

## **Market Report**

### **10 November 2022**

	Cı	urrent	Δ fro	m YD	Δ from 7D Avg
Nat Gas Prompt	\$	5.97	<b>\$</b>	0.10	<b>\$</b> (0.34)

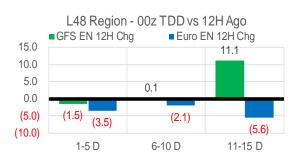
	С	urrent	Δ from YD	_	m 7D vg
WTI Prompt	\$	85.48	<b>\$</b> (0.35)	<b>~</b> \$	(4.9)

	<u></u>	Current	Λ from VD	Δ from 7D			
	Current Δ from Y		A	vg			
Brent Prompt	\$	92.45	<b>\$</b> (0.20)	<b>~</b> \$	(4.2)		

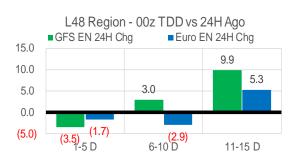
#### Page Menu

Short-term Weather Model Outlooks
Lower 48 Component Models
Regional S/D Models Storage Projection
Weather Model Storage Projection
Supply – Demand Trends
Nat Gas Options Volume and Open Interest
Nat Gas Futures Open Interest
Price Summary

## Vs. 12H Ago



## Vs. 24H Ago



	Current	Δ from YD	Δ from 7D Avg		
US Dry Production	100.7	<b>0.43</b>	<b>0.57</b>		

	Current	Current Δ from YD	
US ResComm	17.9	▼ -2.98	<b>a</b> 0.33

	Current	Δ from YD	Δ from 7D Avg		
Net LNG Exports	11.5	<b>a</b> 0.37	<b>▼</b> -0.03		

	Current	Δ from YD	Δ from 7D Avg		
US Power Burns	28.7	▼ -0.28	<b>-</b> 0.30		

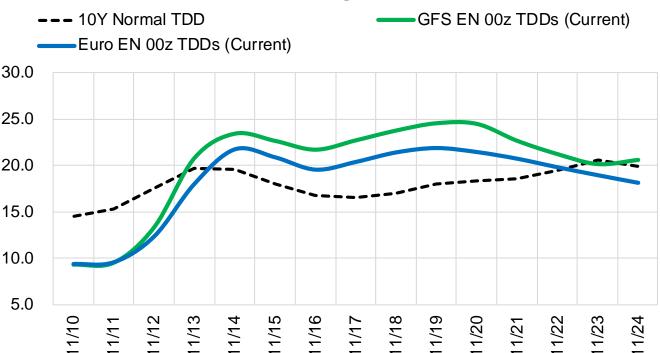
	Current	Δ from YD	Δ from 7D Avg		
Canadian Imports	4.6	<b>0.50</b>	<b>0.50</b>		

	Current	Δ from YD	Δ from 7D Avg		
Mexican Exports	6.5	▼ -0.24	<b>0.42</b>		



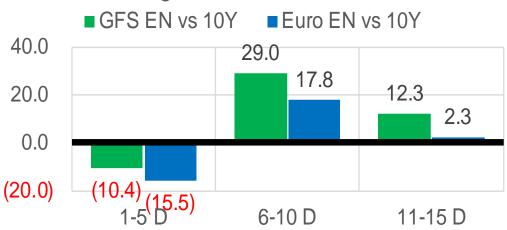
### Short-term Weather Model Outlooks (00z)





### Vs. 10Y Normal

L48 Region - 00z TDD vs 10Y Normal



Source: WSI, Bloomberg



## **Market Report**

## Lower 48 Component Models

#### **Daily Balances**

	4-Nov	5-Nov	6-Nov	7-Nov	8-Nov	9-Nov	10-Nov	DoD	vs. 7D
Lower 48 Dry Production	100.9	99.2	99.5	99.7	100.6	100.3	100.4	<b>0.1</b>	<b>0.4</b>
Canadian Imports	4.3	4.0	4.1	4.1	4.0	4.1	4.6	<b>0.5</b>	<b>▲</b> 0.5
L48 Power	28.2	27.3	28.4	30.9	30.0	28.9	28.7	▼ -0.3	▼ -0.3
L48 Residential & Commercial	15.3	14.9	14.9	18.4	21.9	20.9	17.9	▼ -3.0	<b>0.2</b>
L48 Industrial	21.9	22.4	22.6	23.0	23.2	22.8	22.5	▼ -0.3	<b>-</b> 0.2
L48 Lease and Plant Fuel	5.6	5.5	5.6	5.6	5.6	5.6	5.6	▼ 0.0	▼ 0.0
L48 Pipeline Distribution	2.5	2.4	2.5	2.8	3.0	2.9	2.7	▼ -0.2	▼ 0.0
L48 Regional Gas Consumption	73.6	72.4	73.9	80.8	83.8	81.1	77.3	▼ -3.8	▼ -0.3
Net LNG Delivered	11.26	12.28	11.75	11.60	11.70	11.15	11.52	<b>0.4</b>	▼ -0.1
Total Mexican Exports	6.1	5.3	5.5	5.8	6.7	6.7	6.5	▼ -0.2	<b>0.5</b>
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	14.2	13.2	12.3	5.6	2.5	5.4	9.7		

EIA Storage Week Balances								
_	LY				LW	Current		
	5-Nov	7-Oct	14-Oct	21-Oct	28-Oct	4-Nov	WoW	vs. LY
Lower 48 Dry Production	96.0	101.8	101.7	100.4	101.1	101.0	▼ -0.1	<b>5.0</b>
Canadian Imports	5.5	6.0	5.5	6.1	5.3	4.9	▼ -0.4	▼-0.6
L48 Power	30.3	30.5	30.7	30.9	28.9	29.5	<b>a</b> 0.6	-0.8
L48 Residential & Commercial	23.4	12.9	14.7	20.9	15.9	17.7	<b>1.8</b>	-5.7
L48 Industrial	22.0	20.8	20.3	20.0	21.1	20.9	▼ -0.1	-1.0
L48 Lease and Plant Fuel	5.4	5.7	5.7	5.6	5.6	5.6	▼ 0.0	0.3
L48 Pipeline Distribution	3.2	2.7	2.8	3.2	2.8	2.8	<b>0.1</b>	-0.3
L48 Regional Gas Consumption	84.2	72.6	74.1	80.6	74.3	76.6	<b>2.3</b>	▼ -7.6
Net LNG Exports	10.9	11.0	11.0	11.5	11.4	11.9	<b>0.6</b>	<b>1.1</b>
Total Mexican Exports	6.1	6.7	6.6	6.7	6.4	6.3	▼ -0.1	<b>0.2</b>
Implied Daily Storage Activity	0.3	17.5	15.6	7.7	14.3	11.0	-3.3	10.7
EIA Reported Daily Storage Activity	1.0	17.9	15.9	7.4	15.3			
Daily Model Error	-0.7	-0.4	-0.3	0.3	-1.0			

Monthly Balances	2Yr Ago	LY					MTD		
	Nov-20	Nov-21	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	MoM	vs. LY
Lower 48 Dry Production	91.2	96.4	97.8	98.2	100.6	101.3	100.1	▼-1.1	<b>3.7</b>
Canadian Imports	4.6	5.3	5.9	5.4	5.9	5.7	4.1	▼-1.5	▼-1.2
L48 Power	25.7	29.3	44.8	43.8	37.0	30.2	29.2	<b>▼</b> -1.0	▼-0.1
L48 Residential & Commercial	24.4	28.2	8.2	7.8	8.9	16.6	17.1	<b>0.5</b>	▼-11.1
L48 Industrial	22.5	23.3	19.4	19.7	20.5	20.6	22.1	<b>1.6</b>	<b>▼</b> -1.2
L48 Lease and Plant Fuel	5.0	5.4	5.5	5.5	5.5	5.7	5.6	<b>▼</b> -0.1	<b>0.2</b>
L48 Pipeline Distribution	2.7	3.3	3.1	3.0	2.8	2.9	2.7	<b>▼</b> -0.2	▼ -0.6
L48 Regional Gas Consumption	80.3	89.5	81.0	79.9	74.7	75.9	76.7	8.0 🛋	▼-12.8
Net LNG Exports	10.1	11.4	10.9	11.0	11.5	11.3	11.6	<b>0.3</b>	<b>0.2</b>
Total Mexican Exports	6.1	6.1	7.0	6.9	6.7	6.6	6.1	▼-0.4	▲ 0.0
Implied Daily Storage Activity EIA Reported Daily Storage Activity	-0.7	-5.3	4.8	5.8	13.6	13.2	9.9		
Daily Model Error					-0.5				



## **Daily** Average Generation Data

#### **Nuclear Generation Daily Average - GWh (NRC)**

	2-Nov	3-Nov	4-Nov	5-Nov	6-Nov	7-Nov	8-Nov	DoD	vs. 7D
NRC Nuclear Daily Output	76.0	75.3	76.8	76.8	76.8	76.8	77.2	0.4	8.0
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	104.9	0.0	0.0
NRC Nuclear Outage	28.9	29.6	28.1	28.1	28.1	28.1	27.7	-0.4	-0.8
NRC % Nuclear Cap Utilization	77.3	76.5	78.1	78.1	78.1	78.1	78.5	0.4	8.0

#### Wind Generation Daily Average - MWh (EIA)

	2-Nov	3-Nov	4-Nov	5-Nov	6-Nov	7-Nov	8-Nov	DoD	vs. 7D
CALI Wind	3579	3131	1283	2680	2791	2511	2837	326	175
TEXAS Wind	15614	20777	20596	13126	12252	8692	8841	148	-6336
US Wind	70047	79068	73151	68099	47654	54238	59162	4924	-6214

#### **Generation Daily Average - MWh (EIA)**

	2-Nov	3-Nov	4-Nov	5-Nov	6-Nov	7-Nov	8-Nov	DoD	vs. 7D
US Wind	70047	79068	73151	68099	47654	54238	59162	4924	-6214
US Solar	10365	9577	10931	10292	10493	10062	9938	-124	-349
US Petroleum	1054	921	975	939	960	1065	1035	-30	50
US Other	10058	9846	9369	9676	8792	10633	9809	-824	80
US Coal	65479	62907	67308	62791	46615	69274	67364	-1910	4968
US Nuke	79836	79692	80475	79897	68943	80517	81337	820	3111
US Hydro	23131	23772	22581	20071	19443	24320	24596	276	2376
US Gas	153851	151603	148883	138610	124846	173513	168550	-4963	19999

See National Wind and Nuclear daily charts

32.7

73.4

-1.6

WoW



NRC Nuclear Outage

NRC % Nuclear Cap Utilization

## **Storage Week** Average Generation Data

,	<b>3</b> 000									
	5-Nov	7-Oct	14-Oct	21-Oct	28-Oct	4-Nov	WoW	WoW Bcf/d Impact		
NRC Nuclear Daily Output	72.2	80.5	76.2	74.4	74.4	76.0	1.6	-0.3		
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0			

28.7

77.5

30.5

75.6

30.5

75.6

24.4

81.9

### Wind Generation Weekly Average - MWh (EIA)

**Nuclear Generation Weekly Average - GWh (NRC)** 

	5-Nov	7-Oct	14-Oct	21-Oct	28-Oct	4-Nov	WoW	Bcf/d Impact
CALI Wind	1669	1370	1087	944	1974	1641	-333	0.1
TEXAS Wind	8472	6160	7842	9710	17228	10904	-6324	1.2
US Wind	35268	32707	41063	45195	64747	44699	-20049	3.8
							-31%	
						-0.4		
Concretion Weekly Average	BANA/L /ETA	<b>\</b>						

#### **Generation Weekly Average - MWh (EIA)**

					LY	Current		
								WoW
	5-Nov	7-Oct	14-Oct	21-Oct	28-Oct	4-Nov	WoW	Bcf/d
								Impact
US Wind	35268	32707	41063	45195	64747	44699	-20049	3.8
US Solar	9998	15455	14503	14347	13755	11298	-2458	0.5
US Petroleum	1057	664	842	1054	933	990	57	0.0
US Other	9317	10812	11273	11285	9086	9943	857	-0.2
US Coal	80036	74744	76322	79517	69841	75079	5238	-1.0
US Nuke	76098	83242	77235	76583	77718	79723	2005	-0.4
US Hydro	25833	21917	20001	19318	19097	21591	2493	-0.5
US Gas	162947	171116	170286	162314	148286	157640	9354	1.8

See National Wind and Nuclear daily charts



## **Monthly** Average Generation Data

Nuclear Generation Monthly Average - GWh (NRC)										
	2Yr Ago LY					MTD				
	Same 30 days	Same 30 days	Aug-22	Sep-22	Oct-22	Nov-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY	
NRC Nuclear Daily Output	76.0	74.2	90.5	86.2	76.2	76.8	75.5	0.6	1.3	
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	104.9	0.0	0.0	
NRC Nuclear Outage	28.9	30.7	14.3	18.7	28.7	28.1	29.4	-0.6	-1.3	
NRC % Nuclear Cap Utilization	77.3	75.5	92.1	87.7	77.4	78.1	76.7	0.6	1.3	

#### Wind Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD				
	Same 30 days	Same 30 days	Aug-22	Sep-22	Oct-22	Nov-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY	
CALI Wind	1203	1794	2028	1608	1239	2704	1753	1466	-41	
TEXAS Wind	10553	12073	8440	7993	9916	12867	12080	2952	7	
US Wind	42838	46416	33222	38270	43698	61896	53569	18198	7154	

#### **Generation Monthly Average - MWh (EIA)**

, ,	2Yr Ago	ĹY				MTD			
	Same 30 days	Same 30 days	Aug-22	Sep-22	Oct-22	Nov-22	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	42838	46416	33222	38270	43698	61896	53569	▼-8326.6	<b>~</b> 7154
US Solar	7729	10648	16962	16163	14157	10290	12498	<b>2208.3</b>	<b>1850</b>
US Petroleum	792	970	1251	864	899	1003	1003	▼ 0	<b>33</b>
US Other	8763	10278	10597	10512	10500	9835	10114	<b>279</b>	<b>▼</b> -164
US Coal	85756	79010	117203	92002	75808	65205	72282	<b>~</b> 7077	<b>▼</b> -6728
US Nuke	79528	76905	92976	89057	78133	79309	78164	<b>▼</b> -1145	<b>1259</b>
US Hydro	26843	24707	30192	25202	19926	23118	20735	<b>▼</b> -2383	▼ -3972
US Gas	150025	156877	233739	200112	162320	155661	157424	<b>▼</b> -2292	<b>547</b>
US Total	400890	405945	535696	470765	405761	406067	405620	<b>3744</b>	<b>▼</b> -325



See National Wind and Nuclear daily charts



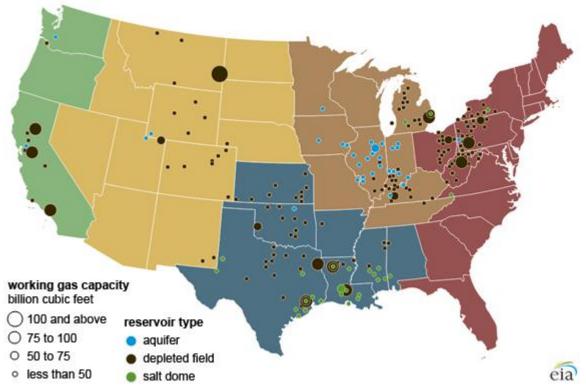
## Regional S/D Models Storage Projection

Week Ending 4-Nov

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	12.1	-0.6	11.5	81
East	-0.1	2.4	2.4	16
Midwest	3.5	0.5	4.0	28
Mountain	4.9	-4.1	8.0	5
South Central	3.8	1.0	4.8	34
Pacific	0.0	-0.4	-0.4	-3

<sup>\*</sup>Adjustment Factor is calcuated based on historical regional deltas

#### U.S. underground natural gas storage facilities by type (July 2015)

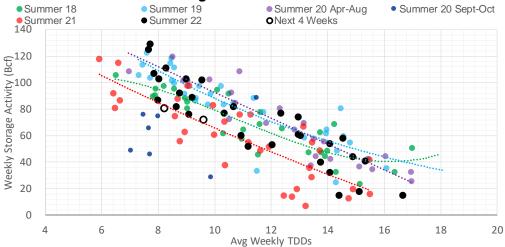




## Weather Model Storage Projection

Next report and beyond		
Week Ending	GWDDs	Week Storage Projection
04-Nov	8.2	81
11-Nov	9.6	72
18-Nov		'
25-Nov		

#### Weather Storage Model - Next 4 Week Forecast



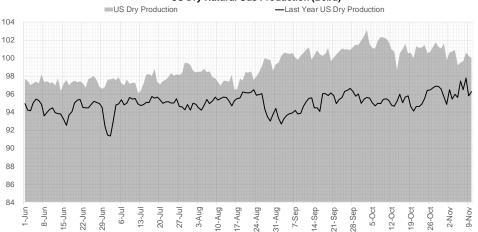
Go to larger image



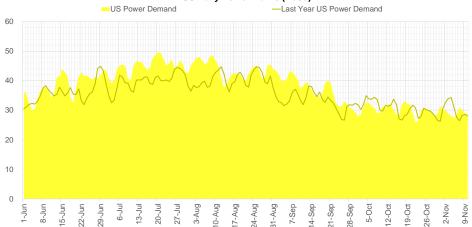


### Supply - Demand Trends

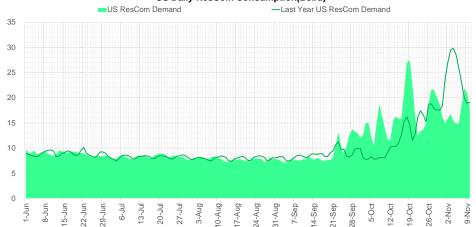
#### US Dry Natural Gas Production (Bcf/d)



#### US Daily Power Burns (Bcf/d)



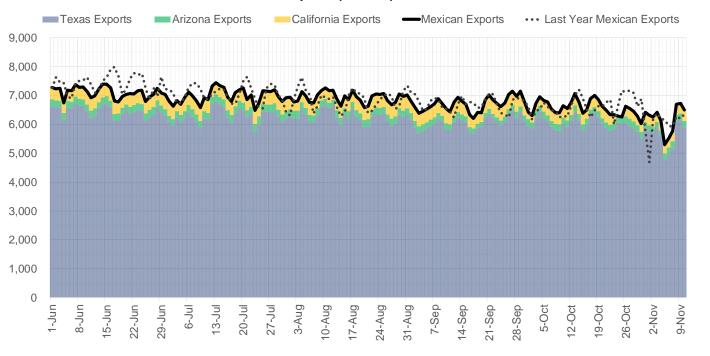
#### US Daily ResCom Consumption(Bcf/d)



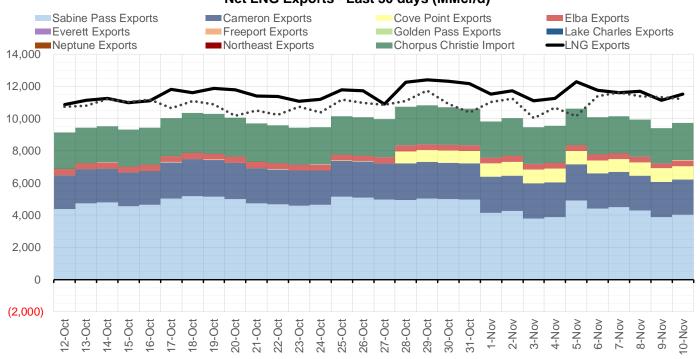
Source: Bloomberg



#### Mexican Exports (MMcf/d)



#### Net LNG Exports - Last 30 days (MMcf/d)



Source: Bloomberg



## **Market Report**

# Nat Gas Options Volume and Open Interest CME and ICE Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
12	2022	P	4.00	13227	12	2022	P	4.00	52310
10	2022	P	1.00		12	2022	P	5.00	40233
12	2023	P	4.50	12000 9210	12	2022	Ċ	10.00	33370
12	2022	P	4.75	9210 8105	5	2023	P	2.00	30114
12	2022	P	5.00	6035	12	2022	P	6.00	29596
12	2022	C	6.00	4082	12	2022	Р	4.50	29518
12	2022	C	8.00	3326	12	2022	Р	3.50	27114
12	2022	P	3.50	2806	10	2023	Р	3.00	27030
12	2022	P	6.00	2494	1	2023	P	5.00	24688
12	2022	C	7.00	2337	1	2023	C	10.00	24660
12	2022	Č	10.00	2274	3	2023	C	10.00	23945
12	2022	C	9.00	2104	4	2023	P	3.00	23193
3	2023	Č	8.50	2000	3	2023	Р	4.00	22701
2	2023	P	4.00	1811	4	2023	Р	2.00	22544
1	2023	C	8.00	1737	4	2023	Р	3.50	21766
12	2023	P	4.25	1666	2	2023	С	10.00	21655
5	2023	Ċ	5.50	1575	10	2023	Р	2.00	21460
12	2022	P	5.50	1375	12	2022	С	6.00	20068
3	2023	C	10.00	1329	12	2022	Р	3.00	20061
2	2023	P	4.75	1300	5	2023	Р	3.00	19753
1	2023	C	7.00	1216	10	2023	Р	2.50	19750
12	2022	Č	7.50	1181	12	2022	С	8.00	19722
1	2023	Č	12.00	1148	12	2022	С	7.00	19552
3	2023	P	5.00	1125	1	2023	Р	3.00	19256
10	2023	P	4.00	1100	10	2023	Р	4.00	19226
4	2023	C	6.00	1093	6	2023	Р	3.00	19010
3	2023	C	6.00	1084	3	2023	Р	3.00	18925
1	2023	P	5.20	1034	3	2023	С	20.00	18920
1	2023	C	11.00	1016	6	2023	Р	2.00	18834
1	2023	P	5.30	1000	4	2023	Р	4.00	18805
3	2023	C	14.00	1000	6	2023	Р	3.50	18650
3	2023	P	5.50	1000	12	2022	Р	5.50	18621
4	2023	C	5.00	1000	12	2022	С	5.00	18383
10	2023	C	10.00	1000	1	2023	Р	4.00	18215
3	2023	P	3.00	935	5	2023	Р	3.50	18185
1	2023	C	15.00	917	8	2023	Р	2.00	18127
12	2023	C	5.50	900	9	2023	P	2.00	18078
1	2023	C	9.50	893	8	2023	P -	3.00	18061
12	2023	P	9.50 5.75	874	7	2023	P -	3.00	18060
1	2023	P	4.00	858	9	2023	P -	3.00	17960
4	2023	C	7.00	850	7	2023	P	2.00	17927
5	2023	C	9.00	850 850	10	2023	P	3.50	17258
12	2023	C	6.50	845	5	2023	P	4.00	17226
12 11	2022 2023	P	3.00	845 815	9	2023	P	4.00	17106
11 12	2023 2022	C	3.00 7.75	815 705	6	2023	P	4.00	17093
12	2022 2023	P	7.75 2.75	705 700	8	2023	P	3.50	16836
10	2023 2022	C			7	2023	P	3.50	16704
		P	8.50	681	9	2023	P	3.50	16694
1 5	2023	C	3.00	681	2	2023	С	8.00	16552
Э	2023	C	8.00	670	12	2022	C Source	: CME, ICE	16195



## Nat Gas Futures Open Interest

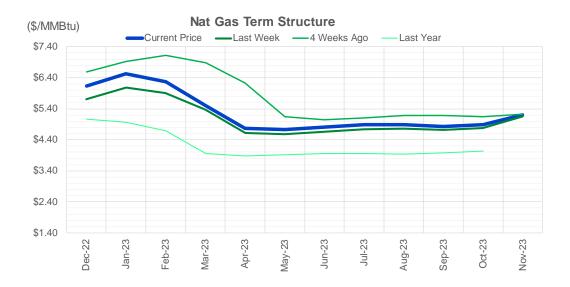
CME and ICE Combined

CME Henry Hub Futures (10,000 MMBtu)  ICE Henry Hub Futures Contract Equivalent (10,000 MM											
CME Henry H											
	Current	Prior	Daily Change		Current	Prior	Daily Change				
DEC 22	70480	76254	-5774	DEC 22	88006	89466	-1461				
JAN 23	151413	147078	4335	JAN 23	76335	76486	-151				
FEB 23	64612	61968	2644	FEB 23	67690	66884	807				
MAR 23	97784	98908	-1124	MAR 23	61599	61065	534				
APR 23	82212	82208	4	APR 23	57849	57946	-97				
MAY 23	91092	89182	1910	MAY 23	59992	60043	-51				
JUN 23	24576	24260	316	JUN 23	50343	50026	317				
JUL 23	31783	32584	-801	JUL 23	49985	49789	195				
AUG 23	26888	25901	987	AUG 23	47896	47547	350				
SEP 23	29713	30214	-501	SEP 23	46178	45855	323				
OCT 23	51464	51545	-81	OCT 23	60443	59895	548				
NOV 23	21310	21355	-45	NOV 23	48176	47720	456				
DEC 23	29675	29985	-310	DEC 23	43254	43187	67				
JAN 24	35066	35508	-442	JAN 24	46526	46350	176				
FEB 24	11926	11954	-28	FEB 24	30494	30467	28				
MAR 24	23607	23741	-134	MAR 24	38015	37929	85				
APR 24	22332	22271	61	APR 24	30996	30847	150				
MAY 24	10166	9973	193	MAY 24	30198	30150	48				
JUN 24	3491	3458	33	JUN 24	26883	26851	31				
JUL 24	4863	4854	9	JUL 24	25846	25779	67				
AUG 24	4534	4515	19	AUG 24	25227	25195	32				
SEP 24	3266	3247	19	SEP 24	25164	25131	33				
OCT 24	9667	9673	-6	OCT 24	29771	29731	40				
NOV 24	4904	4928	-24	NOV 24	26472	26472	0				
DEC 24	8762	8812	-50	DEC 24	30269	30238	31				
JAN 25	18351	18375	-24	JAN 25	24726	24667	59				
FEB 25	1817	1816	1	FEB 25	15717	15782	-66				
MAR 25	6351	6329	22	MAR 25	17772	17766	6				
APR 25	6493	6487	6	APR 25	16379	16572	-193				
MAY 25	2749	2749	0	MAY 25	15640	15712	-72				

Source: CME, ICE







	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23
Current Price	\$6.138	\$6.524	\$6.266	\$5.506	\$4.773	\$4.730	\$4.805	\$4.884	\$4.893	\$4.834	\$4.889	\$5.199
Last Week	\$5.714	\$6.080	\$5.899	\$5.375	\$4.630	\$4.585	\$4.659	\$4.742	\$4.763	\$4.725	\$4.788	\$5.154
vs. Last Week	\$0.424	\$0.444	\$0.367	\$0.131	\$0.143	\$0.145	\$0.146	\$0.142	\$0.130	\$0.109	\$0.101	\$0.045
4 Weeks Ago	\$6.596	\$6.928	\$7.114	\$6.876	\$6.239	\$5.136	\$5.040	\$5.109	\$5.179	\$5.184	\$5.149	\$5.221
vs. 4 Weeks Ago	-\$0.458	-\$0.404	-\$0.848	-\$1.370	-\$1.466	-\$0.406	-\$0.235	-\$0.225	-\$0.286	-\$0.350	-\$0.260	-\$0.022
Last Year	\$4.979	\$5.070	\$4.959	\$4.699	\$3.957	\$3.886	\$3.915	\$3.958	\$3.963	\$3.942	\$3.969	\$4.046
vs. Last Year	\$1.159	\$1.454	\$1.307	\$0.807	\$0.816	\$0.844	\$0.890	\$0.926	\$0.930	\$0.892	\$0.920	\$1.153

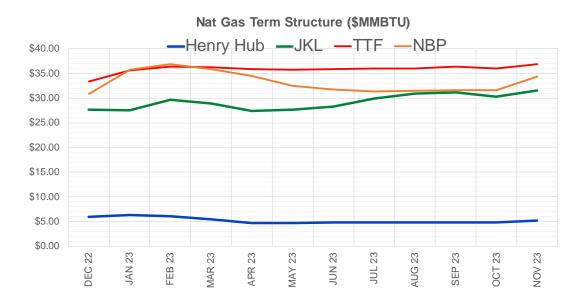
		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	2.39	18.33	15.94
TETCO M3	\$/MMBtu	2.11	8.02	5.91
FGT Zone 3	\$/MMBtu	3.15	6.54	3.40
Zone 6 NY	\$/MMBtu	3.15	8.70	5.56
Chicago Citygate	\$/MMBtu	3.51	6.31	2.80
Michcon	\$/MMBtu	3.59	5.76	2.17
Columbia TCO Pool	\$/MMBtu	2.57	5.46	2.89
Ventura	\$/MMBtu	3.76	6.67	2.91
Rockies/Opal	\$/MMBtu	7.84	6.35	-1.49
El Paso Permian Basin	\$/MMBtu	2.41	4.80	2.39
Socal Citygate	\$/MMBtu	9.89	8.18	-1.71
Malin	\$/MMBtu	7.90	7.35	-0.55
Houston Ship Channel	\$/MMBtu	3.45	5.81	2.36
Henry Hub Cash	\$/MMBtu	3.46	5.66	2.20
AECO Cash	C\$/GJ	3.90	4.61	0.71
Station2 Cash	C\$/GJ	3.44	8.87	5.43
Dawn Cash	C\$/GJ	3.85	5.97	2.12

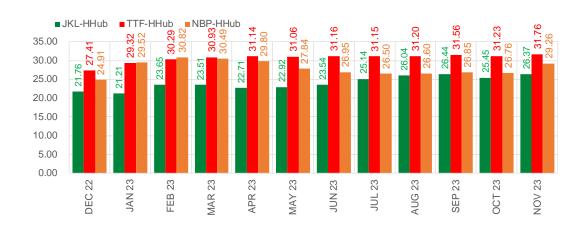
Source: CME, Bloomberg



					\/ C	4 Wooks		
					s. 4 Weeks			
	Units	Current Price	VS.	Last Week		Ago	VS	s. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224		0.000		0.000		0.000
NatGas Oct21/Nov21	\$/MMBtu	0.361		0.000		0.000		0.000
NatGas Oct21/Jan22	\$/MMBtu	-1.817		0.000		0.000		-0.950
NatGas Apr22/Oct22	\$/MMBtu	1.532		0.000		0.000		1.515
WTI Crude	\$/Bbl	85.83		-4.170	•	-1.440		4.490
Brent Crude	\$/Bbl	92.65		-3.510		0.200		10.010
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	365.63		-2.110		-27.650		120.420
Propane, Mt. Bel	cents/Gallon	0.87		-0.011		0.012		-0.514
Ethane, Mt. Bel	cents/Gallon	0.40		0.003		-0.030		-0.007
Coal, PRB	\$/MTon	12.30		0.000		0.000		0.000
Coal, PRB	\$/MMBtu	0.70						
Coal, ILB	\$/MTon	31.05		0.000		0.000		0.000
Coal, ILB	\$/MMBtu	1.32						



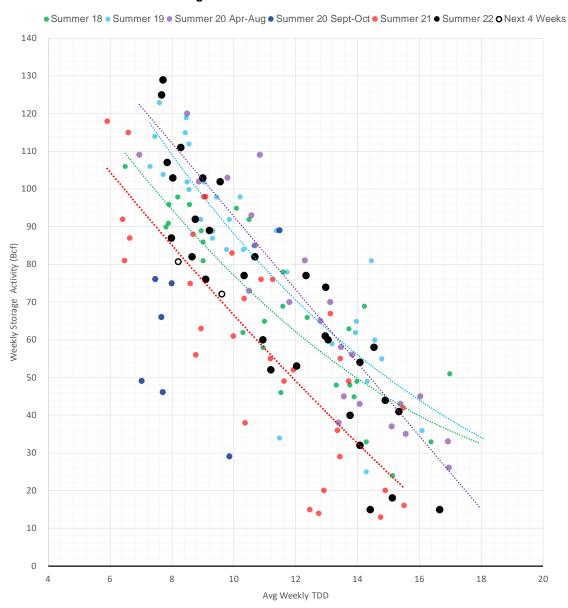




	DEC 22	JAN 23	FEB 23	MAR 23	APR 23	MAY 23	JUN 23	JUL 23	AUG 23	SEP 23	OCT 23	NOV 23
Henry Hub	\$5.968	\$6.328	\$6.078	\$5.420	\$4.723	\$4.706	\$4.758	\$4.837	\$4.861	\$4.791	\$4.858	\$5.150
JKL	\$27.730	\$27.535	\$29.725	\$28.925	\$27.435	\$27.625	\$28.295	\$29.975	\$30.900	\$31.230	\$30.310	\$31.515
JKL-HHub	\$21.762	\$21.207	\$23.647	\$23.505	\$22.712	\$22.919	\$23.537	\$25.138	\$26.039	\$26.439	\$25.452	\$26.365
TTF	\$33.377	\$35.643	\$36.364	\$36.349	\$35.865	\$35.768	\$35.915	\$35.984	\$36.057	\$36.350	\$36.086	\$36.913
TTF-HHub	\$27.409	\$29.315	\$30.286	\$30.929	\$31.142	\$31.062	\$31.157	\$31.147	\$31.196	\$31.559	\$31.228	\$31.763
NBP	\$30.878	\$35.843	\$36.896	\$35.914	\$34.520	\$32.541	\$31.707	\$31.341	\$31.456	\$31.644	\$31.619	\$34.413
NBP-HHub	\$24.910	\$29.515	\$30.818	\$30.494	\$29.797	\$27.835	\$26.949	\$26.504	\$26.595	\$26.853	\$26.761	\$29.263



#### Weather Storage Model - Next 4 Week Forecast





#### Weather Storage Model - Next 4 Week Forecast

