	6/1/22 12:00 AM	31	5/16/22 12:00 PM	5/9/22 12:00 AM	(7.50)	(9,375)	ACH
7	June-22	1,250	6/1/22 12:00 AM	7/1/22 12:00 AM	30	6/16/22 12:00 AM	6/6/22 12:00 AM	(10.00)	(12,500)	ACH
8	July-22	1,250	7/1/22 12:00 AM	8/1/22 12:00 AM	31	7/16/22 12:00 PM	7/8/22 12:00 AM	(8.50)	(10,625)	ACH
9	August-22	1,250	8/1/22 12:00 AM	9/1/22 12:00 AM	31	8/16/22 12:00 PM	8/4/22 12:00 AM	(12.50)	(15,625)	ACH
10	September-22	-	-	-	-	-	-	-	-	-
11	October-22	2,500	9/1/22 12:00 AM	11/1/22 12:00 AM	61	10/1/22 12:00 PM	10/12/22 12:00 AM	10.50	26,250	ACH
12	November-22	1,250	11/1/22 12:00 AM	12/1/22 12:00 AM	30	11/16/22 12:00 AM	11/2/22 12:00 AM	(14.00)	(17,500)	ACH
13	December-22	1,250	12/1/22 12:00 AM	1/1/23 12:00 AM	31	12/16/22 12:00 PM	12/21/22 12:00 AM	4.50	5,625	ACH
14										
15		<u>\$ 15,000</u>			<u>365</u>			(4.67)	<u>\$ (70,000)</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: North American Energy
#10-29-01-32-928-03-00

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 2,000	4/1/22 12:00 AM	4/1/23 12:00 AM	365	9/30/22 12:00 PM	1/19/22 12:00 AM	(254.50)	\$ (509,000)	CHECK
3	February-22	-			-			-	-	
4	March-22	-			-			-	-	
5	April-22	-			-			-	-	
6	May-22	-			-			-	-	
7	June-22	-			-			-	-	
8	July-22	-			-			-	-	
9	August-22	-			-			-	-	
10	September-22	-			-			-	-	
11	October-22	-			-			-	-	
12	November-22	-			-			-	-	
13	December-22	-			-			-	-	
14										
15		<u>\$ 2,000</u>			<u>365</u>			(254.50)	<u>\$ (509,000)</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Systrends USA

#10-29-01-32-928-03-00

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ 456	12/23/21 12:00 AM	12/24/21 12:00 AM	1	12/23/21 12:00 PM	1/26/22 12:00 AM	33.50	\$ 15,276	ACH
3	February-22	-			-			-	-	
4	March-22	-			-			-	-	
5	April-22	-			-			-	-	
6	May-22	-			-			-	-	
7	June-22	-			-			-	-	
8	July-22	-			-			-	-	
9	August-22	-			-			-	-	
10	September-22	-			-			-	-	
11	October-22	-			-			-	-	
12	November-22	-			-			-	-	
13	December-22	-			-			-	-	
14										
15		<u>\$ 456</u>						33.50	<u>\$ 15,276</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Patnaude

#10-29-01-32-928-03-00

<u>Line No</u>	<u>Month</u>	<u>Non-Transmission Expense</u>	<u>Service From</u>	<u>Service To</u>	<u>Total Days</u>	<u>Mid-Point Calculation Date</u>	<u>Payment Date</u>	<u>(Lead) Lag Days</u>	<u>Weighted Dollar Days</u>	<u>Payment Type</u>
1										
2	January-22	\$ -			-			-	\$ -	
3	February-22	-			-			-	-	
4	March-22	-			-			-	-	
5	April-22	-			-			-	-	
6	May-22	-			-			-	-	
7	June-22	-			-			-	-	
8	July-22	-			-			-	-	
9	August-22	-			-			-	-	
10	September-22	-			-			-	-	
11	October-22	-			-			-	-	
12	November-22	-			-			-	-	
13	December-22	<u>564</u>	7/20/22 12:00 AM	7/21/22 12:00 AM	<u>1</u>	7/20/22 12:00 PM	12/28/22 12:00 AM	160.50	<u>90,442</u>	CHECK
14										
15		<u>\$ 564</u>						160.50	<u>\$ 90,442</u>	
16										
17										
18										
19										
20										

Unitil Energy Systems, Inc.
Non-Transmission - Calculation of (Lead) Lag
12 Months Ended December 31, 2022

Supplier: Pierce Atwood

#10-29-13-32-928-03-00

Line No	Month	Non-Transmission Expense	Service From	Service To	Total Days	Mid-Point Calculation Date	Payment Date	(Lead) Lag Days	Weighted Dollar Days	Payment Type
1										
2	January-22	\$ -			-			-	\$ -	
3	February-22	-			-			-	-	
4	March-22	2,988	1/1/22 12:00 AM	2/1/22 12:00 AM	31	1/16/22 12:00 PM	3/28/22 12:00 AM	70.50	210,619	ACH
5	April-22	1,981	2/1/22 12:00 AM	3/1/22 12:00 AM	28	2/15/22 12:00 AM	4/11/22 12:00 AM	55.00	108,969	ACH
6	May-22	-			-			-	-	
7	June-22	-			-			-	-	
8	July-22	-			-			-	-	
9	August-22	-			-			-	-	
10	September-22	-			-			-	-	
11	October-22	-			-			-	-	
12	October-22	-			-			-	-	
13	November-22	-			-			-	-	
14	December-22	-			-			-	-	
15										
16		<u>\$ 4,969</u>						64.32	<u>\$ 319,588</u>	
17										
18										
19										
20										