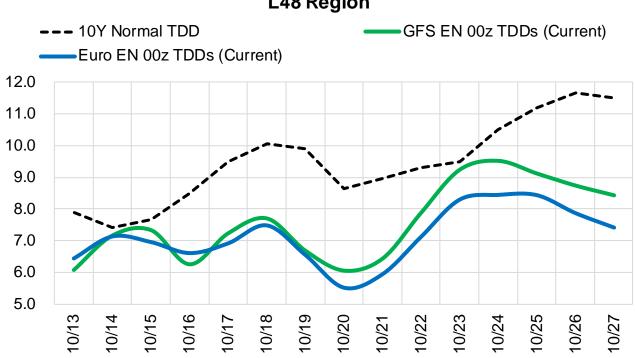




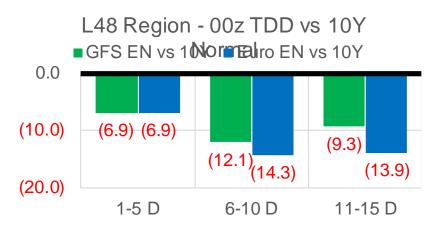


## Short-term Weather Model Outlooks (00z)



### L48 Region

## Vs. 10Y Normal



Source: WSI, Bloomberg

# **Market Report**

## 13 October 2021

### **Daily Balances**

	7-Oct	8-Oct	9-Oct	10-Oct	11-Oct	12-Oct	13-Oct	DoD	vs. 7D
Lower 48 Dry Production	92.4	92.5	92.9	92.7	92.5	91.8	92.4	<b>0.6</b>	<b>T-0.1</b>
Canadian Imports	5.0	4.9	4.9	5.0	4.9	4.8	4.5	<b>▼</b> -0.3	<b>T</b> -0.4
L48 Power	34.1	33.1	30.0	30.3	31.4	31.3	31.0	<b>-</b> 0.2	▼ -0.7
L48 Residential & Commercial	8.1	8.4	8.4	8.4	9.4	10.7	10.4	<b>V</b> -0.3	<b>1.5</b>
L48 Industrial	21.0	20.4	19.9	19.7	19.7	19.8	19.9	<b>A</b> 0.1	▼ -0.2
L48 Lease and Plant Fuel	5.0	5.0	5.1	5.1	5.0	5.0	4.9	▼ -0.1	<b>T</b> -0.1
L48 Pipeline Distribution	2.3	2.2	2.1	2.1	2.2	2.2	2.2	▼ 0.0	<b>0.0</b>
L48 Regional Gas Consumption	70.5	69.1	65.4	65.4	67.7	69.0	68.5	<b>-0.5</b>	<b>0.6</b>
Net LNG Delivered	10.04	10.69	10.71	10.37	10.15	10.75	11.21	<b>a</b> 0.5	<b>0.8</b>
Total Mexican Exports	6.6	6.5	6.2	6.2	6.4	6.8	6.7	<b>-0.1</b>	<b>0.2</b>
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	10.3	11.1	15.5	15.7	13.2	10.0	10.4		

Lower 48 Component Models

Daily Model Error

#### **EIA Storage Week Balances**

	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	8-Oct	WoW	vs. 4W
Lower 48 Dry Production	90.9	91.3	91.9	92.9	93.2	92.8	<b>-0.4</b>	<b>0.5</b>
Canadian Imports	5.0	4.8	5.0	5.2	5.7	5.3	<b>-0.4</b>	<b>0.1</b>
L48 Power	38.1	33.8	35.1	33.2	30.2	32.7	<b>2</b> .5	▼-0.4
L48 Residential & Commercial	7.4	6.9	7.2	8.0	8.4	8.2	▼ -0.2	<b>a</b> 0.5
L48 Industrial	18.8	19.5	20.7	20.5	20.2	21.2	<b>1.0</b>	<b>0</b> .9
L48 Lease and Plant Fuel	5.0	5.0	5.0	5.1	5.1	5.1	▼ 0.0	▲ 0.0
L48 Pipeline Distribution	2.4	2.2	2.3	2.3	2.1	2.2	<b>0.1</b>	▼ 0.0
L48 Regional Gas Consumption	71.7	67.5	70.2	69.1	65.9	69.3	<b>3.3</b>	▲ 1.1
Net LNG Exports	10.5	11.0	10.2	9.9	10.3	9.9	<b>-0.4</b>	▼-0.4
Total Mexican Exports	7.0	6.7	6.6	6.8	6.7	6.6	<b>T</b> -0.1	▼-0.1
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	6.7 7.4 -0.7	10.9 11.9 -1.0	9.8 10.9 -1.0	12.2 12.6 -0.3	16.0 16.9 -0.9	12.4	-3.6	

#### **Monthly Balances**

	2Yr Ago	LY					MTD		
	Oct-19	Oct-20	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	МоМ	vs. LY
Lower 48 Dry Production	95.1	88.3	93.3	93.3	92.4	92.2	92.5	<b>0.3</b>	<b>4.2</b>
Canadian Imports	4.6	4.3	4.9	5.2	5.1	5.1	5.1	▼ 0.0	<b>0.8</b>
L48 Power	30.3	30.8	35.9	39.4	40.2	33.1	32.0	<b>T</b> -1.1	<b>1.2</b>
L48 Residential & Commercial	15.3	15.3	8.8	8.1	7.7	7.6	8.7	<b>A</b> 1.1	<b>T</b> -6.6
L48 Industrial	23.5	22.6	20.5	20.8	20.2	20.1	20.6	<b>a</b> 0.5	<b>-</b> 2.0
L48 Lease and Plant Fuel	5.1	4.8	5.0	5.1	5.0	5.0	5.0	▲ 0.0	<b>a</b> 0.2
L48 Pipeline Distribution	2.4	2.5	2.4	2.5	2.5	2.2	2.2	▼ -0.1	<b>V</b> -0.3
L48 Regional Gas Consumption	76.6	75.9	72.7	76.0	75.7	68.1	68.5	<b>0.4</b>	▼ -7.4
Net LNG Exports	6.7	8.0	10.2	10.8	10.5	10.3	10.3	▼ -0.1	<b>2.2</b>
Total Mexican Exports	5.4	6.0	7.4	7.1	6.9	6.7	6.5	▼ -0.2	<b>0.5</b>
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	11.1	2.7	7.8	4.6	4.5	12.1	12.4		

Source: Bloomberg, analytix.ai

# **Daily** Average Generation Data

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

ENERGY

	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct	10-Oct	11-Oct	DoD	vs. 7D
NRC Nuclear Daily Output	81.7	81.0	80.9	80.2	74.8	76.0	76.7	0.7	-2.4
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	23.2	23.9	24.0	24.7	30.1	28.9	28.2	-0.7	2.4
NRC % Nuclear Cap Utilization	83.1	82.3	82.2	81.5	76.0	77.3	78.0	0.7	-2.4

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

	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct	10-Oct	11-Oct	DoD	vs. 7D
CALI Wind	1812	2162	1931	3402	2766	1700	3903	2202	1607
TEXAS Wind	5609	6824	12342	16198	18293	20964	10073	-10891	-3299
US Wind	23782	31367	34210	37562	60053	63036	44491	-18545	2822

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

	5-Oct	6-Oct	7-Oct	8-Oct	9-Oct	10-Oct	11-Oct	DoD	vs.7D
US Wind	23782	31367	34210	37562	60053	63036	44491	-18545	2822
US Solar	10242	10611	9179	8522	9837	10498	10375	-123	560
US Petroleum	3362	3490	3541	3549	2368	2684	3104	420	-62
US Other	11781	12108	12057	11981	11724	11830	12110	280	196
US Coal	101665	98440	98959	97722	84373	83087	92217	9130	-1824
US Nuke	81938	81560	81401	80235	75536	76471	76799	329	-2724
US Hydro	25294	24923	26594	27308	23069	22244	25313	3069	408
US Gas	182995	175192	176861	173667	148187	143720	163580	19860	-3190

# See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

# Storage Week Average Generation Data

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

	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	8-Oct	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	90.2	90.3	86.7	85.9	85.1	82.1	-3.0	0.5
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	14.7	14.6	18.2	19.0	19.8	22.7	3.0	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

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

	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	8-Oct	WoW	WoW Bcf/d Impact
CALI Wind	2247	1236	2083	1936	2467	1099	-1368	0.2
TEXAS Wind	7534	7327	9541	9780	10364	4890	-5473	1.0
US Wind	35459	30662	42378	43250	43452	20468	-22984	4.1
					201.4			
					0%			

### Generation Weekly Average - MWh (EIA)

								VVOVV
	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	8-Oct	WoW	Bcf/d
								Impact
US Wind	35459	30662	42378	43250	43452	20468	-22984	4.1
US Solar	13358	14254	14057	12185	12957	11215	-1743	0.3
US Petroleum	3135	2072	2470	2594	2712	3901	1189	-0.2
US Other	9764	8932	9273	9121	8709	10870	2162	-0.4
US Coal	136318	116993	115066	109063	94776	100713	5938	-1.1
US Nuke	92365	93162	89490	88789	88402	83696	-4706	0.8
US Hydro	28181	26944	24138	25340	25279	24516	-764	0.1
US Gas	205503	181094	182116	175354	153814	176783	22969	-4.1
1								

## See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

The risk of trading futures and options and other derivatives involves a substantial risk of loss and is not suitable for all persons. Each person must consider whether a particular trade, combination of trades, or strategy is suitable for that person's financial means and objectives. Past results are not necessarily indicative of future results. This communication may contain links to third party websites which are not under the control of and are not maintained by ION Energy Group, and ION Energy Group is not responsible for their content.



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# Monthly Average Generation Data

#### Nuclear Generation Monthly Average - GWh (NRC)

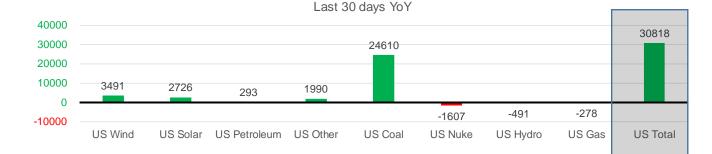
	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jul-21	Aug-21	Sep-21	Oct-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
NRC Nuclear Daily Output	84.4	83.5	90.1	91.5	87.2	79.7	83.0	-7.5	-0.5
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	104.9	0.0	0.0
NRC Nuclear Outage	20.5	21.4	14.8	13.4	17.7	25.2	21.9	7.5	0.5
NRC % Nuclear Cap Utilization	85.8	84.9	91.6	93.0	88.7	81.0	84.4	-7.6	-0.5

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

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jul-21	Aug-21	Sep-21	Oct-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
CALI Wind	1871	1504	2338	2442	2020	2097	2175	78	672
TEXAS Wind	9068	7429	7217	9901	9400	9223	9385	-176	1956
US Wind	36330	35122	29217	35830	40216	33646	38613	-6569	3491

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

	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jul-21	Aug-21	Sep-21	Oct-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	36330	35122	29217	35830	40216	33646	38613	<b>4967.3</b>	<b>A</b> 3491
US Solar	8759	9109	14140	13787	13379	10653	11835	<b>A</b> 1182.3	<b>A</b> 2726
US Petroleum	4222	2708	4233	4484	2452	3478	3001	<b>-478</b>	<b>293</b>
US Other	8275	8059	9326	9928	9008	11381	10049	<b>T</b> -1332	<b>1990</b>
US Coal	105217	76709	137228	137655	110033	95910	101319	<b>4</b> 5410	<b>A 24610</b>
US Nuke	90747	86763	92911	94062	90146	80655	85156	<b>4501</b>	<b>T</b> -1607
US Hydro	24245	25336	29941	28532	25639	24629	24846	<b>217</b>	<b>-491</b>
US Gas	172948	169415	207823	210824	173536	168754	169137	<b>4468</b>	<b>-278</b>
US Total	451334	413197	524834	534937	464619	428752	444015	<b>A</b> 23969	<b>a</b> 30818



## See National Wind and Nuclear daily charts

Source: Bloomberg, analytix.ai

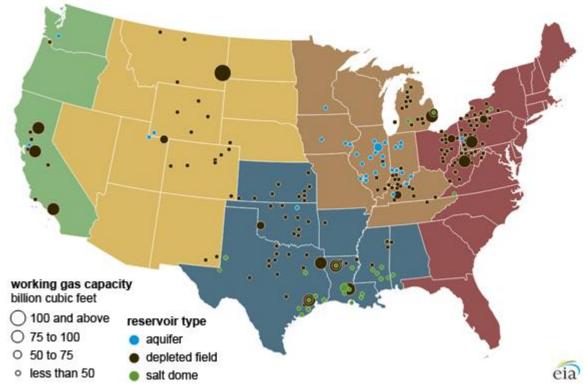


## Regional S/D Models Storage Projection

Week Ending	8-Oct			
			Daily	
			Average	Weekly
		Daily	Storage	Adjusted
	Daily Raw	Adjustment	Activity	Storage
	Storage	Factor	(Adjusted) *	Activity
<u>L</u> 48	12.1	1.2	13.3	93
East	3.1	0.6	3.7	26
Midwest	4.4	-0.7	3.7	26
Mountain	3.8	-3.2	0.6	4
South Central	-0.2	5.1	5.0	35
Pacific	1.0	-0.5	0.4	3

\*Adjustment Factor is calcuated based on historical regional deltas

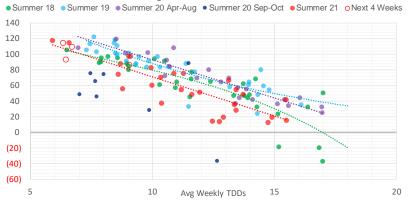
### U.S. underground natural gas storage facilities by type (July 2015)



## Weather Model Storage Projection

Next report and beyond		
Week Ending	GWDDs	Week Storage Projection
08-Oct	6.5	93
15-Oct	6.4	114
22-Oct	6.7	109
29-Oct	9.1	86

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

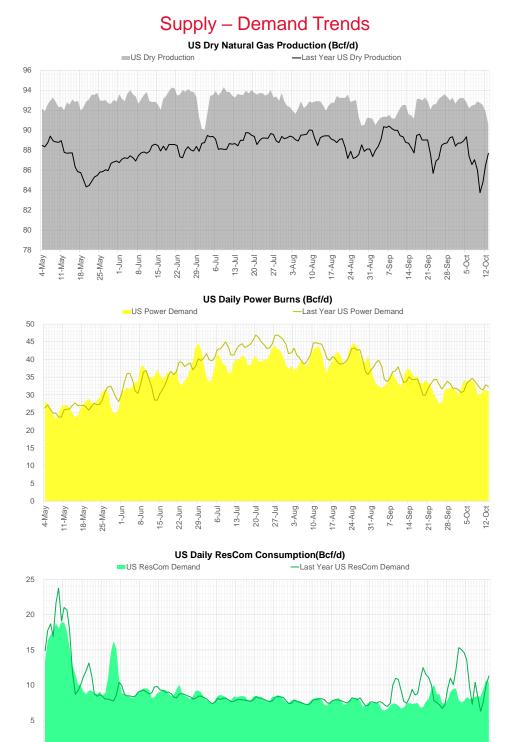


# Go to larger image



0 4-May

18-May 25-May 1-Jun 8-Jun



Source: Bloomberg

21-Sep

28-Sep

12-Oct

5-Oct

14-Sep

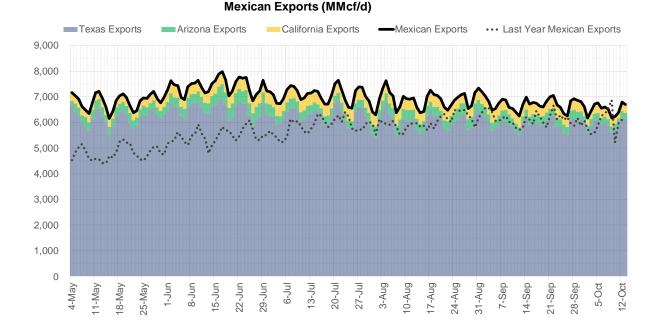
7-Sep

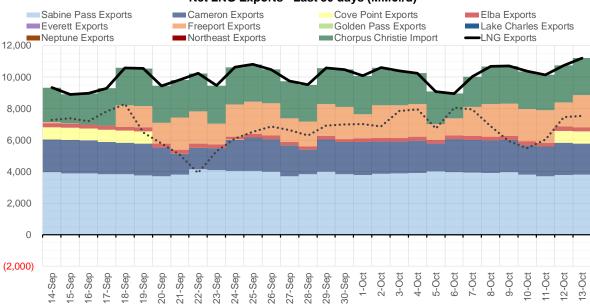
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6-Jul 13-Jul 20-Jul 27-Jul 3-Aug 10-Aug 17-Aug 24-Aug 31-Aug

15-Jun 22-Jun 29-Jun







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

Source: Bloomberg

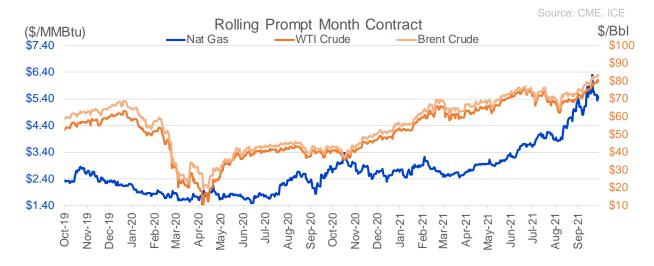


### Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

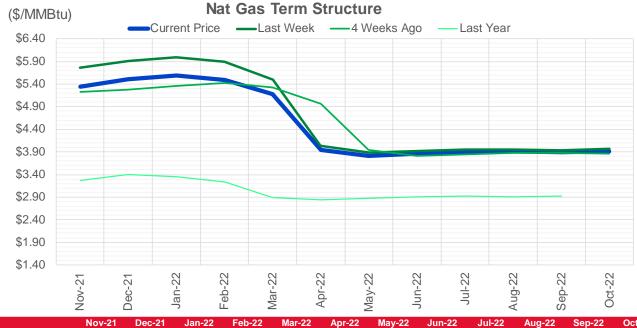
MORIN   Vert   OOL   OOL   OOL   OOL   OOL   OOL     12   2021   P   4.50   3604   12   2021   P   2.55   38608     1   2022   P   3.25   3300   12   2021   P   4.00   31525     3   2022   P   5.00   2438   3   2022   C   10.00   30653     11   2021   P   6.50   2342   11   2021   P   3.00   23779     3   2022   P   5.25   2300   11   2021   P   4.50   2342     11   2021   P   4.50   2342   12   2021   P   4.50   2333     11   2021   P   4.75   1736   11   2021   C   4.00   22556     12   2021   P   4.25   1400   3   2022   C   5.00   221729     <		CONTRACT	PUT/CALL	STRIKE	CUMULATIVE	CONTRACT		PUT/CALL	STRIKE	CUMULATIVE OI
12 2021 P 4.50 3604 12 2021 P 2.50 38808   12 2021 C 6.50 2781 12 2021 P 4.00 31522   3 2022 P 5.00 2438 3 2021 P 4.00 31523   11 2021 P 5.00 2438 3 2021 P 3.00 30167   11 2021 P 4.50 2342 11 2021 P 3.00 26786   11 2021 P 4.50 2342 12 2021 P 4.00 25786   11 2021 P 4.75 1736 11 2021 P 4.20 2333   12 2021 P 4.25 1660 11 2021 C 5.00 221786   11 2021 P 4.25 1600 11 2021 C 5.00 221729   12 2021 P 4.00 1352 11 2021	MONTH	YEAR			VOL	MONTH	YEAR			
1   2022   P   3.26   3300   12   2021   P   3.00   33880     13   2022   P   5.00   2438   3   2022   C   10.00   30653     11   2021   P   5.00   2438   3   2021   P   5.00   27379     11   2021   P   5.25   2342   11   2021   P   5.00   27379     11   2021   P   5.25   2342   11   2021   P   3.60   26074     11   2021   P   5.25   1522   12   2022   C   8.00   25766     11   2021   P   4.25   1522   12   2021   C   4.00   23333     11   2021   P   4.25   1522   12   2021   C   4.00   22786     12   2021   P   4.25   1522   12   2021   C   6.00   <	12	2021	С	9.00	3756	12	2021		2.75	46692
12   2021   C   6.50   2781   12   2021   P   4.00   31522     11   2021   C   6.00   2385   11   2021   P   3.00   30667     11   2021   P   4.50   2342   11   2021   P   3.00   3067     11   2021   P   4.50   2346   11   2021   P   4.00   2635     11   2021   P   5.00   1962   11   2021   P   4.00   2635     11   2021   P   4.75   1736   11   2021   C   8.00   25786     11   2021   P   4.25   1622   12   2021   C   4.00   22586     11   2021   P   4.25   1622   12   2021   C   5.00   2279     12   2021   P   4.00   1352   11   2021   C   5.00 <td< td=""><td>12</td><td>2021</td><td>Р</td><td>4.50</td><td>3604</td><td>12</td><td></td><td></td><td></td><td>38608</td></td<>	12	2021	Р	4.50	3604	12				38608
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	1	2022	Р	3.25	3300					
111 2021 P 3.00 30/67   111 2021 P 5.00 27379   3 2022 P 5.25 2300 11 2021 P 4.00 28544   111 2021 P 5.00 1962 3 2022 C 8.00 25766   111 2021 P 4.75 1736 11 2021 C 4.00 2333   111 2021 P 4.75 1736 11 2021 C 4.00 2333   111 2021 P 4.25 1522 12 2021 C 6.00 22189   12 2021 P 4.25 1522 11 2021 C 6.00 22199   12 2021 C 15.00 1217 11 2021 C 6.00 21729   112 2021 C 15.00 1217 11 2022 P 3.50 18542   12 2021 C 15.00 1217 11 </td <td>12</td> <td>2021</td> <td>С</td> <td>6.50</td> <td>2781</td> <td>12</td> <td></td> <td></td> <td>4.00</td> <td>31522</td>	12	2021	С	6.50	2781	12			4.00	31522
112021P4.502442112021P5.002737932002P5.252300112021P4.0026354112021C7.002686122021P4.0026354112021P4.00196232022C8.0025786112021P4.751736112021P4.602333132022C8.001660112021P4.6023331112021P4.25140032022C5.0021199122021P4.001314112021P3.5020211112021C6.25121242022C3.0019760112021C6.25121242022P3.5017965112022P3.00120032022P3.5017965122022P3.00120032022P3.501746632022P3.00120032022P2.501736632022P3.00120032022P2.501736632022P3.00120032022P2.501736632022P3.001100122021C	3	2022	Р	5.00	2438	3				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	11	2021	С	6.00	2355					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	11	2021	Р	4.50	2342					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	3	2022	Р	5.25	2300					
112021P4.751736112021C7.002478832022C8.001660112021P4.5023333112021P4.251522122021C4.002222812021P4.25140032022C5.0022199122021P4.25140032022C5.0022199112021P4.001352112021P3.5020211122021C15.001217112022C3.0019760132022P4.25120812022P3.501864232022P4.25120822022P3.5017965112022P4.25120012022P3.501796532022P3.00120032022P3.501746892022P3.00120032022P2.501736892022P3.751182122021C6.0017319112021C5.50118312022C5.001669722022C5.50118312022C5.001679112021C5.50118332022C5.	11	2021	С	7.00	2068					
112021P4.5023333112021P4.251522122021C4.002228612022P4.251522122021C5.0022199122021P4.001352112021C6.0021729112021P4.001352112021C6.0020145122021C15.001217112021C4.0020145132022P4.55120622022P3.501186432022P4.55120622022P3.501795512022P3.00120032022P3.501745682022P3.00120032022P2.501736692022P3.751182122021C6.001673132022P3.75118012022C6.001679122022C5.50118322022P4.0016537112021C5.50118012022C5.001658842022P3.001100112021C5.0016583112021C5.50118522022C5.001487762022<	11	2021		5.00	1962					
3 $2021$ C $0.00$ $1000$ $12$ $2021$ C $4.00$ $22526$ 1 $2021$ P $4.25$ $1400$ $3$ $2022$ C $5.00$ $22199$ 11 $2021$ P $4.00$ $1352$ $11$ $2021$ C $6.00$ $21729$ 11 $2021$ P $4.00$ $1352$ $11$ $2021$ C $6.00$ $21729$ 11 $2021$ P $4.00$ $1314$ $11$ $2021$ C $6.00$ $21729$ 12 $2021$ C $6.25$ $1212$ $4$ $2002$ C $3.00$ $19760$ 3 $2022$ P $4.25$ $1208$ $2$ $2022$ P $3.50$ $18422$ 1 $2022$ P $4.25$ $1208$ $2$ $2022$ P $3.50$ $17955$ 7 $2022$ P $3.00$ $1200$ $3$ $2022$ P $3.50$ $17456$ 9 $2022$ P $3.00$ $1200$ $3$ $2022$ P $2.50$ $17366$ 9 $2022$ P $3.00$ $1200$ $3$ $2022$ P $2.50$ $17366$ 9 $2022$ P $3.75$ $1182$ $12$ $2021$ C $6.00$ $1791$ 3 $2022$ C $6.00$ $1119$ $3$ $2022$ C $6.00$ $16791$ 1 $2022$ C $6.00$ $1119$ $3$ $2022$ P $4.00$ $16537$ 1 $2022$ P <t< td=""><td>11</td><td>2021</td><td>Р</td><td>4.75</td><td>1736</td><td></td><td></td><td></td><td></td><td></td></t<>	11	2021	Р	4.75	1736					
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1 $2021$ P $4.00$ $1352$ $11$ $2021$ C $6.00$ $21729$ 11 $2021$ P $4.00$ $1314$ $11$ $2021$ P $3.50$ $20211$ 12 $2021$ C $15.00$ $1277$ $11$ $2021$ C $4.00$ $20145$ 11 $2021$ C $6.25$ $1212$ $4$ $2022$ C $3.00$ $19760$ 3 $2022$ P $4.50$ $1200$ $2$ $2022$ P $3.50$ $17855$ 7 $2022$ P $4.50$ $1200$ $3$ $2022$ P $3.50$ $17456$ 9 $2022$ P $3.00$ $1200$ $3$ $2022$ P $2.50$ $17366$ 9 $2022$ P $3.00$ $1200$ $3$ $2022$ P $2.50$ $17366$ 9 $2022$ P $3.00$ $1200$ $3$ $2022$ P $2.50$ $17366$ 9 $2022$ P $3.50$ $1182$ $12$ $2021$ C $6.00$ $17319$ 11 $2021$ C $5.50$ $1180$ $12$ $2022$ C $6.00$ $16976$ 2 $2022$ C $6.00$ $11919$ $3$ $2022$ P $4.00$ $16577$ 11 $2021$ P $3.00$ $1100$ $11$ $2021$ C $5.00$ $16576$ 11 $2022$ C $6.00$ $11919$ $3$ $2022$ C $5.00$ $14877$ 6 $2022$ P	11	2021	Р	4.25	1522					
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$\begin{array}{c c c c c c c c c c c c c c c c c c c $	11	2021	Р	4.00	1314					
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	12	2021	С	15.00	1217					
3 2022 P 4.25 1208 1 2022 P 3.50 18542   1 2022 P 4.50 1200 1 2022 P 3.50 17945   7 2022 P 3.00 1200 3 2022 P 3.50 17466   9 2022 P 3.00 1200 3 2022 P 3.50 17466   9 2022 P 3.00 1200 3 2022 P 3.50 17466   9 2022 P 3.75 1182 12 2021 C 6.00 17319   3 2022 C 5.50 1153 2 2022 C 6.00 16978   1 2022 C 6.00 1119 3 2022 C 4.00 16537   11 2022 C 6.00 1100 11 2021 C 5.00 14893   1 2022 P 3.00 1100 4 2022 C	11	2021		6.25	1212					
1   2022   P   3.50   17955     7   2022   P   3.00   1200   3   2022   P   3.50   17943     8   2022   P   3.00   1200   3   2022   P   3.50   17456     9   2022   P   3.00   1200   3   2022   P   2.50   17366     3   2022   P   3.75   1182   12   2021   C   6.00   1978     3   2022   C   5.50   1153   2   2022   C   6.00   16791     2   2022   C   6.00   1119   3   2022   P   4.00   16537     1   2022   P   3.00   1100   11   2021   C   4.00   1576     1   2022   P   3.00   1100   12   2022   C   5.00   14877     6   2022   P   3.00										
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8   2022   P   3.00   1200   3   2022   P   3.50   17456     9   2022   P   3.00   1200   3   2022   P   2.50   17366     3   2022   P   3.75   1182   12   2021   C   6.00   17029     11   2021   C   5.50   1153   2   2022   C   6.00   16978     2   2022   C   6.00   119   3   2022   P   4.00   16537     11   2022   P   3.00   1101   11   2021   C   5.00   15588     4   2022   P   3.00   1100   4   2022   C   5.00   14877     6   2022   P   3.00   1100   4   2022   P   2.50   14889     1   2022   P   3.00   1100   4   2022   P   2.50   14877										
9   2022   P   3.00   1200   3   2022   P   2.50   17369     3   2022   P   3.75   1182   12   2021   C   6.00   17319     11   2021   C   5.50   1153   1   2022   C   6.00   16978     2   2022   C   6.00   1119   2   2022   P   4.00   16537     1   2022   C   6.00   1119   3   2022   P   4.00   16537     1   2022   C   8.00   1101   11   2021   C   5.00   15888     4   2022   P   3.00   1100   4   2022   C   5.00   14877     10   2022   P   3.00   1100   4   2022   P   2.50   14489     1   2022   C   15.00   1043   11   2021   P   2.50   14489 </td <td></td>										
3   2022   P   3.75   1182   12   2021   C   6.00   17319     11   2021   C   5.50   1180   1   2022   C   6.00   16978     3   2022   C   5.50   1153   2   2022   C   6.00   16791     2   2022   C   6.00   1119   3   2022   P   4.00   16537     11   2022   C   8.00   1101   11   2021   C   5.00   15588     4   2022   P   3.00   1100   1   2022   C   5.00   15588     5   2022   P   3.00   1100   12   2022   C   5.00   14872     10   2022   P   3.00   1100   4   2022   P   2.50   14889     1   2022   P   3.00   100   4   2021   P   2.50   14488 <td></td>										
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11 2021 P 3.75 1106 3 2022 P 4.00 16537   1 2022 C 8.00 1101 11 2021 C 5.00 15588   4 2022 P 3.00 1100 11 2021 C 4.50 14899   5 2022 P 3.00 1100 4 2022 C 5.00 14877   6 2022 P 3.00 1100 4 2022 C 5.00 14877   10 2022 P 3.00 1100 4 2022 P 2.50 14889   11 2021 C 6.50 1098 11 2021 P 2.50 14488   1 2022 C 7.00 1030 1 2022 P 4.00 14303   11 2022 P 4.75 1015 1 2022 P 4.00 14303   11 2021 C 4.55 1000 12 2021 P </td <td></td>										
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5   2022   P   3.00   1100   4   2021   C   4.50   14899     6   2022   P   3.00   1100   4   2022   C   5.00   14877     10   2022   P   3.00   1100   4   2022   P   2.50   14589     11   2021   C   6.50   1098   11   2021   P   2.50   14589     1   2022   C   15.00   1043   11   2021   C   3.75   14479     2   2022   C   7.00   1030   1   2022   C   4.00   14478     1   2022   P   4.75   1015   1   2022   C   4.00   14478     11   2021   C   4.95   1000   11   2021   P   4.00   14473     12   2022   C   4.50   1000   12   2021   P   3.00   1363										
6   2022   P   3.00   1100   12   2022   C   5.00   14877     10   2022   P   3.00   1100   4   2022   P   2.50   14589     11   2021   C   6.50   1098   11   2021   P   2.50   14488     1   2022   C   15.00   1043   11   2021   C   3.75   14479     2   2022   C   7.00   1030   1   2022   C   4.00   14478     1   2022   P   4.75   1015   1   2022   P   4.00   14303     11   2021   C   4.95   1000   11   2021   P   3.25   14216     12   2022   C   4.50   1000   12   2021   P   3.00   13885     12   2021   C   10.00   995   2   2022   C   6.00   13								С		
10   2022   P   3.00   1100   4   2022   C   5.00   14572     11   2021   C   6.50   1098   11   2021   P   2.50   14589     1   2022   C   15.00   1043   11   2021   C   3.75   14479     2   2022   C   7.00   1030   1   2022   P   4.00   1433     11   2022   P   4.75   1015   1   2022   P   4.00   14303     11   2021   C   4.95   1000   11   2021   P   3.25   14216     12   2022   C   4.25   1000   12   2021   P   3.00   13637     12   2022   C   4.50   1000   12   2021   P   5.00   13637     12   2021   C   7.50   965   11   2022   P   5.00   1										
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112021C7.50965112021C5.5013593122021C7.0091132022C9.001341932022C10.0085732022C7.001341132022P3.00850112021C4.2513282122021C12.00807122022C5.2513241								С	6.00	13719
122021C7.0091132022C9.001341932022C10.0085732022C7.001341132022P3.00850112021C4.2513282122021C12.00807122022C5.2513241										
3   2022   C   10.00   857   3   2022   C   7.00   13411     3   2022   P   3.00   850   11   2021   C   4.25   13282     12   2021   C   12.00   807   12   2022   C   5.25   13241										13593
3   2022   P   3.00   850   11   2021   C   4.25   13282     12   2021   C   12.00   807   12   2022   C   5.25   13241										13419
3   2022   P   3.00   850   11   2021   C   4.25   13282     12   2021   C   12.00   807   12   2022   C   5.25   13241						3	2022	С	7.00	13411
								С		13282
1 2022 P 3.00 750 12 2022 C 4.50 12115										13241
	1	2022	Р	3.00	750	12	2022	С	4.50	13115
1 2022 P 3.50 750 5 2022 C 3 13110 Source: CME, ICE	1	2022	Р	3.50	750	5	2022	C Source	CME, ICE	13110

### Nat Gas Futures Open Interest CME, and ICE Combined

Civil, and ICE Combined								
CME Henry H	Hub Futures (1)		u)	ICE Henry	Hub Futures Cont		alent (10,000 MM	
	Current	Prior	Daily Change		Current	Prior	Daily Change	
NOV 21	137978	162373	-24395	NOV 21	90558	88664	1894	
DEC 21	124781	122267	2514	DEC 21	86268	85693	575	
JAN 22	210381	198417	11964	JAN 22	92179	93258	-1079	
FEB 22	65219	64193	1026	FEB 22	69293	69332	-39	
MAR 22	141549	139289	2260	MAR 22	74364	74499	-134	
APR 22	118754	118483	271	APR 22	74890	74696	194	
MAY 22	112120	113922	-1802	MAY 22	70700	70704	-4	
JUN 22	38536	39936	-1400	JUN 22	54397	54472	-75	
JUL 22	38178	37324	854	JUL 22	56680	56749	-69	
AUG 22	30224	30533	-309	AUG 22	56038	55999	39	
SEP 22	35308	35279	29	SEP 22	56559	56685	-127	
OCT 22	81220	81764	-544	OCT 22	62736	62705	31	
NOV 22	31002	31064	-62	NOV 22	48480	48433	47	
DEC 22	25971	26048	-77	DEC 22	51702	51596	106	
JAN 23	25952	23687	2265	JAN 23	38535	38298	237	
FEB 23	10410	10224	186	FEB 23	31861	31674	187	
MAR 23	13919	13613	306	MAR 23	33469	33271	198	
APR 23	13243	12613	630	APR 23	33602	33288	315	
MAY 23	7777	7799	-22	MAY 23	32095	31998	97	
JUN 23	6646	6595	51	JUN 23	29823	29743	79	
JUL 23	4490	4474	16	JUL 23	30027	29976	51	
AUG 23	3880	3884	-4	AUG 23	29872	29783	89	
SEP 23	4450	4204	246	SEP 23	29065	28918	147	
OCT 23	5689	5749	-60	OCT 23	32054	31988	66	
NOV 23	2807	2782	25	NOV 23	30373	30310	63	
DEC 23	2687	2497	190	DEC 23	28257	28193	64	
JAN 24	1222	1216	6	JAN 24	15667	15685	-18	
FEB 24	1181	1181	0	FEB 24	13375	13386	-11	
MAR 24	3964	3383	581	MAR 24	18163	18166	-3	
APR 24	3573	3032	541	APR 24	12491	12383	108	



# **Market Report**



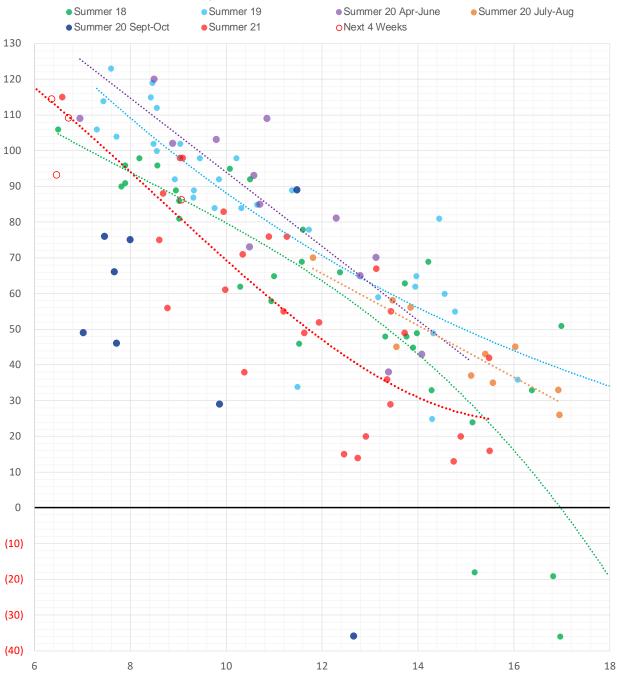
	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Jun-22	Jul-22	Aug-22	Sep-22	Oct-22
Current Price	\$5.345	\$5.502	\$5.597	\$5.491	\$5.183	\$3.936	\$3.820	\$3.856	\$3.896	\$3.903	\$3.886	\$3.918
Last Week	\$5.766	\$5.906	\$5.999	\$5.888	\$5.505	\$4.042	\$3.880	\$3.911	\$3.950	\$3.955	\$3.935	\$3.963
vs. Last Week	-\$0.421	-\$0.404	-\$0.402	-\$0.397	-\$0.322	-\$0.106	-\$0.060	-\$0.055	-\$0.054	-\$0.052	-\$0.049	-\$0.045
4 Weeks Ago	\$5.231	\$5.273	\$5.366	\$5.430	\$5.327	\$4.970	\$3.942	\$3.814	\$3.841	\$3.873	\$3.880	\$3.865
vs. 4 Weeks Ago	\$0.114	\$0.229	\$0.231	\$0.061	-\$0.144	-\$1.034	-\$0.122	\$0.042	\$0.055	\$0.030	\$0.006	\$0.053
Last Year	\$2.881	\$3.271	\$3.401	\$3.355	\$3.233	\$2.893	\$2.841	\$2.869	\$2.908	\$2.916	\$2.903	\$2.929
vs. Last Year	\$2.464	\$2.231	\$2.196	\$2.136	\$1.950	\$1.043	\$0.979	\$0.987	\$0.988	\$0.987	\$0.983	\$0.989

		Cash	Prompt	Cash to
	Units	Settled	Settle	Prompt
AGT Citygate	\$/MMBtu	5.12	9.87	4.75
TETCO M3	\$/MMBtu	4.71	6.04	1.33
FGT Zone 3	\$/MMBtu	4.73	6.45	1.72
Zone 6 NY	\$/MMBtu	4.73	6.36	1.63
Chicago Citygate	\$/MMBtu	5.08	6.21	1.13
Michcon	\$/MMBtu	5.10	6.04	0.94
Columbia TCO Pool	\$/MMBtu	4.66	5.64	0.98
Ventura	\$/MMBtu	5.06	6.43	1.37
Rockies/Opal	\$/MMBtu	5.33	6.15	0.82
El Paso Permian Basin	\$/MMBtu	4.93	5.95	1.02
Socal Citygate	\$/MMBtu	6.23	6.70	0.47
Malin	\$/MMBtu	5.35	6.69	1.34
Houston Ship Channel	\$/MMBtu	5.07	6.21	1.14
Henry Hub Cash	\$/MMBtu	5.34	6.11	0.77
AECO Cash	C\$/GJ	4.06	4.55	0.49
Station2 Cash	C\$/GJ	2.44	7.42	4.98
Dawn Cash	C\$/GJ	5.10	6.14	1.04

Source: CME, Bloomberg



		vs. 4 Weeks						
	Units	<b>Current Price</b>	vs.	Last Week		Ago	vs	. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224		0.000		0.581		2.203
NatGas Oct21/Nov21	\$/MMBtu	-0.336		-0.807		-0.381	▼	-0.386
NatGas Oct21/Jan22	\$/MMBtu	-0.080		-0.761	▼	-0.285	▼	-0.351
NatGas Apr22/Oct22	\$/MMBtu	-0.029		0.079		0.020	▼	-0.038
WTI Crude	\$/Bbl	80.64		1.710		10.180		40.440
Brent Crude	\$/Bbl	83.42		0.860		9.820		40.970
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	251.00		1.640		34.870		134.100
Propane, Mt. Bel	cents/Gallon	1.46		-0.052		0.230		0.942
Ethane, Mt. Bel	cents/Gallon	0.44		-0.026		0.050		0.228
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						



### Weather Storage Model - Next 4 Week Forecast

# **Market Report**

ENERGY

## 13 October 2021

