

# Liberty Utilities Energy Corporation

2022-2023 Design Day and RFP Plan Summary  
File Last Updated: November 16, 2022

## Design Day Summary and Deliverable Capacity

Load Study:	Jackson, MO
Weather Station Location:	Poplar, Bluff, MO
Weather Station Code:	KPOF
Data Sample:	1/1/2019 to 3/31/2022
HDD Selection Method:	Coldest Day Since 1970

Forecasted Design Day DTH	
Forecasted DTH:	10,407
S.E. of Regression:	201
S.E. 95% Adjustment	394
3rd Party Obligations DTH:	0
Total Forecasted DTH:	11,002

Design Day Weather	Date	HDD
Coldest HDD on Record:	1/21/1985	69
HDD of Prior Day:	1/20/1985	54.5

Reserve Margin Summary	
Final Deliverable Capacity DTH:	9,707
Reserve Capacity DTH:	(1,295)
Reserve Capacity %:	-11.77%

### Summary of Final Delivery Capacity

Pipeline	Contract # & Description	MDQ DTH	Notes
NGPL	FTS 150572	4,077	
NGPL	FTS 150573	2,200	
NGPL	DSS 150574	2,530	Slg has time ratchets not vol ratchets; see below for true reserve margin.
NGPL	FTS 150897/Winter Only	200	Winter Only Dec - Feb.
Winter Peaking Service		700	December 2022 to February 2023 estimate peaking service requirement.
<b>Total Capacity</b>		<b>9,707</b>	

### Summary of Upstream Storage and Storage Capacity

Pipeline	Contract # & Description	MDQ DTH	Notes
NGPL	NSS 150575	1,350	Rides on FTS transport.
<b>Total Upstream and Storage Capacity</b>		<b>1,350</b>	

The DSS storage has ratchets; Please see below for reserve margin reaction to ratchets.

Nov 1 to Feb 15 - available DSS	2530	(11.77%)
Feb 16 to Feb 28 - available DSS	2277	(14.07%)
Mar 1 to Mar 31 - available DSS	1898	(17.51%)

## Planned Volumes

### Firm Sales Customers

Month	Year	Normal Weather		10% Colder		10% Warmer		20% Colder		20% Warmer	
		HDD	DTH	HDD	DTH	HDD	DTH	HDD	DTH	HDD	DTH
January	2023	894	131,085	984	145,666	805	116,504	1,073	160,247	715	101,923
February	2023	689	100,690	758	111,954	620	89,570	827	123,218	551	80,012
March	2023	509	67,689	559	72,901	458	63,521	610	78,981	407	59,599
April	2023	213	32,758	234	34,438	191	31,079	255	36,118	170	29,399
May	2023	51	17,654	56	18,054	46	17,253	61	18,455	41	16,852
June	2023	1	13,584	1	13,593	1	13,574	1	13,602	1	13,565
July	2023	0	13,204	0	13,204	0	13,204	0	13,204	0	13,204
August	2023	0	13,258	0	13,258	0	13,258	0	13,258	0	13,258
September	2023	25	14,106	28	14,304	23	13,908	30	14,501	20	13,711
October	2023	213	26,027	234	27,708	191	24,347	255	29,389	170	22,666
November	2022	531	63,048	584	69,133	478	58,027	637	75,938	425	53,913
December	2022	809	108,260	890	121,427	728	95,096	971	134,593	647	82,725
Firm Winter DTH		3,432	470,774	3,775	521,081	3,089	422,718	4,118	572,977	2,746	378,173
Firm Annual DTH		3,934	601,364	4,328	655,640	3,541	549,340	4,721	711,505	3,147	500,826

### Interruptible Sales Customers

Month	Year	Normal Weather		10% Colder		10% Warmer		20% Colder		20% Warmer	
		HDD	DTH	HDD	DTH	HDD	DTH	HDD	DTH	HDD	DTH
January	2023	894	0	984	0	805	0	1,073	0	715	0
February	2023	689	0	758	0	620	0	827	0	551	0
March	2023	509	0	559	0	458	0	610	0	407	0
April	2023	213	0	234	0	191	0	255	0	170	0
May	2023	51	0	56	0	46	0	61	0	41	0
June	2023	1	0	1	0	1	0	1	0	1	0
July	2023	0	0	0	0	0	0	0	0	0	0
August	2023	0	0	0	0	0	0	0	0	0	0
September	2023	25	0	28	0	23	0	30	0	20	0
October	2023	213	0	234	0	191	0	255	0	170	0
November	2022	531	0	584	0	478	0	637	0	425	0
December	2022	809	0	890	0	728	0	971	0	647	0
INT Winter DTH		3,432	0	3,775	0	3,089	0	4,118	0	2,746	0
INT Annual DTH		3,934	0	4,328	0	3,541	0	4,721	0	3,147	0

<b>Total Winter DTH</b>		3,432	470,774	3,775	521,081	3,089	422,718	4,118	572,977	2,746	378,173
<b>Total Annual DTH</b>		3,934	601,364	4,328	655,640	3,541	549,340	4,721	711,505	3,147	500,826

April			32,758						36,118		29,399
May			17,654						18,455		16,852
June			13,584						13,602		13,565
July			13,204						13,204		13,204
August			13,258						13,258		13,258
September			14,106						14,501		13,711
October			26,027						29,389		22,666
November			63,048						75,938		53,913
December			108,260						134,593		82,725
January			131,085						160,247		101,923
February			100,690						123,218		80,012
March			67,689						78,981		59,599
			<b>601,364</b>						<b>711,505</b>		<b>500,826</b>

W/ Firm DTH(-1) Model				
Dependent Variable: JACKSON_FIRM				
Method: Least Squares				
Date: 11/15/22 Time: 11:40				
Sample: 1/01/2019 3/31/2022				
Included observations: 1186				
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 7.0000)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
JACKSON_HDD	76.0786	2.6830	28.3561	0.0000
JACKSON_HDD45	57.4416	4.8145	11.9311	0.0000
JACKSON_HDD(-1)	-24.5557	3.5267	-6.9628	0.0000
JACKSON_FIRM(-1)	0.3317	0.0314	10.5685	0.0000
MONTH12	362.4373	44.9058	8.0711	0.0000
MONTH01	578.0483	56.4003	10.2490	0.0000
MONTH02	547.3095	45.4064	12.0536	0.0000
MONTH03	318.0995	40.5513	7.8444	0.0000
MONTH11	188.5955	45.5141	4.1437	0.0000
WEEKDAY01	306.6188	18.3434	16.7154	0.0000
WEEKDAY02	295.6614	19.5606	15.1151	0.0000
WEEKDAY03	304.0343	19.9478	15.2415	0.0000
WEEKDAY04	309.2746	20.3672	15.1849	0.0000
WEEKDAY05	291.3528	19.9077	14.6351	0.0000
WEEKDAY06	239.3019	21.6035	11.0770	0.0000
WEEKDAY07	256.9141	19.0329	13.4984	0.0000
R-squared	0.9858	Mean dependent var	1833.409	
Adjusted R-squared	0.9856	S.D. dependent var	1677.397	
S.E. of regression	201.1214	Akaike info criterion	13.45909	
Sum squared resid	47326280.1502	Schwarz criterion	13.5276	
Log likelihood	-7965.2423	Hannan-Quinn criter.	13.48492	
Durbin-Watson stat	1.7361			

W/O Firm DTH(-1) Model				
Dependent Variable: JACKSON_FIRM				
Method: Least Squares				
Date: 11/15/22 Time: 11:42				
Sample: 1/01/2019 3/31/2022				
Included observations: 1186				
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 7.0000)				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
JACKSON_HDD	70.1509	2.9786	23.5519	0.0000
JACKSON_HDD45	76.7394	5.5440	13.8419	0.0000
JACKSON_HDD(-1)	10.9970	1.4677	7.4926	0.0000
MONTH12	505.4664	62.4407	8.0951	0.0000
MONTH01	834.8103	69.8380	11.9535	0.0000
MONTH02	807.2534	57.4935	14.0408	0.0000
MONTH03	451.3241	53.2375	8.4776	0.0000
MONTH11	236.0281	63.1094	3.7400	0.0002
WEEKDAY01	425.2654	15.9757	26.6195	0.0000
WEEKDAY02	430.1319	15.3966	27.9368	0.0000
WEEKDAY03	440.0440	14.2765	30.8229	0.0000
WEEKDAY04	444.7765	14.1271	31.4839	0.0000
WEEKDAY05	428.7075	14.3532	29.8683	0.0000
WEEKDAY06	375.5127	17.6938	21.2229	0.0000
WEEKDAY07	378.7757	16.2153	23.3592	0.0000
R-squared	0.9832	Mean dependent var	1833.409	
Adjusted R-squared	0.9830	S.D. dependent var	1677.397	
S.E. of regression	218.8381	Akaike info criterion	13.62711	
Sum squared resid	56079337.6067	Schwarz criterion	13.69134	
Log likelihood	-8065.8754	Hannan-Quinn criter.	13.65132	
Durbin-Watson stat	1.1297			

Design Day DTH Calculations	
Design Day Date	HDD
1/21/1985	69
1/20/1985	54.5
Is HDD(-2) Known?	NO
N/A	54.5
Calendar Load	887.32
Weather Load	6725.78
DTH Lag Load	2793.48
<b>Total Forecasted DTH</b>	<b>10406.59</b>
DTH(-1) Calculations	
NO DTH	
Calendar Load	1279.59
Weather Load	7070.07
<b>Total Forecast DTH</b>	<b>8349.65</b>
DTH LRV method	
Calendar Load	887.32
Weather Load	4789.74
<b>Total Forecast DTH</b>	<b>8494.58</b>

HDD45 49  
34.5

Dependent Variable: JACKSON\_FIRM  
Method: Least Squares  
Date: 11/15/22 Time: 15:35  
Sample (adjusted): 11/02/2012 3/01/2013 11/01/2013 3/31/2014 11/01/2014 3/31/2015 11/01/2015 3/31/2016 11/01/2016 3/31/2017 11/01/2017 3/31/2018 11/01/2018 4/01/2019 11/01/2019 3/31/2020 11/01/2020 3/31/2021 11/01/2021 3/31/2022  
Included observations: 1482 after adjustments  
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 8.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	22.05988	18.37917	1.20027	0.23023
JACKSON_HDD	110.31062	1.83624	60.07417	0.00000
JACKSON_HDD(-1)	-61.97140	2.85787	-21.68444	0.00000
JACKSON_FIRM(-1)	0.65770	0.02106	31.22999	0.00000

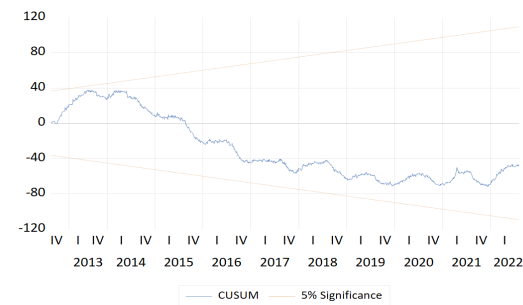
R-squared 0.95742 Mean dependent var 3267.25236  
Adjusted R-squared 0.95733 S.D. dependent var 1567.80721  
S.E. of regression 323.85359 Akaike info criterion 14.40116  
Sum squared resid 155014338.61237 Schwarz criterion 14.41546  
Log likelihood -10667.25626 Hannan-Quinn criter. 14.40649  
F-statistic 11077.02223 Durbin-Watson stat 2.17597  
Prob(F-statistic) 0.00000 Wald F-statistic 9792.91552  
Prob(Wald F-statistic) 0.00000

Note: Due to the limited sample size, the sample was not truncated.

Quandt-Andrews unknown breakpoint test  
Null Hypothesis: No breakpoints within 10% trimmed data  
Equation Sample: 11/02/2012 3/01/2013 11/01/2013 3/31/2014 11/01/2014 3/31/2015 11/01/2015 3/31/2016 11/01/2016 3/31/2017 11/01/2017 3/31/2018 11/01/2018 4/01/2019 11/01/2019 3/31/2020 11/01/2020 3/31/2021 11/01/2021 3/31/2022  
Test Sample: 11/30/2013 11/03/2021  
Number of breaks compared: 1185

Statistic	Value	Prob.
Maximum LR F-statistic (3/17/2014)	10.16408	0.00000
Exp LR F-statistic	2.500736	0.00043
Ave LR F-statistic	2.795899	0.00275

Note: probabilities calculated using Hansen's (1997) method  
WARNING: estimation sample is non-continuous (probabilities calculated assuming a continuous sample)



Dependent Variable: JACKSON\_FIRM  
Method: Least Squares  
Date: 11/15/22 Time: 15:38  
Sample: 1/01/2019 3/31/2019 11/01/2019 3/31/2020 11/01/2020 3/31/2021 11/01/2021 3/31/2022  
Included observations: 544  
HAC standard errors & covariance (Bartlett kernel, Newey-West fixed bandwidth = 6.0000)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	52.56354	33.40420	1.57356	0.11617
JACKSON_HDD	111.70598	2.67159	41.81255	0.00000
JACKSON_HDD(-1)	-60.27562	5.75168	-10.47965	0.00000
JACKSON_FIRM(-1)	0.62922	0.04601	13.67703	0.00000

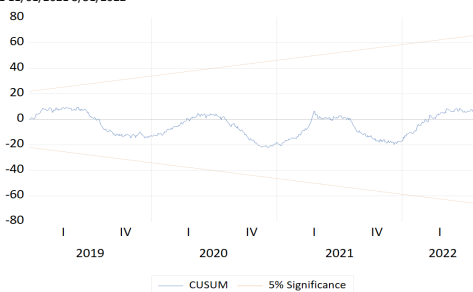
R-squared 0.96029 Mean dependent var 3244.11765  
Adjusted R-squared 0.96007 S.D. dependent var 1500.21423  
S.E. of regression 299.78834 Akaike info criterion 14.25136  
Sum squared resid 48531447.76569 Schwarz criterion 14.28297  
Log likelihood -3872.36890 Hannan-Quinn criter. 14.26371  
F-statistic 4352.68612 Durbin-Watson stat 2.14852  
Prob(F-statistic) 0.00000 Wald F-statistic 2957.88909  
Prob(Wald F-statistic) 0.00000

Note: Due to the limited sample size, the sample was not truncated.

Quandt-Andrews unknown breakpoint test  
Null Hypothesis: No breakpoints within 10% trimmed data  
Equation Sample: 1/01/2019 3/31/2019 11/01/2019 3/31/2020 11/01/2020 3/31/2021 11/01/2021 3/31/2022  
Test Sample: 2/25/2019 2/05/2022  
Number of breaks compared: 435

Statistic	Value	Prob.
Maximum LR F-statistic (1/02/2022)	6.616712	0.000910992
Exp LR F-statistic	1.422644	0.031252885
Ave LR F-statistic	2.362854	0.010425475

Note: probabilities calculated using Hansen's (1997) method  
WARNING: estimation sample is non-continuous (probabilities calculated assuming a continuous sample)



<u>Gas Day</u>	Jackson <u>HDD</u>	Jackson <u>Dth</u>
1/1/2019	25	3394
1/2/2019	27	3732
1/3/2019	26	3516
1/4/2019	28	3977
1/5/2019	22	2701
1/6/2019	12	2037
1/7/2019	10	1714
1/8/2019	18	2520
1/9/2019	29	3941
1/10/2019	34	4264
1/11/2019	32	4404
1/12/2019	26	3961
1/13/2019	31	4612
1/14/2019	29	4250
1/15/2019	31	4233
1/16/2019	23	3417
1/17/2019	20	3014
1/18/2019	20	3235
1/19/2019	38	5695
1/20/2019	42	6266
1/21/2019	35	5626
1/22/2019	20	3537
1/23/2019	37	5115
1/24/2019	35	5188
1/25/2019	38	5279
1/26/2019	28	3994
1/27/2019	23	3516
1/28/2019	33	5093
1/29/2019	39	5815
1/30/2019	48	7042
1/31/2019	34	5002
2/1/2019	24	2982
2/2/2019	20	2498
2/3/2019	5	1409
2/4/2019	11	1839
2/5/2019	19	2808
2/6/2019	6	1861
2/7/2019	33	4330
2/8/2019	40	5548
2/9/2019	34	4553
2/10/2019	26	3909
2/11/2019	18	2847
2/12/2019	26	3859
2/13/2019	18	3139
2/14/2019	18	3027
2/15/2019	36	5112
2/16/2019	33	4459
2/17/2019	32	4590
2/18/2019	32	4899
2/19/2019	28	4183

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
2/20/2019	24	3519
2/21/2019	23	3416
2/22/2019	21	3190
2/23/2019	14	2297
2/24/2019	24	3431
2/25/2019	28	3559
2/26/2019	17	2483
2/27/2019	20	3143
2/28/2019	35	4970
3/1/2019	28	3920
3/2/2019	28	4108
3/3/2019	41	6209
3/4/2019	43	6142
3/5/2019	37	5450
3/6/2019	36	4537
3/7/2019	28	4174
3/8/2019	22	3062
3/9/2019	10	2090
3/10/2019	17	2429
3/11/2019	18	2775
3/12/2019	15	2424
3/13/2019	3	1149
3/14/2019	10	1428
3/15/2019	21	2726
3/16/2019	20	2495
3/17/2019	15	2296
3/18/2019	21	2358
3/19/2019	17	2100
3/20/2019	20	2773
3/21/2019	19	2535
3/22/2019	10	1651
3/23/2019	11	1532
3/24/2019	5	1067
3/25/2019	16	2320
3/26/2019	20	2418
3/27/2019	12	1688
3/28/2019	3	877
3/29/2019	4	993
3/30/2019	21	2638
3/31/2019	25	3000
4/1/2019	24	2722
4/2/2019	10	1704
4/3/2019	7	1050
4/4/2019	11	1509
4/5/2019	8	1218
4/6/2019	0	652
4/7/2019	0	660
4/8/2019	0	610
4/9/2019	0	616
4/10/2019	0	524
4/11/2019	1	585

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
4/12/2019	10	894
4/13/2019	15	1488
4/14/2019	24	2824
4/15/2019	6	1143
4/16/2019	0	658
4/17/2019	0	633
4/18/2019	12	1316
4/19/2019	17	1794
4/20/2019	9	1406
4/21/2019	0	826
4/22/2019	0	719
4/23/2019	0	685
4/24/2019	0	576
4/25/2019	5	658
4/26/2019	5	726
4/27/2019	2	725
4/28/2019	10	861
4/29/2019	0	531
4/30/2019	0	447
5/1/2019	0	508
5/2/2019	0	534
5/3/2019	0	523
5/4/2019	8	751
5/5/2019	3	605
5/6/2019	1	542
5/7/2019	0	535
5/8/2019	0	494
5/9/2019	3	551
5/10/2019	8	620
5/11/2019	13	1026
5/12/2019	8	936
5/13/2019	8	882
5/14/2019	0	565
5/15/2019	0	508
5/16/2019	0	474
5/17/2019	0	443
5/18/2019	0	438
5/19/2019	0	481
5/20/2019	0	472
5/21/2019	0	461
5/22/2019	0	449
5/23/2019	0	450
5/24/2019	0	393
5/25/2019	0	420
5/26/2019	0	399
5/27/2019	0	434
5/28/2019	0	440
5/29/2019	0	430
5/30/2019	0	418
5/31/2019	0	359
6/1/2019	0	405

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
6/2/2019	0	440
6/3/2019	0	469
6/4/2019	0	449
6/5/2019	0	405
6/6/2019	0	445
6/7/2019	0	426
6/8/2019	0	417
6/9/2019	0	443
6/10/2019	0	482
6/11/2019	0	505
6/12/2019	2	496
6/13/2019	0	461
6/14/2019	0	485
6/15/2019	0	440
6/16/2019	0	413
6/17/2019	0	486
6/18/2019	0	445
6/19/2019	0	447
6/20/2019	0	429
6/21/2019	0	445
6/22/2019	0	434
6/23/2019	0	447
6/24/2019	0	421
6/25/2019	0	448
6/26/2019	0	436
6/27/2019	0	397
6/28/2019	0	407
6/29/2019	0	385
6/30/2019	0	400
7/1/2019	0	390
7/2/2019	0	398
7/3/2019	0	395
7/4/2019	0	394
7/5/2019	0	372
7/6/2019	0	393
7/7/2019	0	406
7/8/2019	0	432
7/9/2019	0	459
7/10/2019	0	387
7/11/2019	0	392
7/12/2019	0	376
7/13/2019	0	372
7/14/2019	0	428
7/15/2019	0	453
7/16/2019	0	374
7/17/2019	0	387
7/18/2019	0	409
7/19/2019	0	368
7/20/2019	0	371
7/21/2019	0	410
7/22/2019	0	401

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
7/23/2019	0	449
7/24/2019	0	492
7/25/2019	0	731
7/26/2019	0	392
7/27/2019	0	387
7/28/2019	0	371
7/29/2019	0	408
7/30/2019	0	409
7/31/2019	0	400
8/1/2019	0	366
8/2/2019	0	363
8/3/2019	0	371
8/4/2019	0	371
8/5/2019	0	379
8/6/2019	0	395
8/7/2019	0	409
8/8/2019	0	385
8/9/2019	0	364
8/10/2019	0	368
8/11/2019	0	388
8/12/2019	0	362
8/13/2019	0	238
8/14/2019	0	365
8/15/2019	0	407
8/16/2019	0	359
8/17/2019	0	379
8/18/2019	0	415
8/19/2019	0	359
8/20/2019	0	475
8/21/2019	0	432
8/22/2019	0	392
8/23/2019	0	444
8/24/2019	0	396
8/25/2019	0	409
8/26/2019	0	417
8/27/2019	0	475
8/28/2019	0	471
8/29/2019	0	518
8/30/2019	0	417
8/31/2019	0	410
9/1/2019	0	378
9/2/2019	0	461
9/3/2019	0	436
9/4/2019	0	440
9/5/2019	0	465
9/6/2019	0	411
9/7/2019	0	396
9/8/2019	0	398
9/9/2019	0	397
9/10/2019	0	428
9/11/2019	0	453



<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
9/12/2019	0	440
9/13/2019	0	367
9/14/2019	0	415
9/15/2019	0	1013
9/16/2019	0	398
9/17/2019	0	433
9/18/2019	0	432
9/19/2019	0	434
9/20/2019	0	413
9/21/2019	0	387
9/22/2019	0	422
9/23/2019	0	438
9/24/2019	0	474
9/25/2019	0	413
9/26/2019	0	437
9/27/2019	0	399
9/28/2019	0	369
9/29/2019	0	422
9/30/2019	0	328
10/1/2019	0	435
10/2/2019	0	464
10/3/2019	0	426
10/4/2019	1	411
10/5/2019	0	435
10/6/2019	5	452
10/7/2019	8	500
10/8/2019	7	525
10/9/2019	0	498
10/10/2019	0	447
10/11/2019	20	940
10/12/2019	19	1172
10/13/2019	13	931
10/14/2019	7	698
10/15/2019	5	732
10/16/2019	16	1199
10/17/2019	16	1189
10/18/2019	13	948
10/19/2019	7	668
10/20/2019	0	591
10/21/2019	6	796
10/22/2019	14	1167
10/23/2019	8	895
10/24/2019	12	1256
10/25/2019	11	1195
10/26/2019	14	1352
10/27/2019	8	921
10/28/2019	9	993
10/29/2019	16	1606
10/30/2019	22	2410
10/31/2019	31	3785
11/1/2019	26	2854

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
11/2/2019	23	2608
11/3/2019	19	2046
11/4/2019	12	1488
11/5/2019	19	2054
11/6/2019	17	2221
11/7/2019	31	4080
11/8/2019	32	3845
11/9/2019	21	2692
11/10/2019	12	1624
11/11/2019	37	5071
11/12/2019	44	6017
11/13/2019	36	4895
11/14/2019	29	4021
11/15/2019	29	3739
11/16/2019	27	3307
11/17/2019	23	3110
11/18/2019	17	2131
11/19/2019	18	2379
11/20/2019	9	1680
11/21/2019	13	2053
11/22/2019	23	2942
11/23/2019	27	3795
11/24/2019	22	2814
11/25/2019	11	1772
11/26/2019	8	1652
11/27/2019	22	2732
11/28/2019	27	3342
11/29/2019	20	2874
11/30/2019	13	2077
12/1/2019	25	3747
12/2/2019	32	4434
12/3/2019	24	3681
12/4/2019	19	2807
12/5/2019	14	2061
12/6/2019	23	3005
12/7/2019	28	3228
12/8/2019	16	2657
12/9/2019	18	2890
12/10/2019	35	5041
12/11/2019	30	3997
12/12/2019	27	3674
12/13/2019	29	3605
12/14/2019	26	3874
12/15/2019	30	4262
12/16/2019	32	4874
12/17/2019	33	4891
12/18/2019	35	5389
12/19/2019	32	4562
12/20/2019	29	3721
12/21/2019	22	3097
12/22/2019	21	2781

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
12/23/2019	20	2506
12/24/2019	20	2391
12/25/2019	7	1340
12/26/2019	6	1055
12/27/2019	16	2129
12/28/2019	5	1249
12/29/2019	17	2318
12/30/2019	24	3467
12/31/2019	25	3431
1/1/2020	18	2855
1/2/2020	16	2378
1/3/2020	20	2905
1/4/2020	29	4109
1/5/2020	22	3329
1/6/2020	25	3351
1/7/2020	24	3475
1/8/2020	20	2987
1/9/2020	9	2184
1/10/2020	7	1503
1/11/2020	29	3750
1/12/2020	29	4143
1/13/2020	25	3557
1/14/2020	19	2403
1/15/2020	17	2530
1/16/2020	31	4494
1/17/2020	24	4010
1/18/2020	25	3584
1/19/2020	39	5587
1/20/2020	41	5987
1/21/2020	37	5403
1/22/2020	32	4928
1/23/2020	28	4074
1/24/2020	27	3992
1/25/2020	25	3928
1/26/2020	22	3121
1/27/2020	24	3873
1/28/2020	31	4597
1/29/2020	30	4511
1/30/2020	26	3930
1/31/2020	21	3078
2/1/2020	20	2932
2/2/2020	12	1968
2/3/2020	5	1470
2/4/2020	22	3144
2/5/2020	30	4454
2/6/2020	33	5013
2/7/2020	29	3970
2/8/2020	24	3620
2/9/2020	11	2356
2/10/2020	27	4020
2/11/2020	25	3828

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
2/12/2020	26	4059
2/13/2020	39	5878
2/14/2020	41	5739
2/15/2020	24	3656
2/16/2020	17	2296
2/17/2020	11	2124
2/18/2020	27	4211
2/19/2020	24	3561
2/20/2020	34	5049
2/21/2020	36	4790
2/22/2020	23	3654
2/23/2020	19	2998
2/24/2020	16	2730
2/25/2020	24	3655
2/26/2020	32	5077
2/27/2020	24	3532
2/28/2020	25	3601
2/29/2020	23	3019
3/1/2020	9	1946
3/2/2020	6	1254
3/3/2020	14	1908
3/4/2020	15	2394
3/5/2020	12	2158
3/6/2020	23	2971
3/7/2020	22	2403
3/8/2020	7	1650
3/9/2020	6	1458
3/10/2020	18	2504
3/11/2020	11	1806
3/12/2020	5	1493
3/13/2020	19	2529
3/14/2020	23	3272
3/15/2020	24	3447
3/16/2020	21	3065
3/17/2020	13	1779
3/18/2020	9	1573
3/19/2020	0	865
3/20/2020	18	2263
3/21/2020	22	2737
3/22/2020	20	2740
3/23/2020	15	2041
3/24/2020	16	2422
3/25/2020	15	1588
3/26/2020	0	743
3/27/2020	0	576
3/28/2020	0	693
3/29/2020	7	946
3/30/2020	9	1082
3/31/2020	12	1512
4/1/2020	12	1314
4/2/2020	5	911

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
4/3/2020	7	1003
4/4/2020	14	1737
4/5/2020	8	1378
4/6/2020	0	697
4/7/2020	0	564
4/8/2020	0	643
4/9/2020	11	1196
4/10/2020	17	1583
4/11/2020	5	1087
4/12/2020	12	1364
4/13/2020	18	2053
4/14/2020	21	2348
4/15/2020	15	2067
4/16/2020	9	1337
4/17/2020	16	2276
4/18/2020	14	1458
4/19/2020	11	1293
4/20/2020	5	839
4/21/2020	6	937
4/22/2020	8	1203
4/23/2020	9	1252
4/24/2020	2	720
4/25/2020	13	1270
4/26/2020	7	1074
4/27/2020	2	953
4/28/2020	0	640
4/29/2020	8	942
4/30/2020	5	853
5/1/2020	0	619
5/2/2020	0	529
5/3/2020	0	566
5/4/2020	3	626
5/5/2020	3	709
5/6/2020	9	1135
5/7/2020	5	706
5/8/2020	13	1273
5/9/2020	9	901
5/10/2020	8	998
5/11/2020	12	957
5/12/2020	14	1446
5/13/2020	3	923
5/14/2020	0	554
5/15/2020	0	556
5/16/2020	0	523
5/17/2020	0	546
5/18/2020	3	616
5/19/2020	0	588
5/20/2020	0	592
5/21/2020	0	585
5/22/2020	0	515
5/23/2020	0	500

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
5/24/2020	0	439
5/25/2020	0	462
5/26/2020	0	536
5/27/2020	0	491
5/28/2020	0	532
5/29/2020	0	480
5/30/2020	0	496
5/31/2020	0	473
6/1/2020	0	455
6/2/2020	0	517
6/3/2020	0	507
6/4/2020	0	479
6/5/2020	0	453
6/6/2020	0	446
6/7/2020	0	436
6/8/2020	0	426
6/9/2020	0	463
6/10/2020	0	503
6/11/2020	0	483
6/12/2020	0	476
6/13/2020	0	441
6/14/2020	0	447
6/15/2020	0	467
6/16/2020	0	495
6/17/2020	0	496
6/18/2020	0	411
6/19/2020	0	448
6/20/2020	0	450
6/21/2020	0	450
6/22/2020	0	431
6/23/2020	0	433
6/24/2020	0	446
6/25/2020	0	438
6/26/2020	0	435
6/27/2020	0	444
6/28/2020	0	427
6/29/2020	0	407
6/30/2020	0	412
7/1/2020	0	468
7/2/2020	0	450
7/3/2020	0	438
7/4/2020	0	438
7/5/2020	0	397
7/6/2020	0	404
7/7/2020	0	444
7/8/2020	0	434
7/9/2020	0	411
7/10/2020	0	427
7/11/2020	0	406
7/12/2020	0	418
7/13/2020	0	439

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
7/14/2020	0	434
7/15/2020	0	421
7/16/2020	0	434
7/17/2020	0	440
7/18/2020	0	406
7/19/2020	0	412
7/20/2020	0	413
7/21/2020	0	439
7/22/2020	0	422
7/23/2020	0	429
7/24/2020	0	413
7/25/2020	0	408
7/26/2020	0	390
7/27/2020	0	396
7/28/2020	0	427
7/29/2020	0	383
7/30/2020	0	404
7/31/2020	0	411
8/1/2020	0	435
8/2/2020	0	422
8/3/2020	0	403
8/4/2020	0	505
8/5/2020	0	447
8/6/2020	0	460
8/7/2020	0	459
8/8/2020	0	397
8/9/2020	0	365
8/10/2020	0	431
8/11/2020	0	426
8/12/2020	0	440
8/13/2020	0	424
8/14/2020	0	384
8/15/2020	0	417
8/16/2020	0	429
8/17/2020	0	428
8/18/2020	0	476
8/19/2020	0	490
8/20/2020	0	434
8/21/2020	0	430
8/22/2020	0	411
8/23/2020	0	447
8/24/2020	0	402
8/25/2020	0	426
8/26/2020	0	479
8/27/2020	0	452
8/28/2020	0	444
8/29/2020	0	416
8/30/2020	0	433
8/31/2020	0	438
9/1/2020	0	478
9/2/2020	0	453

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
9/3/2020	0	485
9/4/2020	0	433
9/5/2020	0	431
9/6/2020	0	396
9/7/2020	0	427
9/8/2020	0	407
9/9/2020	0	458
9/10/2020	0	429
9/11/2020	0	415
9/12/2020	0	403
9/13/2020	0	454
9/14/2020	0	448
9/15/2020	0	426
9/16/2020	0	496
9/17/2020	0	471
9/18/2020	3	419
9/19/2020	5	483
9/20/2020	1	505
9/21/2020	1	500
9/22/2020	3	551
9/23/2020	4	545
9/24/2020	3	450
9/25/2020	0	511
9/26/2020	0	451
9/27/2020	0	489
9/28/2020	7	579
9/29/2020	8	678
9/30/2020	2	547
10/1/2020	9	717
10/2/2020	13	828
10/3/2020	8	768
10/4/2020	15	1125
10/5/2020	14	1083
10/6/2020	4	709
10/7/2020	0	595
10/8/2020	2	570
10/9/2020	0	466
10/10/2020	0	482
10/11/2020	0	464
10/12/2020	7	716
10/13/2020	7	744
10/14/2020	0	572
10/15/2020	15	1124
10/16/2020	17	1241
10/17/2020	4	857
10/18/2020	9	746
10/19/2020	15	1358
10/20/2020	9	1025
10/21/2020	0	600
10/22/2020	0	497
10/23/2020	11	890



<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
10/24/2020	17	1487
10/25/2020	14	1403
10/26/2020	20	2209
10/27/2020	21	2490
10/28/2020	15	1955
10/29/2020	22	2583
10/30/2020	20	2104
10/31/2020	14	1731
11/1/2020	22	2471
11/2/2020	20	2411
11/3/2020	11	1432
11/4/2020	10	1151
11/5/2020	12	1165
11/6/2020	10	1094
11/7/2020	0	640
11/8/2020	0	579
11/9/2020	0	566
11/10/2020	2	714
11/11/2020	18	1758
11/12/2020	13	1573
11/13/2020	17	1906
11/14/2020	5	1284
11/15/2020	19	2074
11/16/2020	16	1927
11/17/2020	22	2529
11/18/2020	15	2070
11/19/2020	7	1421
11/20/2020	6	935
11/21/2020	14	1589
11/22/2020	25	2921
11/23/2020	20	2229
11/24/2020	13	1891
11/25/2020	15	1684
11/26/2020	20	2293
11/27/2020	19	2281
11/28/2020	26	2763
11/29/2020	23	3077
11/30/2020	34	4571
12/1/2020	33	4168
12/2/2020	24	3218
12/3/2020	24	3432
12/4/2020	24	3325
12/5/2020	24	2787
12/6/2020	24	3152
12/7/2020	28	3717
12/8/2020	26	3289
12/9/2020	19	2352
12/10/2020	15	2032
12/11/2020	10	1563
12/12/2020	23	2785
12/13/2020	29	3645

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
12/14/2020	32	4291
12/15/2020	32	4354
12/16/2020	36	5069
12/17/2020	35	4764
12/18/2020	24	3738
12/19/2020	23	3398
12/20/2020	24	3043
12/21/2020	19	2819
12/22/2020	17	2572
12/23/2020	24	3358
12/24/2020	41	5620
12/25/2020	39	5458
12/26/2020	26	3732
12/27/2020	17	2955
12/28/2020	28	4190
12/29/2020	24	3683
12/30/2020	26	3742
12/31/2020	31	4653
1/1/2021	25	3779
1/2/2021	30	4024
1/3/2021	30	3922
1/4/2021	24	3411
1/5/2021	27	3441
1/6/2021	25	3595
1/7/2021	31	4616
1/8/2021	30	4548
1/9/2021	32	4624
1/10/2021	34	5040
1/11/2021	38	5693
1/12/2021	31	4598
1/13/2021	25	3793
1/14/2021	23	3526
1/15/2021	29	4397
1/16/2021	28	4052
1/17/2021	26	3916
1/18/2021	21	3425
1/19/2021	25	3698
1/20/2021	24	3497
1/21/2021	23	3276
1/22/2021	30	4172
1/23/2021	26	3711
1/24/2021	23	3307
1/25/2021	21	3522
1/26/2021	25	3772
1/27/2021	34	5140
1/28/2021	34	5015
1/29/2021	26	3872
1/30/2021	17	3313
1/31/2021	28	4457
2/1/2021	31	4881
2/2/2021	31	4595

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
2/3/2021	26	3830
2/4/2021	28	4606
2/5/2021	27	3873
2/6/2021	35	5014
2/7/2021	42	5887
2/8/2021	35	5481
2/9/2021	40	6383
2/10/2021	42	6707
2/11/2021	42	6786
2/12/2021	45	7498
2/13/2021	51	8445
2/14/2021	55	9301
2/15/2021	60	9344
2/16/2021	55	7505
2/17/2021	46	6872
2/18/2021	47	6659
2/19/2021	49	6149
2/20/2021	42	5552
2/21/2021	24	4173
2/22/2021	23	3406
2/23/2021	16	2332
2/24/2021	15	2355
2/25/2021	22	2951
2/26/2021	23	3371
2/27/2021	12	1952
2/28/2021	12	2184
3/1/2021	26	3623
3/2/2021	23	3127
3/3/2021	15	2312
3/4/2021	12	1956
3/5/2021	25	3556
3/6/2021	23	2751
3/7/2021	16	2264
3/8/2021	15	1928
3/9/2021	5	1370
3/10/2021	0	1136
3/11/2021	6	1257
3/12/2021	15	1914
3/13/2021	13	1841
3/14/2021	13	2060
3/15/2021	11	1579
3/16/2021	6	1534
3/17/2021	7	1512
3/18/2021	22	3052
3/19/2021	20	2884
3/20/2021	16	1927
3/21/2021	13	1647
3/22/2021	5	1065
3/23/2021	7	1289
3/24/2021	5	902
3/25/2021	11	1450

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
3/26/2021	11	1226
3/27/2021	1	721
3/28/2021	17	1867
3/29/2021	9	1469
3/30/2021	8	1348
3/31/2021	24	2436
4/1/2021	25	3019
4/2/2021	22	2501
4/3/2021	12	1572
4/4/2021	6	940
4/5/2021	1	690
4/6/2021	0	603
4/7/2021	2	701
4/8/2021	8	1014
4/9/2021	0	612
4/10/2021	7	893
4/11/2021	3	847
4/12/2021	1	683
4/13/2021	7	809
4/14/2021	10	1028
4/15/2021	12	1258
4/16/2021	10	1163
4/17/2021	14	1456
4/18/2021	14	1520
4/19/2021	8	1132
4/20/2021	25	2639
4/21/2021	19	2371
4/22/2021	14	1594
4/23/2021	7	1205
4/24/2021	13	1617
4/25/2021	6	889
4/26/2021	0	658
4/27/2021	0	549
4/28/2021	0	595
4/29/2021	0	678
4/30/2021	0	588
5/1/2021	0	611
5/2/2021	1	636
5/3/2021	7	545
5/4/2021	7	767
5/5/2021	6	743
5/6/2021	6	919
5/7/2021	1	690
5/8/2021	1	733
5/9/2021	10	1171
5/10/2021	11	1179
5/11/2021	7	1014
5/12/2021	10	1045
5/13/2021	9	968
5/14/2021	6	775
5/15/2021	2	795

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
5/16/2021	0	575
5/17/2021	0	579
5/18/2021	0	623
5/19/2021	0	624
5/20/2021	0	546
5/21/2021	0	514
5/22/2021	0	522
5/23/2021	0	509
5/24/2021	0	507
5/25/2021	0	504
5/26/2021	0	555
5/27/2021	0	566
5/28/2021	3	598
5/29/2021	11	832
5/30/2021	4	598
5/31/2021	0	519
6/1/2021	2	630
6/2/2021	0	590
6/3/2021	0	545
6/4/2021	0	502
6/5/2021	0	492
6/6/2021	0	497
6/7/2021	0	463
6/8/2021	0	504
6/9/2021	0	478
6/10/2021	0	487
6/11/2021	0	464
6/12/2021	0	477
6/13/2021	0	452
6/14/2021	0	467
6/15/2021	0	469
6/16/2021	0	470
6/17/2021	0	457
6/18/2021	0	422
6/19/2021	0	439
6/20/2021	0	414
6/21/2021	0	486
6/22/2021	0	471
6/23/2021	0	521
6/24/2021	0	495
6/25/2021	0	430
6/26/2021	0	435
6/27/2021	0	417
6/28/2021	0	405
6/29/2021	0	419
6/30/2021	0	455
7/1/2021	0	449
7/2/2021	0	464
7/3/2021	0	445
7/4/2021	0	375
7/5/2021	0	370

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
7/6/2021	0	495
7/7/2021	0	459
7/8/2021	0	486
7/9/2021	0	446
7/10/2021	0	443
7/11/2021	0	468
7/12/2021	0	456
7/13/2021	0	468
7/14/2021	0	463
7/15/2021	0	438
7/16/2021	0	416
7/17/2021	0	445
7/18/2021	0	421
7/19/2021	0	465
7/20/2021	0	480
7/21/2021	0	458
7/22/2021	0	410
7/23/2021	0	425
7/24/2021	0	429
7/25/2021	0	394
7/26/2021	0	515
7/27/2021	0	476
7/28/2021	0	428
7/29/2021	0	445
7/30/2021	0	417
7/31/2021	0	393
8/1/2021	0	432
8/2/2021	0	432
8/3/2021	0	452
8/4/2021	0	464
8/5/2021	0	433
8/6/2021	0	447
8/7/2021	0	445
8/8/2021	0	404
8/9/2021	0	453
8/10/2021	0	445
8/11/2021	0	426
8/12/2021	0	412
8/13/2021	0	471
8/14/2021	0	458
8/15/2021	0	407
8/16/2021	0	450
8/17/2021	0	463
8/18/2021	0	428
8/19/2021	0	443
8/20/2021	0	438
8/21/2021	0	447
8/22/2021	0	445
8/23/2021	0	404
8/24/2021	0	413
8/25/2021	0	470

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
8/26/2021	0	456
8/27/2021	0	422
8/28/2021	0	431
8/29/2021	0	406
8/30/2021	0	520
8/31/2021	0	462
9/1/2021	0	445
9/2/2021	0	404
9/3/2021	0	429
9/4/2021	0	434
9/5/2021	0	418
9/6/2021	0	449
9/7/2021	0	435
9/8/2021	0	481
9/9/2021	0	479
9/10/2021	0	419
9/11/2021	0	428
9/12/2021	0	441
9/13/2021	0	418
9/14/2021	0	453
9/15/2021	0	485
9/16/2021	0	492
9/17/2021	0	410
9/18/2021	0	464
9/19/2021	0	453
9/20/2021	0	440
9/21/2021	1	516
9/22/2021	5	532
9/23/2021	5	544
9/24/2021	0	488
9/25/2021	5	429
9/26/2021	0	514
9/27/2021	0	390
9/28/2021	0	498
9/29/2021	0	502
9/30/2021	0	477
10/1/2021	0	439
10/2/2021	0	453
10/3/2021	0	473
10/4/2021	0	490
10/5/2021	0	527
10/6/2021	0	513
10/7/2021	0	492
10/8/2021	0	488
10/9/2021	0	450
10/10/2021	0	466
10/11/2021	0	507
10/12/2021	0	559
10/13/2021	0	500
10/14/2021	0	481
10/15/2021	6	552

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
10/16/2021	13	751
10/17/2021	12	785
10/18/2021	11	816
10/19/2021	7	743
10/20/2021	0	609
10/21/2021	10	639
10/22/2021	9	736
10/23/2021	5	837
10/24/2021	0	557
10/25/2021	11	940
10/26/2021	11	940
10/27/2021	5	766
10/28/2021	9	898
10/29/2021	10	1202
10/30/2021	12	1390
10/31/2021	13	1500
11/1/2021	18	1969
11/2/2021	20	2122
11/3/2021	26	2635
11/4/2021	25	2746
11/5/2021	25	2486
11/6/2021	21	2325
11/7/2021	17	1692
11/8/2021	13	1370
11/9/2021	12	1402
11/10/2021	4	1019
11/11/2021	14	1628
11/12/2021	22	2587
11/13/2021	24	2689
11/14/2021	21	2500
11/15/2021	17	2243
11/16/2021	3	1078
11/17/2021	11	1541
11/18/2021	27	3014
11/19/2021	26	2877
11/20/2021	14	2232
11/21/2021	20	2533
11/22/2021	29	3687
11/23/2021	23	3132
11/24/2021	9	1962
11/25/2021	30	3595
11/26/2021	30	3603
11/27/2021	20	2644
11/28/2021	25	3047
11/29/2021	20	2912
11/30/2021	16	1935
12/1/2021	15	2058
12/2/2021	11	1501
12/3/2021	7	1200
12/4/2021	14	1710
12/5/2021	6	1489



<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
12/6/2021	30	3482
12/7/2021	30	4050
12/8/2021	23	3030
12/9/2021	10	2057
12/10/2021	2	987
12/11/2021	29	3268
12/12/2021	27	3318
12/13/2021	20	2469
12/14/2021	7	1353
12/15/2021	2	1107
12/16/2021	16	1946
12/17/2021	18	2571
12/18/2021	28	3767
12/19/2021	33	3966
12/20/2021	29	3992
12/21/2021	24	3401
12/22/2021	31	3679
12/23/2021	12	2228
12/24/2021	2	1155
12/25/2021	7	1104
12/26/2021	6	1473
12/27/2021	6	1227
12/28/2021	9	1622
12/29/2021	18	2331
12/30/2021	14	2040
12/31/2021	4	1050
1/1/2022	22	2926
1/2/2022	40	5888
1/3/2022	37	5127
1/4/2022	31	5197
1/5/2022	29	4460
1/6/2022	45	6741
1/7/2022	44	6357
1/8/2022	24	4247
1/9/2022	33	5115
1/10/2022	32	4822
1/11/2022	28	4427
1/12/2022	21	3349
1/13/2022	24	3368
1/14/2022	23	3344
1/15/2022	32	4753
1/16/2022	29	4588
1/17/2022	29	4365
1/18/2022	17	3199
1/19/2022	37	5928
1/20/2022	47	7370
1/21/2022	45	6590
1/22/2022	35	5330
1/23/2022	27	4324
1/24/2022	23	4261
1/25/2022	41	6210

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
1/26/2022	40	5777
1/27/2022	33	5084
1/28/2022	39	6216
1/29/2022	35	5502
1/30/2022	26	4093
1/31/2022	25	3537
2/1/2022	12	2282
2/2/2022	38	5823
2/3/2022	42	6761
2/4/2022	39	6110
2/5/2022	41	5700
2/6/2022	34	4723
2/7/2022	30	4380
2/8/2022	23	3599
2/9/2022	21	3308
2/10/2022	21	3087
2/11/2022	20	3487
2/12/2022	38	5639
2/13/2022	33	5146
2/14/2022	30	4357
2/15/2022	11	2498
2/16/2022	4	1657
2/17/2022	34	4915
2/18/2022	32	4551
2/19/2022	30	4245
2/20/2022	17	2705
2/21/2022	7	1806
2/22/2022	23	3189
2/23/2022	38	5742
2/24/2022	35	5378
2/25/2022	40	5784
2/26/2022	34	4956
2/27/2022	28	4007
2/28/2022	20	2979
3/1/2022	11	1946
3/2/2022	8	1422
3/3/2022	13	1889
3/4/2022	8	1349
3/5/2022	0	902
3/6/2022	5	1330
3/7/2022	26	3596
3/8/2022	25	3449
3/9/2022	23	2817
3/10/2022	22	2781
3/11/2022	37	5344
3/12/2022	33	4659
3/13/2022	19	2987
3/14/2022	12	1963
3/15/2022	12	1470
3/16/2022	8	1193
3/17/2022	3	840

<u>Gas Day</u>	<u>HDD</u>	<u>Dth</u>
3/18/2022	13	1575
3/19/2022	17	2282
3/20/2022	9	1514
3/21/2022	5	1135
3/22/2022	11	1674
3/23/2022	20	2717
3/24/2022	21	3059
3/25/2022	14	2486
3/26/2022	15	2345
3/27/2022	22	2727
3/28/2022	16	2158
3/29/2022	0	993
3/30/2022	11	1487
3/31/2022	24	3245

Calendar Date	KPOF	KBRL	KIRK	KMCI	KMWA	KPAH	KPOF	KSPI	KSTL	KUIN	KCSG	KGVL
January1	28.70	41	40	36	33	30	29	38	32	38	17	24
January2	28.80	41	41	36	33	30	29	38	32	38	17	24
January3	28.90	41	41	36	33	30	29	38	32	38	17	24
January4	29.00	41	41	36	33	31	29	38	32	38	17	24
January5	29.00	41	41	36	33	31	29	38	33	39	17	24
January6	29.10	41	41	36	33	31	29	38	33	39	17	24
January7	29.10	42	41	36	33	31	29	38	33	39	17	24
January8	29.20	42	41	36	33	31	29	38	33	39	17	24
January9	29.20	42	41	36	33	31	29	38	33	39	17	24
January10	29.20	42	41	36	33	31	29	38	33	39	17	24
January11	29.30	42	41	36	33	31	29	38	33	39	17	24
January12	29.30	42	41	36	33	31	29	39	33	39	17	24
January13	29.30	42	41	36	33	31	29	39	33	39	17	24
January14	29.30	42	41	36	33	31	29	39	33	39	17	24
January15	29.20	42	41	36	33	31	29	39	33	39	17	24
January16	29.20	42	41	36	33	31	29	39	33	39	17	24
January17	29.20	42	41	36	33	31	29	39	33	39	17	23
January18	29.10	42	41	36	33	31	29	39	33	39	17	23
January19	29.10	42	41	36	33	31	29	38	33	39	17	23
January20	29.00	42	41	36	33	31	29	38	33	39	17	23
January21	28.90	42	41	36	33	30	29	38	33	39	17	23
January22	28.80	42	41	36	32	30	29	38	33	39	17	23
January23	28.70	42	41	36	32	30	29	38	33	39	17	23
January24	28.60	42	41	36	32	30	29	38	33	39	16	23
January25	28.50	41	41	36	32	30	29	38	33	38	16	23
January26	28.40	41	41	36	32	30	28	38	33	38	16	23
January27	28.30	41	41	36	32	30	28	38	33	38	16	23
January28	28.10	41	41	36	32	30	28	38	33	38	16	23
January29	28.00	41	41	36	32	30	28	38	32	38	16	22
January30	27.90	41	40	35	31	30	28	38	32	38	16	22
January31	27.70	41	40	35	31	29	28	37	32	38	16	22
February1	27.50	41	40	35	31	29	28	37	32	38	15	22
February2	27.40	40	40	35	31	29	27	37	32	37	15	22
February3	27.20	40	40	35	31	29	27	37	32	37	15	22
February4	27.00	40	40	35	31	29	27	37	31	37	15	22
February5	26.80	40	39	34	30	28	27	37	31	37	15	21
February6	26.60	40	39	34	30	28	27	36	31	37	15	21
February7	26.40	39	39	34	30	28	26	36	31	36	14	21
February8	26.20	39	39	34	30	28	26	36	30	36	14	21
February9	26.00	39	38	33	30	27	26	36	30	36	14	21
February10	25.80	39	38	33	29	27	26	35	30	36	14	21
February11	25.50	38	38	33	29	27	26	35	30	35	14	20
February12	25.30	38	38	33	29	27	25	35	29	35	14	20
February13	25.10	38	37	32	29	26	25	35	29	35	13	20
February14	24.80	37	37	32	28	26	25	34	29	35	13	20
February15	24.60	37	37	32	28	26	25	34	28	34	13	20
February16	24.40	37	36	31	28	26	24	34	28	34	13	19
February17	24.10	36	36	31	28	25	24	33	28	34	12	19
February18	23.90	36	36	31	27	25	24	33	27	33	12	19
February19	23.60	36	35	30	27	25	24	33	27	33	12	19
February20	23.40	35	35	30	27	24	23	32	27	33	12	18
February21	23.10	35	35	29	27	24	23	32	26	32	12	18

Design Day Temperature Lookup			
Station Name	Date	HDD	HDD(-1)
KBRL	2/3/1996	83	80
KMWA	1/19/1994	73.5	57.5
KSPI	12/24/1983	78.5	73
KUIN	12/22/1989	79	72
KPAH	1/20/1985	72	48.5
KIRK	12/24/1983	80.5	75
KMCI	12/22/1989	80.5	73.5
KPOF	1/21/1985	69	54.5
KSTL	1/20/1985	73.5	60
KCSG	1/21/1985	54.5	41.5
KGVL	1/21/1985	56	46

Calendar Date	KPOF	KBRL	KIRK	KMCI	KMWA	KPAH	KPOF	KSPI	KSTL	KUIN	KCSG	KGVL
February22	22.90	34	34	29	26	24	23	31	26	32	11	18
February23	22.60	34	34	29	26	23	23	31	26	32	11	18
February24	22.30	34	33	28	26	23	22	31	25	31	11	17
February25	22.10	33	33	28	25	23	22	30	25	31	11	17
February26	21.80	33	33	28	25	22	22	30	25	30	11	17
February27	21.50	32	32	27	25	22	22	30	24	30	10	17
February28	21.20	32	32	27	24	22	21	29	24	30	10	17
February29	21.10	32	32	27	24	22	21	29	24	29	10	16
March1	21.00	31	31	26	24	21	21	29	24	29	10	16
March2	20.70	31	31	26	24	21	21	28	23	29	10	16
March3	20.40	31	31	26	23	21	20	28	23	28	10	16
March4	20.10	30	30	25	23	21	20	28	23	28	9	16
March5	19.80	30	30	25	23	20	20	27	22	28	9	15
March6	19.50	29	29	25	22	20	20	27	22	27	9	15
March7	19.20	29	29	24	22	20	19	26	22	27	9	15
March8	18.90	28	29	24	22	19	19	26	21	26	9	15
March9	18.60	28	28	23	21	19	19	26	21	26	8	14
March10	18.30	28	28	23	21	19	18	25	21	26	8	14
March11	18.00	27	27	23	21	18	18	25	20	25	8	14
March12	17.70	27	27	22	20	18	18	24	20	25	8	14
March13	17.40	26	27	22	20	18	17	24	20	24	8	13
March14	17.10	26	26	21	20	17	17	24	19	24	7	13
March15	16.80	26	26	21	19	17	17	23	19	23	7	13
March16	16.50	25	25	21	19	17	17	23	19	23	7	12
March17	16.20	25	25	20	19	17	16	22	18	23	7	12
March18	15.80	24	25	20	18	16	16	22	18	22	7	12
March19	15.50	24	24	20	18	16	16	22	18	22	7	12
March20	15.20	23	24	19	17	16	15	21	17	22	6	11
March21	14.90	23	23	19	17	15	15	21	17	21	6	11
March22	14.60	23	23	19	17	15	15	21	17	21	6	11
March23	14.30	22	23	18	16	15	14	20	16	20	6	11
March24	13.90	22	22	18	16	14	14	20	16	20	6	10
March25	13.60	22	22	18	16	14	14	19	16	20	6	10
March26	13.30	21	22	17	15	14	13	19	15	19	5	10
March27	12.90	21	21	17	15	14	13	19	15	19	5	10
March28	12.60	20	21	17	15	13	13	18	15	19	5	10
March29	12.20	20	21	16	14	13	12	18	14	18	5	9
March30	11.90	20	20	16	14	13	12	18	14	18	5	9
March31	11.60	19	20	16	14	12	12	17	14	17	5	9
April1	11.30	19	20	15	13	12	11	17	13	17	4	9
April2	11.00	18	19	15	13	12	11	17	13	17	4	9
April3	10.70	18	19	15	13	12	11	16	13	16	4	8
April4	10.40	18	18	14	13	11	10	16	12	16	4	8
April5	10.00	17	18	14	12	11	10	16	12	16	4	8
April6	9.70	17	18	14	12	11	10	15	12	15	4	8
April7	9.40	16	17	14	12	10	9	15	11	15	4	8
April8	9.20	16	17	13	11	10	9	15	11	15	3	7
April9	8.90	16	17	13	11	10	9	14	11	14	3	7
April10	8.60	15	16	13	11	10	9	14	10	14	3	7
April11	8.30	15	16	12	10	9	8	14	10	14	3	7
April12	8.10	15	16	12	10	9	8	13	10	13	3	7
April13	7.80	14	15	12	10	9	8	13	10	13	3	6
April14	7.50	14	15	11	10	9	8	13	9	13	3	6

Calendar Date	KPOF	KBRL	KIRK	KMCI	KMWA	KPAH	KPOF	KSPI	KSTL	KUIN	KCSG	KGVL
April15	7.10	13	15	11	9	8	7	12	9	12	2	6
April16	6.80	13	14	11	9	8	7	12	9	12	2	6
April17	6.50	13	14	11	9	8	7	12	8	12	2	5
April18	6.20	12	14	10	8	7	6	11	8	12	2	5
April19	6.00	12	13	10	8	7	6	11	8	11	2	5
April20	5.70	12	13	10	8	7	6	11	7	11	2	5
April21	5.40	11	13	9	8	7	5	10	7	11	2	5
April22	5.10	11	12	9	7	6	5	10	7	10	1	4
April23	4.90	11	12	9	7	6	5	10	6	10	1	4
April24	4.60	10	12	8	7	6	5	9	6	10	1	4
April25	4.40	10	11	8	6	5	4	9	6	9	1	4
April26	4.20	10	11	8	6	5	4	9	6	9	1	4
April27	4.00	9	11	7	6	5	4	8	5	9	1	3
April28	3.80	9	10	7	6	5	4	8	5	8	1	3
April29	3.60	9	10	7	5	5	4	8	5	8	1	3
April30	3.50	8	10	7	5	4	4	7	5	8	1	3
May1	3.30	8	9	6	5	4	3	7	4	8	1	3
May2	3.10	8	9	6	5	4	3	7	4	7	1	3
May3	3.00	7	9	6	4	4	3	7	4	7	1	2
May4	2.80	7	8	5	4	3	3	6	4	7	1	2
May5	2.70	7	8	5	4	3	3	6	4	6	1	2
May6	2.60	7	8	5	4	3	3	6	4	6	0	2
May7	2.50	6	7	5	4	3	3	6	3	6	0	2
May8	2.40	6	7	5	3	3	2	5	3	6	0	2
May9	2.30	6	7	4	3	3	2	5	3	6	0	2
May10	2.20	6	7	4	3	3	2	5	3	5	0	2
May11	2.10	5	6	4	3	3	2	5	3	5	0	1
May12	2.00	5	6	4	3	2	2	5	3	5	0	1
May13	1.90	5	6	4	3	2	2	4	3	5	0	1
May14	1.80	5	6	4	3	2	2	4	3	5	0	1
May15	1.70	5	5	3	3	2	2	4	2	4	0	1
May16	1.60	4	5	3	3	2	2	4	2	4	0	1
May17	1.50	4	5	3	2	2	2	4	2	4	0	1
May18	1.50	4	5	3	2	2	2	4	2	4	0	1
May19	1.30	4	5	3	2	2	1	3	2	4	0	1
May20	1.20	4	4	3	2	2	1	3	2	4	0	1
May21	1.10	3	4	2	2	1	1	3	2	3	0	1
May22	1.00	3	4	2	2	1	1	3	2	3	0	1
May23	0.90	3	4	2	2	1	1	3	1	3	0	1
May24	0.80	3	3	2	2	1	1	3	1	3	0	1
May25	0.70	3	3	2	1	1	1	2	1	3	0	1
May26	0.60	3	3	2	1	1	1	2	1	3	0	1
May27	0.50	2	3	2	1	1	1	2	1	2	0	0
May28	0.50	2	3	2	1	1	1	2	1	2	0	0
May29	0.40	2	2	1	1	1	0	2	1	2	0	0
May30	0.40	2	2	1	1	1	0	2	1	2	0	0
May31	0.30	2	2	1	1	1	0	2	1	2	0	0
June1	0.20	2	2	1	1	0	0	1	1	2	0	0
June2	0.20	2	2	1	1	0	0	1	1	2	0	0
June3	0.10	1	2	1	1	0	0	1	0	1	0	0
June4	0.10	1	2	1	1	0	0	1	0	1	0	0
June5	0.10	1	1	1	1	0	0	1	0	1	0	0
June6	0.10	1	1	1	0	0	0	1	0	1	0	0



Calendar Date	KPOF	KBRL	KIRK	KMCI	KMWA	KPAH	KPOF	KSPI	KSTL	KUIN	KCSG	KGVL
July30	-	0	0	0	0	0	0	0	0	0	0	0
July31	-	0	0	0	0	0	0	0	0	0	0	0
August1	-	0	0	0	0	0	0	0	0	0	0	0
August2	-	0	0	0	0	0	0	0	0	0	0	0
August3	-	0	0	0	0	0	0	0	0	0	0	0
August4	-	0	0	0	0	0	0	0	0	0	0	0
August5	-	0	0	0	0	0	0	0	0	0	0	0
August6	-	0	0	0	0	0	0	0	0	0	0	0
August7	-	0	0	0	0	0	0	0	0	0	0	0
August8	-	0	0	0	0	0	0	0	0	0	0	0
August9	-	0	0	0	0	0	0	0	0	0	0	0
August10	-	0	0	0	0	0	0	0	0	0	0	0
August11	-	0	0	0	0	0	0	0	0	0	0	0
August12	-	0	0	0	0	0	0	0	0	0	0	0
August13	-	0	0	0	0	0	0	0	0	0	0	0
August14	-	0	0	0	0	0	0	0	0	0	0	0
August15	-	0	0	0	0	0	0	0	0	0	0	0
August16	-	0	0	0	0	0	0	0	0	0	0	0
August17	-	0	0	0	0	0	0	0	0	0	0	0
August18	-	0	0	0	0	0	0	0	0	0	0	0
August19	-	0	0	0	0	0	0	0	0	0	0	0
August20	-	0	0	0	0	0	0	0	0	0	0	0
August21	-	0	0	0	0	0	0	0	0	0	0	0
August22	-	0	0	0	0	0	0	0	0	0	0	0
August23	-	0	0	0	0	0	0	0	0	0	0	0
August24	-	0	0	0	0	0	0	0	0	0	0	0
August25	-	0	0	0	0	0	0	0	0	0	0	0
August26	-	0	0	0	0	0	0	0	0	0	0	0
August27	-	0	0	0	0	0	0	0	0	0	0	0
August28	-	0	1	0	0	0	0	0	0	0	0	0
August29	-	0	1	0	0	0	0	0	0	0	0	0
August30	-	1	1	0	0	0	0	0	0	0	0	0
August31	-	1	1	0	0	0	0	0	0	0	0	0
September1	-	1	1	0	0	0	0	0	0	0	0	0
September2	-	1	1	0	0	0	0	0	0	1	0	0
September3	-	1	1	0	0	0	0	0	0	1	0	0
September4	-	1	1	0	0	0	0	1	0	1	0	0
September5	0.10	1	1	0	0	0	0	1	0	1	0	0
September6	0.10	1	1	1	0	0	0	1	0	1	0	0
September7	0.10	1	1	1	0	0	0	1	0	1	0	0
September8	0.10	1	2	1	0	0	0	1	0	1	0	0
September9	0.20	1	2	1	0	0	0	1	0	1	0	0
September10	0.20	1	2	1	1	0	0	1	0	1	0	0
September11	0.30	2	2	1	1	0	0	1	0	1	0	0
September12	0.30	2	2	1	1	0	0	1	1	2	0	0
September13	0.40	2	3	1	1	1	0	2	1	2	0	0
September14	0.50	2	3	2	1	1	1	2	1	2	0	0
September15	0.50	2	3	2	1	1	1	2	1	2	0	0
September16	0.60	3	3	2	1	1	1	2	1	2	0	0
September17	0.70	3	3	2	2	1	1	3	1	3	0	0
September18	0.80	3	4	2	2	1	1	3	1	3	0	0
September19	0.90	3	4	3	2	1	1	3	1	3	0	0
September20	1.00	4	4	3	2	2	1	3	1	3	0	0



Calendar Date	KPOF	KBRL	KIRK	KMCI	KMWA	KPAH	KPOF	KSPI	KSTL	KUIN	KCSG	KGVL
September21	1.10	4	5	3	2	2	1	3	1	4	0	1
September22	1.20	4	5	3	3	2	1	4	2	4	0	1
September23	1.40	4	5	3	3	2	1	4	2	4	0	1
September24	1.50	5	5	4	3	2	2	4	2	5	0	1
September25	1.60	5	6	4	3	3	2	5	2	5	0	1
September26	1.80	5	6	4	3	3	2	5	2	5	0	1
September27	2.10	6	6	4	4	3	2	5	3	6	0	1
September28	2.30	6	7	5	4	3	2	6	3	6	0	1
September29	2.50	6	7	5	4	4	3	6	3	6	0	1
September30	2.70	7	7	5	4	4	3	6	3	6	0	2
October1	2.90	7	8	5	5	4	3	6	3	7	0	2
October2	3.10	7	8	6	5	4	3	7	4	7	0	2
October3	3.30	8	8	6	5	4	3	7	4	7	0	2
October4	3.50	8	9	6	5	5	4	7	4	7	0	2
October5	3.70	8	9	6	5	5	4	8	4	8	1	2
October6	3.90	9	9	7	6	5	4	8	4	8	1	3
October7	4.10	9	9	7	6	5	4	8	5	8	1	3
October8	4.40	9	10	7	6	6	4	8	5	9	1	3
October9	4.60	10	10	7	6	6	5	9	5	9	1	3
October10	4.90	10	10	8	7	6	5	9	5	9	1	3
October11	5.10	10	11	8	7	6	5	9	6	9	1	4
October12	5.40	10	11	8	7	6	5	9	6	10	1	4
October13	5.60	11	11	8	7	7	6	10	6	10	1	4
October14	5.80	11	11	9	8	7	6	10	6	10	1	4
October15	6.10	11	12	9	8	7	6	10	7	10	1	4
October16	6.40	12	12	9	8	7	6	11	7	11	1	4
October17	6.70	12	12	10	8	7	7	11	7	11	2	5
October18	7.10	12	13	10	9	8	7	11	8	11	2	5
October19	7.40	13	13	10	9	8	7	11	8	12	2	5
October20	7.80	13	13	10	9	8	8	12	8	12	2	5
October21	8.20	13	14	11	9	8	8	12	9	12	2	6
October22	8.60	14	14	11	10	9	9	12	9	12	3	6
October23	9.00	14	14	11	10	9	9	12	10	13	3	6
October24	9.30	14	15	12	10	9	9	13	10	13	3	6
October25	9.70	15	15	12	11	9	10	13	10	13	3	7
October26	10.00	15	15	12	11	10	10	13	11	14	4	7
October27	10.40	16	16	13	11	10	10	14	11	14	4	7
October28	10.80	16	16	13	12	10	11	14	11	14	4	7
October29	11.20	16	17	13	12	11	11	14	12	15	4	8
October30	11.60	17	17	14	12	11	12	15	12	15	5	8
October31	12.00	17	17	14	13	11	12	15	13	15	5	8
November1	12.40	18	18	14	13	12	12	15	13	16	5	8
November2	12.70	18	18	15	13	12	13	16	13	16	5	9
November3	13.10	19	19	15	13	12	13	16	14	17	6	9
November4	13.50	19	19	16	14	12	14	17	14	17	6	9
November5	13.90	19	20	16	14	13	14	17	15	17	6	9
November6	14.30	20	20	17	14	13	14	17	15	18	6	10
November7	14.60	20	20	17	15	14	15	18	15	18	7	10
November8	15.00	21	21	18	15	14	15	18	16	19	7	10
November9	15.40	21	21	18	16	14	15	19	16	19	7	10
November10	15.80	22	22	19	16	15	16	19	17	20	7	11
November11	16.20	23	22	19	16	15	16	20	17	20	8	11
November12	16.60	23	23	19	17	15	17	20	17	21	8	11

Calendar Date	KPOF	KBRL	KIRK	KMCI	KMWA	KPAH	KPOF	KSPI	KSTL	KUIN	KCSG	KGVL
November13	16.90	24	23	20	17	16	17	21	18	21	8	12
November14	17.30	24	24	21	17	16	17	21	18	22	8	12
November15	17.70	25	25	21	18	17	18	21	19	22	8	12
November16	18.00	25	25	22	18	17	18	22	19	23	9	13
November17	18.40	26	26	22	19	17	18	22	19	23	9	13
November18	18.80	26	26	23	19	18	19	23	20	24	9	13
November19	19.10	27	27	23	19	18	19	24	20	24	9	14
November20	19.40	27	27	24	20	19	19	24	21	25	10	14
November21	19.80	28	28	24	20	19	20	25	21	25	10	14
November22	20.10	29	28	25	21	20	20	25	21	26	10	15
November23	20.40	29	29	25	21	20	20	26	22	26	10	15
November24	20.70	30	29	26	22	20	21	26	22	27	11	15
November25	21.10	30	30	26	22	21	21	27	22	27	11	16
November26	21.40	31	30	27	22	21	21	27	23	28	11	16
November27	21.70	31	31	27	23	22	22	28	23	28	11	16
November28	22.00	32	31	28	23	22	22	28	23	29	11	17
November29	22.30	32	32	28	24	23	22	29	24	29	12	17
November30	22.50	33	32	29	24	23	23	29	24	30	12	17
December1	22.80	33	33	29	25	23	23	30	24	30	12	18
December2	23.10	34	33	30	25	24	23	30	25	31	12	18
December3	23.40	34	33	30	25	24	23	30	25	31	12	18
December4	23.60	35	34	30	26	24	24	31	25	32	13	19
December5	23.90	35	34	31	26	25	24	31	26	32	13	19
December6	24.10	35	35	31	27	25	24	32	26	32	13	19
December7	24.40	36	35	31	27	26	24	32	26	33	13	20
December8	24.60	36	35	32	27	26	25	33	27	33	13	20
December9	24.80	37	36	32	28	26	25	33	27	34	14	20
December10	25.10	37	36	32	28	26	25	33	27	34	14	20
December11	25.30	37	36	33	28	27	25	34	27	34	14	21
December12	25.50	38	37	33	29	27	26	34	28	35	14	21
December13	25.70	38	37	33	29	27	26	34	28	35	14	21
December14	25.90	38	37	34	29	28	26	35	28	35	14	21
December15	26.10	38	38	34	29	28	26	35	28	35	15	21
December16	26.30	39	38	34	30	28	26	35	29	36	15	22
December17	26.50	39	38	34	30	28	27	35	29	36	15	22
December18	26.70	39	38	35	30	28	27	36	29	36	15	22
December19	26.90	39	39	35	30	29	27	36	29	36	15	22
December20	27.00	40	39	35	31	29	27	36	30	37	15	22
December21	27.20	40	39	35	31	29	27	36	30	37	15	23
December22	27.40	40	39	35	31	29	27	37	30	37	16	23
December23	27.50	40	39	35	31	29	28	37	30	37	16	23
December24	27.70	40	39	35	32	29	28	37	31	37	16	23
December25	27.80	40	40	36	32	30	28	37	31	38	16	23
December26	28.00	41	40	36	32	30	28	37	31	38	16	23
December27	28.10	41	40	36	32	30	28	37	31	38	16	23
December28	28.30	41	40	36	32	30	28	37	31	38	16	23
December29	28.40	41	40	36	32	30	28	38	32	38	16	23
December30	28.50	41	40	36	32	30	29	38	32	38	17	24
December31	28.60	41	40	36	32	30	29	38	32	38	17	24