

UNITIL ENERGY SYSTEMS, INC.

DEFAULT SERVICE AND
RENEWABLE ENERGY CREDITS

LEAD/LAG STUDY

FOR G1 AND NON-G1 CUSTOMERS

2022

Unitil Energy Systems, Inc.
Default Service Costs and Renewable Energy Credits Lead / Lag Study
For the Period January 1, 2022 Through December 31, 2022
Summary of Results

The results of the Unitil Energy Systems, Inc. Default Service ("DS") and Renewable Energy Credits ("RECs") Lead / Lag Study ("Study") indicate a net lead period for DS and REC costs of 12.55 days for G1 Customers and a net lag period of 2.65 days for Non-G1 Customers. The procedures used to develop the Study are as follows:

I. Determination of Revenue Lag Period

The revenue lag period includes four calculations in determining the total lag – receipt of electric service to meter reading, meter reading to recording of accounts receivable, billing to collection, and collection to receipt of available funds.

A. Receipt of Electric Service to Meter Reading

There are 365 days in the test year January through December 2022, including one 28 day month, four 30 day months, and seven 31 day months. The weighted average day delay is 15.21 days between the time a customer receives service until the meter is read. See page 5 of this Study.

B. Meter Reading to Recording of Accounts Receivable

The average delay time from meter reading to recording of accounts receivable is 1.05 days. See pages 6 - 10 of this Study.

C. Billing to Collection

Billing to Collection lag days are determined by dividing accounts receivable sales by daily electric revenues. The daily average revenues are obtained from the monthly electric sales revenues divided by the number of days in the month. This weighted average delay period from Billing to Collection is 24.78 days for G1 customers and 38.50 days for Non-G1 customers. See pages 11 and 12 of this Study.

D. Collection to Receipt of Available Funds

On average, 1.63 days are required for checks deposited at the Company's banks to be considered available funds for banking transaction purposes. See pages 13 - 19 of this Study.

The sum of all revenue lag periods is 42.67 days for G1 customers and 56.39 days for Non-G1 customers. See page 4 of this Study.

Unitil Energy Systems, Inc.
Default Service Costs and Renewable Energy Credits Lead / Lag Study
For the Period January 1, 2022 Through December 31, 2022
Summary of Results

II. Determination of the Expense Lead Period

The expense lead period consists of the lead in payment of DS supplier costs and RECs, and is calculated for the G1 and Non-G1 customer classes based upon the following calculations: lead period, average days lead, weighted cost, days lead and weighted days lead.

A. Lead Period

The lead period is generally based on a monthly cycle and consists of (1) the average days in the period that DS purchases were provided or RECs were required; and (2) the billing period from the end of the period up to and including the payment date. See pages 20 through 23 of the Study.

B. Average Days Lead

The bills for each G-1 and Non-G-1 DS supplier are analyzed to determine the days lead. The REC days lead are also analyzed. Average days lead is calculated by multiplying the lead period by the weighted percentage of aggregate costs. The weighted days are then totaled to obtain the average days lead period for DS suppliers and for the RECs. See pages 20 and 22 of this Study.

C. Weighted Cost

The cost of purchasing default service and RECs is divided by the total combined costs to determine a weighted cost. See pages 20 and 22 of this Study.

D. Weighted Days Lead

The weighted cost is multiplied by the average days lead to calculate the weighted days lead, resulting in 55.22 days for G1 customers and 53.74 days for Non-G1 customers. See pages 20 and 22 of this Study.

III. Summary

The results of the Study indicate a net Purchased Power lead period of 12.55 days for G1 customers and net lag period of 2.65 days for Non-G1 customers. See page 4 of this Study.

Unitil Energy Systems, Inc.
Number of Days Delay Between Receipt of Revenue and
Payment of Default Service Costs and Renewable Energy Credits
Based on 2022 Data

Line No.	Description	G1 Customers		Non-G1 Customers	
		Page Reference	Number of Days Delay	Page Reference	Number of Days Delay
1	Revenue Lag:				
2	Receipt of Electric Service to Meter Reading	5	15.21 days	5	15.21 days
3	Meter Reading to Recording of Accounts Receivable	6 - 10	1.05 days	6 - 10	1.05 days
4	Billing to Collection	11	24.78 days	12	38.50 days
5	Collection to Receipt of Available Funds	13 - 19	<u>1.63 days</u>	13 - 19	<u>1.63 days</u>
6	Subtotal Revenue Lag Days		42.67 days		56.39 days
	Less: Lead in Payment of Default Service Costs and				
7	Renewable Energy Credits	20	<u>55.22 days</u>	22	<u>53.74 days</u>
8	Total Default Service and Renewable Energy Credit Lag (Line 6 Less Line 7)		<u><u>-12.55 days</u></u>		<u><u>2.65 days</u></u>

**Receipt of Electric Service to Meter Reading
Average Days Delay**

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

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>365 days</u>

$365 \text{ Days} / 12 \text{ Months} / 2 = \underline{\underline{15.21 \text{ days}}}$

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

<u>Month</u>	<u>Average Days</u>
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	<u>1.05</u>

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

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

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

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

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 1/22 - 12/22 G1 Customers				
Month	Days in Month	Electric Sales Revenues	Daily Average (1/Days)	Accounts Receivable Electric Sales
		(1)	(2)	(3)
2022				
January	31	2,750,164	88,715	2,343,461
February	28	2,901,563	103,627	2,383,559
March	31	3,075,142	99,198	2,620,511
April	30	2,729,719	90,991	2,654,076
May	31	2,712,900	87,513	2,636,506
June	30	2,901,405	96,714	2,312,314
July	31	3,015,274	97,267	2,302,105
August	31	3,297,706	106,378	2,428,956
September	30	3,059,665	101,989	2,260,455
October	31	2,596,350	83,753	1,953,392
Novemeber	30	2,595,115	86,504	2,051,902
December	31	2,543,981	82,064	1,925,703
Total		34,178,985	1,124,712	27,872,941
Average		2,848,249	93,726	2,322,745
Payment Lag Days (3/2)				24.78

Unitil Energy Systems, Inc. Number Of Days Lag In Billing To Collection Twelve Months Average 1/22 - 12/22 Non-G1 Customers				
Month	Days in Month	Electric Sales Revenues	Daily Average (1/Days)	Accounts Receivable Electric Sales
		(1)	(2)	(3)
2022				
January	31	20,065,709	647,281	23,330,774
February	28	19,022,842	679,387	24,021,790
March	31	17,595,728	567,604	22,371,760
April	30	14,683,709	489,457	20,517,090
May	31	14,409,349	464,818	19,990,351
June	30	14,225,801	474,193	18,868,913
July	31	15,216,498	490,855	20,126,246
August	31	17,766,375	573,109	20,663,931
September	30	14,261,431	475,381	18,183,522
October	31	11,218,484	361,887	14,845,585
Novemeber	30	11,251,737	375,058	14,380,497
December	31	16,997,598	548,310	19,345,736
Total		\$ 186,715,262	\$ 6,147,339	\$ 236,646,195
Average		\$ 15,559,605	\$ 512,278	\$ 19,720,516
Payment Lag Days (3/2)				38.50

**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 0 Days Lag	1 Day Float 1 Day Lag	2-Day Float 2 Days Lag	Total	1 Day	2 Days	Total
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 Funds 1.00 day
 Average Weighted Lag Days for Availability of Funds 0.63 days
Total Lag Days from Collection to Availability of Funds: 1.63 days

Unitil Energy Systems, Inc.
 Remittance Accounts

January, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
3	30,277	235,927	28,426	
4	23,429	102,876	4,956	
5	563,517	374,939	5,745	
6	34,626	134,462	27,143	
7	117,812	356,180	12,676	
10	739,188	417,740	46,502	
11	569,510	210,569	8,174	
12	240,747	302,596	7,267	
13	79,827	168,173	6,874	
14	119,664	386,133	21,179	
18	65,832	670,040	23,511	
19	895,476	191,368	24,860	
20	3,563	177,268	31,014	
21	129,569	385,104	6,007	
24	842,395	520,081	28,012	
25	27,436	59,700	18,846	
26	28,848	243,166	5,924	
27	24,509	272,454	7,774	
28	88,892	136,267	47,920	
31	4,607	445,684	26,019	
	<u>4,629,725</u>	<u>5,790,727</u>	<u>388,829</u>	<u>10,809,281</u>
% of Available Funds	43%	54%	4%	100%
Float Days	<u>0</u>	<u>1</u>	<u>2</u>	
Weighted Float Days	<u>-</u>	<u>0.54</u>	<u>0.07</u>	<u>0.61</u>

February, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	30,928	164,304	11,922	
2	54,576	543,364	15,604	
3	84,230	309,629	13,683	
4	30,928	164,304	11,922	
7	366,440	802,664	46,814	
8	890,383	254,979	32,432	
9	266,005	396,360	24,639	
10	8,326	385,916	30,385	
11	118,448	199,335	29,203	
14	313,674	818,326	21,223	
15	956,743	278,388	32,582	
16	417,930	165,102	26,748	
17	22,871	195,607	5,840	
18	240,972	265,045	14,667	
22	95,567	781,104	18,298	
23	956,124	109,980	8,852	
24	38,944	282,081	21,581	
25	142,106	256,128	40,093	
28	200,030	427,862	45,708	
	<u>5,235,224</u>	<u>6,800,478</u>	<u>452,196</u>	<u>12,487,898</u>
% of Available Funds	42%	54%	4%	100%
Float Days	<u>0</u>	<u>1</u>	<u>2</u>	
Weighted Float Days	<u>-</u>	<u>0.54</u>	<u>0.07</u>	<u>0.62</u>

Unitil Energy Systems, Inc.
Remittance Accounts

March, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	(9,279)	86,182	38,850	
2	12,331	481,024	16,282	
3	23,246	266,449	8,563	
4	186,811	334,297	6,612	
7	75,439	457,672	14,738	
8	809,843	374,681	27,002	
9	338,071	235,382	24,767	
10	20,156	401,507	7,305	
11	137,906	460,757	20,079	
14	282,085	431,003	13,305	
15	970,561	374,382	32,293	
16	366,613	165,430	48,900	
17	(27,172)	489,316	21,386	
18	17,894	214,104	11,285	
21	96,545	499,620	9,409	
22	951,037	167,055	11,058	
23	316,803	234,800	16,757	
24	11,591	104,448	15,471	
25	3,744	87,672	5,071	
28	193,059	325,959	25,811	
29	179,269	266,411	28,316	
30	47,577	286,565	14,369	
31	32,384	307,210	39,844	
	5,036,513	7,051,926	457,473	12,545,912
% of Available Funds	40%	56%	4%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.56	0.07	0.64

April, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	(8,687)	385,795	7,593	
4	147,115	800,069	35,968	
5	27,465	101,413	26,521	
6	536,872	549,328	21,184	
7	37,791	529,762	70,684	
8	(39,484)	209,466	21,717	
11	391,131	786,788	34,929	
12	792,339	173,630	57,789	
13	281,017	285,419	4,392	
14	42,513	226,357	7,949	
15	113,888	171,082	3,939	
18	226,703	240,833	3,947	
19	36,696	313,164	18,297	
20	1,332,025	111,816	11,613	
21	22,715	132,380	17,113	
22	16,724	88,577	4,343	
25	241,968	286,436	23,249	
26	634,733	124,468	10,915	
27	27,546	347,586	5,942	
28	30,978	147,371	7,774	
29	54,982	256,661	24,746	
	4,947,029	6,268,401	420,604	11,636,034
% of Available Funds	43%	54%	4%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.54	0.07	0.61

Unitil Energy Systems, Inc.
Remittance Accounts

May, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
2	32,230	446,851	30,126	
3	24,848	293,895	38,231	
4	32,777	379,324	18,635	
5	243,069	291,281	17,467	
6	14,602	158,618	12,201	
9	295,182	416,937	29,198	
10	698,545	376,205	30,210	
11	306,008	288,962	29,626	
12	24,144	323,691	9,156	
13	34,043	129,623	6,200	
16	329,078	392,002	3,707	
17	546,219	391,484	1,796	
18	20,775	122,071	67,393	
19	259,670	298,410	8,585	
20	357,070	77,951	4,527	
23	187,599	377,861	17,510	
24	533,005	71,497	15,479	
25	162,427	165,903	5,456	
26	18,492	95,967	6,192	
27	16,811	88,623	6,096	
31	48,276	401,180	28,059	
	<u>4,184,870</u>	<u>5,588,336</u>	<u>385,850</u>	<u>10,159,056</u>
% of Available Funds	41%	55%	4%	100%
Float Days	<u>0</u>	<u>1</u>	<u>2</u>	
Weighted Float Days	<u>-</u>	<u>0.55</u>	<u>0.08</u>	<u>0.63</u>

June, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	18,000	226,504	12,276	
2	27,891	289,716	24,366	
3	35,217	164,597	20,585	
6	59,458	293,844	43,135	
7	444,645	814,281	32,019	
8	330,767	425,711	17,276	
9	235,500	381,737	11,170	
10	191,739	315,724	10,893	
13	96,778	496,245	13,830	
14	766,197	330,974	20,123	
15	323,049	233,233	18,710	
16	(23,164)	251,949	3,666	
17	6,497	173,596	2,382	
21	328,478	423,402	12,554	
22	926,069	277,431	10,158	
23	24,531	313,645	11,476	
24	16,972	122,424	7,662	
27	43,637	353,997	27,528	
28	276,998	89,047	20,076	
29	49,084	149,627	5,790	
30	19,198	140,322	9,389	
	<u>4,197,542</u>	<u>6,268,006</u>	<u>335,064</u>	<u>10,800,612</u>
% of Available Funds	39%	58%	3%	100%
Float Days	<u>0</u>	<u>1</u>	<u>2</u>	
Weighted Float Days	<u>-</u>	<u>0.58</u>	<u>0.06</u>	<u>0.64</u>

Unitil Energy Systems, Inc.
Remittance Accounts

July, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	41,798	300,112	33,589	
5	35,048	336,723	37,975	
6	14,222	288,911	13,714	
7	410,722	216,155	12,644	
8	25,030	172,843	6,714	
11	439,645	607,186	49,185	
12	696,219	212,137	28,886	
13	262,285	448,098	29,399	
14	1,542	557,133	9,988	
15	21,901	209,965	10,332	
18	247,215	666,672	12,377	
19	1,012,880	30,375	19,921	
20	225,271	495,098	29,350	
21	5,668	83,784	2,482	
22	6,742	15,834	1,209	
25	227,321	290,779	9,456	
26	437,889	24,176	3,728	
27	29,945	90,795	3,332	
28	13,405	138,981	3,626	
29	19,629	356,597	7,364	
Total	4,174,378	5,542,354	325,271	10,042,003
% of Available Funds	42%	55%	3%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.55	0.06	0.62

August, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	48,194	403,959	27,291	
2	26,846	133,715	19,763	
3	52,746	270,001	23,622	
4	7,253	248,966	20,147	
5	891,272	433,563	41,426	
8	255,905	575,113	16,692	
9	816,409	386,249	11,908	
10	248,005	439,408	16,285	
11	20,089	201,515	13,042	
12	22,153	246,336	44,243	
15	226,138	373,007	32,253	
16	833,036	426,410	29,919	
17	311,468	324,401	8,970	
18	70,896	93,704	3,862	
19	12,484	274,114	3,039	
22	382,493	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	96,934	3,580	
29	176,643	198,927	15,061	
30	75,087	280,726	6,064	
31	25,754	228,270	10,758	
Total	5,371,924	6,605,546	377,659	12,355,129
% of Available Funds	43%	53%	3%	100%
Float Days	0	1	2	
Weighted Float Days	-	0.53	0.06	0.60

Unitil Energy Systems, Inc.
Remittance Accounts

September, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	51,911	231,332	13,216	
2	59,850	241,729	26,781	
6	72,358	516,317	19,162	
7	882,381	272,061	24,199	
8	64,757	321,068	31,450	
9	10,325	351,164	42,125	
12	398,575	723,809	58,189	
13	933,129	431,435	22,571	
14	235,721	372,591	12,433	
15	65,842	189,887	5,049	
16	9,516	116,043	48,181	
19	380,786	741,135	52,299	
20	1,016,702	354,594	6,335	
21	207,732	108,533	2,277	
22	13,201	323,226	6,084	
23	17,103	113,934	4,312	
26	284,891	316,910	5,720	
27	280,925	64,353	2,896	
28	52,290	253,737	11,845	
29	10,139	57,446	4,578	
30	38,190	194,659	6,883	
	<u>5,086,325</u>	<u>6,295,963</u>	<u>406,585</u>	<u>11,788,873</u>
% of Available Funds	43%	53%	3%	100%
Float Days	<u>0</u>	<u>1</u>	<u>2</u>	
Weighted Float Days	<u>-</u>	<u>0.53</u>	<u>0.07</u>	<u>0.60</u>

October, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
3	41,614	387,060	37,722	
4	25,828	210,275	21,010	
5	16,872	164,623	8,239	
6	228,215	466,675	22,198	
7	31,053	522,322	10,315	
11	160,002	571,485	64,557	
12	887,829	77,976	33,121	
13	75,839	190,469	5,675	
14	18,371	405,286	48,666	
17	278,806	453,756	23,941	
18	889,786	540,521	9,194	
19	366,801	122,081	14,645	
20	32,688	305,887	3,594	
21	21,685	144,013	4,511	
24	201,802	294,575	7,711	
25	522,526	155,237	7,153	
26	135,240	173,583	7,604	
27	10,594	118,784	20,060	
28	(2,693)	281,897	2,677	
31	68,110	453,761	12,916	
	<u>4,010,966</u>	<u>6,040,266</u>	<u>365,509</u>	<u>10,416,741</u>
% of Available Funds	39%	58%	4%	100%
Float Days	<u>0</u>	<u>1</u>	<u>2</u>	
Weighted Float Days	<u>-</u>	<u>0.58</u>	<u>0.07</u>	<u>0.65</u>

Unitil Energy Systems, Inc.
Remittance Accounts

November, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	31,170	147,807	28,692	
2	13,880	261,706	31,444	
3	(2,635)	381,709	22,993	
4	11,688	173,602	22,752	
7	206,659	266,031	83,385	
8	551,550	329,922	25,838	
9	177,889	305,842	28,005	
10	51,586	343,647	6,721	
14	96,401	404,451	20,001	
15	787,809	324,904	5,613	
16	286,107	284,176	4,548	
17	13,581	128,206	36,043	
18	(15,858)	187,767	19,637	
21	271,698	350,914	5,247	
22	11,706	134,856	3,310	
23	569,162	66,823	3,001	
25	28,147	252,666	7,172	
28	20,693	176,723	30,480	
29	92,182	131,978	6,297	
30	17,144	93,482	1,406	
	<u>3,220,559</u>	<u>4,747,212</u>	<u>392,585</u>	<u>8,360,356</u>
% of Available Funds	39%	57%	5%	100%
Float Days	<u>0</u>	<u>1</u>	<u>2</u>	
Weighted Float Days	<u>-</u>	<u>0.57</u>	<u>0.09</u>	<u>0.66</u>

December, 2022	Available Balance	1 Day Float	2 Day Float	Total Available + Float
1	16,128	82,905	21,075	
2	7,970	133,890	6,752	
5	52,797	312,068	11,711	
6	16,128	82,905	21,075	
7	18,740	237,838	37,178	
8	31,671	219,138	9,884	
9	25,763	533,065	6,501	
12	255,936	551,018	6,909	
13	559,722	227,662	31,765	
14	221,647	267,236	33,176	
15	(11,188)	264,791	16,140	
16	(9,139)	114,534	4,035	
19	284,289	237,234	7,353	
20	464,545	102,892	4,951	
21	18,355	99,232	2,684	
22	13,417	277,235	9,245	
23	20,436	282,733	8,828	
27	181,554	588,936	27,619	
28	425,181	116,290	12,818	
29	24,403	240,096	11,970	
30	13,230	141,862	9,069	
	<u>2,631,585</u>	<u>5,113,560</u>	<u>300,738</u>	<u>8,045,883</u>
% of Available Funds	33%	64%	4%	100%
Float Days	<u>0</u>	<u>1</u>	<u>2</u>	
Weighted Float Days	<u>-</u>	<u>0.64</u>	<u>0.07</u>	<u>0.71</u>

UNITIL ENERGY SYSTEMS, INC
LEAD IN PAYMENT OF DEFAULT SERVICE COSTS AND RENEWABLE ENERGY CREDITS

	Reference Page	Cost	% of Total	Average Days Lead	Weighted Days Lead
G1 Default Service Supplier Costs	Schedule DTN-2	\$ 6,695,479	93.94%	39.16 days	36.79 days
G1 Renewable Energy Credits	21	\$ 431,675	6.06%	304.21 days	18.43 days
Total		<u>\$ 7,127,153</u>	100.00%		<u>55.22 days</u>

UNITIL ENERGY SYSTEMS, INC
LEAD IN PAYMENT OF RENEWABLE ENERGY CREDITS

G1	2022												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
RECs*													
Period Begin	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022	6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022	12/1/2022	
Period End	1/31/2022	2/28/2022	3/31/2022	4/30/2022	5/31/2022	6/30/2022	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022	12/31/2022	
\$ Amount	\$33,037	\$33,302	\$33,485	\$33,814	\$32,660	\$37,303	\$40,597	\$42,976	\$39,321	\$36,478	\$35,329	\$33,373	
REC Purchase Applied	(\$33,037)	(\$33,302)	(\$33,485)	(\$23,643)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Net \$ Amount	\$0	\$0	\$0	\$10,172	\$32,660	\$37,303	\$40,597	\$42,976	\$39,321	\$36,478	\$35,329	\$33,373	\$308,208
% to Total	0.00%	0.00%	0.00%	2.36%	7.57%	8.64%	9.40%	9.96%	9.11%	8.45%	8.18%	7.73%	71.40%
Payment Date**	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	
Lead Period	531.50	502.00	472.50	442.00	411.50	381.00	350.50	319.50	289.00	258.50	228.00	197.50	
Weighted Days	-	-	-	10.42	31.13	32.92	32.96	31.81	26.32	21.84	18.66	15.27	221.33 days
REC Purchases***													
Period Begin	1/1/2022	1/1/2022	1/1/2022	2/1/2022	2/1/2022	2/1/2022	3/1/2022	4/1/2022	4/1/2022	4/1/2022			
Period End	1/31/2022	1/31/2022	1/31/2022	2/28/2022	2/28/2022	2/28/2022	3/31/2022	4/30/2022	4/30/2022	4/30/2022			
\$ Amount	\$27,958	\$1,345	\$3,734	\$1,375	\$14,228	\$17,699	\$33,485	\$21,765	\$209	\$1,669			\$123,467
% to Total	6.48%	0.31%	0.87%	0.32%	3.30%	4.10%	7.76%	5.04%	0.05%	0.39%			28.60%
Payment Date	8/4/2022	11/16/2022	11/25/2022	11/25/2022	12/8/2022	1/30/2023	1/30/2023	1/30/2023	2/16/2023	5/23/2023			
Lead Period	200.50	304.50	313.50	284.00	297.00	350.00	320.50	290.00	307.00	403.00			
Weighted Days	12.99	0.95	2.71	0.90	9.79	14.35	24.86	14.62	0.15	1.56			82.88 days
Total \$ Amount													\$431,675

Weighted Days

304.21 days

* Estimated cost of RECs included in rates in 2022

** The last day to acquire 2022 Renewable Energy Credits and/or make alternative compliance payments is July 1, 2023

*** Actual purchasing activity for 2022 RECs applied in chronological order to estimated cost of RECs included in rates in 2022

UNITIL ENERGY SYSTEMS, INC
LEAD IN PAYMENT OF DEFAULT SERVICE COSTS AND RENEWABLE ENERGY CREDITS

	Reference Page	Cost	% of Total	Average Days Lead	Weighted Days Lead
Non-G1 Default Service Supplier Costs	Schedule DTN-2	\$ 88,352,081	94.62%	39.09 days	36.99 days
Non-G1 Renewable Energy Credits	23	\$ 5,019,222	5.38%	311.66 days	16.75 days
Total		<u>\$ 93,371,303</u>	100.00%		<u>53.74 days</u>

UNITIL ENERGY SYSTEMS, INC
 LEAD IN PAYMENT OF RENEWABLE ENERGY CREDITS

NON-G1	2022												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
RECs*													
Period Begin	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022	6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022	12/1/2022	
Period End	1/31/2022	2/28/2022	3/31/2022	4/30/2022	5/31/2022	6/30/2022	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022	12/31/2022	
\$ Amount	\$484,207	\$463,860	\$424,623	\$399,983	\$358,778	\$365,069	\$455,725	\$513,854	\$412,246	\$346,555	\$373,067	\$421,256	
REC Purchase Applied	(\$484,207)	(\$463,860)	(\$424,623)	(\$70,288)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
Net \$ Amount	\$0	\$0	\$0	\$329,695	\$358,778	\$365,069	\$455,725	\$513,854	\$412,246	\$346,555	\$373,067	\$421,256	\$3,576,244
% to Total	0.00%	0.00%	0.00%	6.57%	7.15%	7.27%	9.08%	10.24%	8.21%	6.90%	7.43%	8.39%	71.25%
Payment Date**	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	7/1/2023	
Lead Period	531.50	502.00	472.50	442.00	411.50	381.00	350.50	319.50	289.00	258.50	228.00	197.50	
Weighted Days	-	-	-	29.03	29.41	27.71	31.82	32.71	23.74	17.85	16.95	16.58	225.80 days
REC Purchases***													
Period Begin	1/1/2022	1/1/2022	1/1/2022	1/1/2022	2/1/2022	2/1/2022	3/1/2022	4/1/2022	4/1/2022	4/1/2022			
Period End	1/31/2022	1/31/2022	1/31/2022	1/31/2022	2/28/2022	2/28/2022	3/31/2022	4/30/2022	4/30/2022	4/30/2022			
\$ Amount	\$335,604	\$15,591	\$59,236	\$73,776	\$91,196	\$372,664	\$424,623	\$48,514	\$2,419	\$19,355			\$1,442,978
% to Total	6.69%	0.31%	1.18%	1.47%	1.82%	7.42%	8.46%	0.97%	0.05%	0.39%			28.75%
Payment Date	8/4/2022	11/16/2022	11/25/2022	12/8/2022	12/8/2022	1/30/2023	1/30/2023	1/30/2023	2/16/2023	5/23/2023			
Lead Period	200.50	304.50	313.50	326.50	297.00	350.00	320.50	290.00	307.00	403.00			
Weighted Days	13.41	0.95	3.70	4.80	5.40	25.99	27.11	2.80	0.15	1.55			85.86 days
Total \$ Amount													\$5,019,222

Weighted Days

311.66 days

* Estimated cost of RECs included in rates in 2022

** The last day to acquire 2022 Renewable Energy Credits and/or make alternative compliance payments is July 1, 2023

*** Actual purchasing activity for 2022 RECs applied in chronological order to estimated cost of RECs included in rates in 2022

UNITIL ENERGY SYSTEMS, INC.

REDACTED WORKPAPERS

FOR THE

DEFAULT SERVICE AND
RENEWABLE ENERGY CREDITS

LEAD/LAG STUDY

FOR G1 AND NON-G1 CUSTOMERS

2022

REDACTED

**UNITIL ENERGY SYSTEMS, INC
 LEAD IN PAYMENT OF DEFAULT SERVICE COSTS AND RENEWABLE ENERGY CREDITS**

	Reference Page	Cost	% of Total	Average Days Lead	Weighted Days Lead
Summary					
Total G1 Default Service Supplier Costs	Detail below	\$ 6,695,479	93.94%	39.16 days	36.79 days
G1 Renewable Energy Credits	Schedule DTN-1 p 21	\$ 431,675	6.06%	304.21 days	18.43 days
Total		<u>\$ 7,127,153</u>	100.00%		<u>55.22 days</u>
Detail for G1 Default Service Supplier Costs					
Supplier A	3	\$ 5,915,052	88.34%		
Supplier B	4	\$ 780,427	11.66%		
Total G1 Default Service Supplier Costs		<u>\$ 6,695,479</u>	100.00%		<u>39.16 days</u>

REDACTED
UNITIL ENERGY SYSTEMS, INC
LEAD IN PAYMENT OF ELECTRIC COSTS

DS SERVICE POWER SUPPLY CONTRACTS

G1 SUPPLIERS	MONTH ENERGY PURCHASES DELIVERED												
	2022												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Supplier A													
Normal Service													
Period Begin	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022	6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022		
Period End	1/31/2022	2/28/2022	3/30/2022	4/30/2022	5/31/2022	6/30/2022	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022		
\$ Amount	\$ 834,736	\$ 568,100	\$ 412,817	\$ 361,998	\$ 480,387	\$ 493,069	\$ 717,780	\$ 772,071	\$ 435,963	\$ 372,119	\$ 428,667		\$ 5,877,706
% to Total	14.11%	9.60%	6.98%	6.12%	8.12%	8.34%	12.13%	13.05%	7.37%	6.29%	7.25%		99.37%
Payment Date													
Lead Period													
Weighted Days													
Prior Period Adjustments (shown in billing period in 2022)													
Period Begin	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022	6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022		
Period End	1/31/2022	2/28/2022	3/30/2022	4/30/2022	5/31/2022	6/30/2022	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022		
\$ Amount	\$ (12,066)	\$ 34,653	\$ 16,356	\$ (2,323)	\$ 10,455	\$ 12,728	\$ (17,657)	\$ (15,196)	\$ (2,640)	\$ 43	\$ 12,992		\$ 37,345
% to Total	-0.20%	0.59%	0.28%	-0.04%	0.18%	0.22%	-0.30%	-0.26%	-0.04%	0.00%	0.22%		0.63%
Payment Date													
Lead Period													
Weighted Days													
Total \$ Amount	\$ 822,670	\$ 602,753	\$ 429,173	\$ 359,675	\$ 490,841	\$ 505,797	\$ 700,122	\$ 756,876	\$ 433,323	\$ 372,162	\$ 441,659	\$ -	\$ 5,915,052
Weighted Days													

REDACTED
 UNITIL ENERGY SYSTEMS, INC
 LEAD IN PAYMENT OF ELECTRIC COSTS

DS SERVICE POWER SUPPLY CONTRACTS

G1 SUPPLIERS	MONTH ENERGY PURCHASES DELIVERED												
	2022												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Supplier B													
Normal Service													
Period Begin												12/1/2022	
Period End												12/31/2022	
\$ Amount												\$ 779,425	\$ 779,425
% to Total												99.87%	99.87%
Payment Date													
Lead Period													
Weighted Days													
Prior Period Adjustments (shown in billing period in 2022)													
Period Begin												12/1/2022	
Period End												12/31/2022	
\$ Amount												\$ 1,003	\$ 1,003
% to Total												0.13%	0.13%
Payment Date													
Lead Period													
Weighted Days													
Total \$ Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 780,427	\$ 780,427

Weighted Days

REDACTED

**UNITIL ENERGY SYSTEMS, INC
 LEAD IN PAYMENT OF DEFAULT SERVICE COSTS AND RENEWABLE ENERGY CREDITS**

	Reference Page	Cost	% of Total	Average Days Lead	Weighted Days Lead
Summary					
Total Non-G1 Default Service Supplier Costs	see below	\$ 88,352,081	94.62%	39.09 days	36.99 days
Renewable Energy Credits	Schedule DTN-1 p 23	\$ 5,019,222	5.38%	311.66 days	16.75 days
Total		<u>\$ 93,371,303</u>	<u>100.00%</u>		<u>53.74 days</u>
Detail for Non-G1 Default Service Supplier Costs					
Supplier C	6	\$ 40,058,196	45.34%		
Supplier D	7	\$ 30,297,862	34.29%		
Supplier E	8	\$ 17,996,024	20.37%		
Total Non-G1 Default Service Supplier Costs		<u>\$ 88,352,081</u>	<u>100.00%</u>		<u>39.09 days</u>

REDACTED
 UNITIL ENERGY SYSTEMS, INC
 LEAD IN PAYMENT OF ELECTRIC COSTS

DS SERVICE POWER SUPPLY CONTRACTS

NON-G1 SUPPLIERS	MONTH ENERGY PURCHASES DELIVERED												
	2022												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Supplier C													
Normal Service													
Period Begin	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022								
Period End	1/31/2022	2/28/2022	3/30/2022	4/30/2022	5/31/2022								
\$ Amount	\$ 14,613,310	\$ 11,718,462	\$ 7,206,810	\$ 2,873,959	\$ 3,465,185								\$ 39,877,727
% to Total	36.48%	29.25%	17.99%	7.17%	8.65%								99.55%
Payment Date													
Lead Period													
Weighted Days													
Prior Period Adjustments (shown in billing period in 2022)													
Period Begin	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022								
Period End	1/31/2022	2/28/2022	3/30/2022	4/30/2022	5/31/2022								
\$ Amount	\$ 335,817	\$ (47,749)	\$ (50,527)	\$ (30,683)	\$ (26,389)								\$ 180,469
% to Total	0.84%	-0.12%	-0.13%	-0.08%	-0.07%								0.45%
Payment Date													
Lead Period													
Weighted Days													
Total \$ Amount	\$ 14,949,127	\$ 11,670,713	\$ 7,156,283	\$ 2,843,276	\$ 3,438,796	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 40,058,196

Weighted Days

REDACTED
UNITIL ENERGY SYSTEMS, INC
LEAD IN PAYMENT OF ELECTRIC COSTS

DS SERVICE POWER SUPPLY CONTRACTS

NON-G1 SUPPLIERS	MONTH ENERGY PURCHASES DELIVERED												
	2022												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Supplier D													
Normal Service													
Period Begin						6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022		
Period End						6/30/2022	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022		
\$ Amount						\$ 4,098,895	\$ 6,275,128	\$ 6,365,863	\$ 3,881,312	\$ 3,880,914	\$ 5,747,205		\$ 30,249,318
% to Total						13.53%	20.71%	21.01%	12.81%	12.81%	18.97%		99.84%
Payment Date													
Lead Period													
Weighted Days													
Prior Period Adjustments (shown in billing period in 2022)													
Period Begin						6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022		
Period End						6/30/2022	7/31/2022	8/31/2022	9/30/2022	10/31/2022	11/30/2022		
\$ Amount						\$ (1,047)	\$ 77,197	\$ 42,275	\$ (11,647)	\$ (11,647)	\$ (46,586)		\$ 48,544
% to Total						0.00%	0.25%	0.14%	-0.04%	-0.04%	-0.15%		0.16%
Payment Date													
Lead Period													
Weighted Days													
Total \$ Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 4,097,848	\$ 6,352,326	\$ 6,408,138	\$ 3,869,664	\$ 3,869,267	\$ 5,700,619	\$ -	\$ 30,297,862

Weighted Days

REDACTED
 UNITIL ENERGY SYSTEMS, INC
 LEAD IN PAYMENT OF ELECTRIC COSTS

DS SERVICE POWER SUPPLY CONTRACTS

NON-G1 SUPPLIERS	MONTH ENERGY PURCHASES DELIVERED												
	2022												
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
Supplier E													
Normal Service													
Period Begin												12/1/2022	
Period End												12/31/2022	
\$ Amount												\$ 18,093,866	\$ 18,093,866
% to Total												100.54%	100.54%
Payment Date													
Lead Period													
Weighted Days													
Prior Period Adjustments (shown in billing period in 2022)													
Period Begin												12/1/2022	
Period End												12/31/2022	
\$ Amount												\$ (97,842)	\$ (97,842)
% to Total												-0.54%	-0.54%
Payment Date													
Lead Period													
Weighted Days													
Total \$ Amount	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 17,996,024	\$ 17,996,024

Weighted Days