

1 October 2021



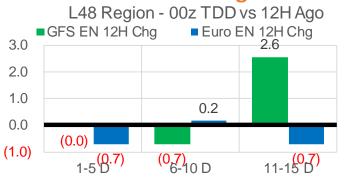
	С	urrent	Δ from YD		m 7D vg
WTI Prompt	\$	74.37	\$ (0.66)	~ \$	(0.3)

	_	urrant	Δ from YD	∆ fro	m 7D
			Avg		
Brent Prompt	\$	77.81	\$ (0.71)	~ \$	(8.0)
1 TOMPL					

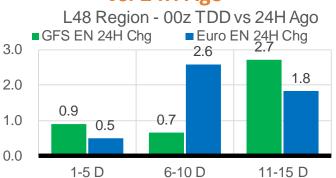
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Price Summary

Vs. 12H Ago



Vs. 24H Ago



	Current	Δ from YD	Δ from 7D Avg
US Dry Production	90.9	▼ -1.95	▼ -2.01

	Current	Δ from YD	Δ from 7D Avg
US ResComm	9.1	▼ -0.28	a 0.77

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	10.0	- 0.40	▼ -0.28

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	30.9	▼ -1.29	a 0.71

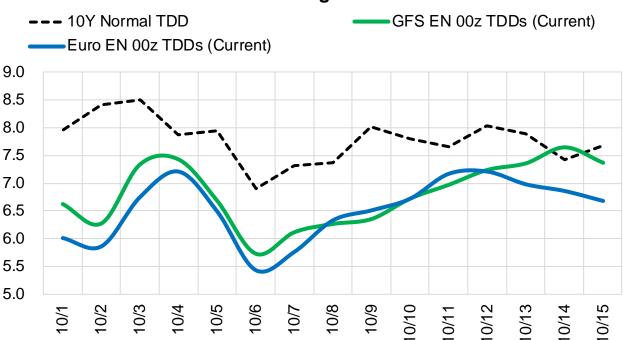
	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	4.7	▼ -1.00	▼ -1.02

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.7	▼ -0.17	0.13

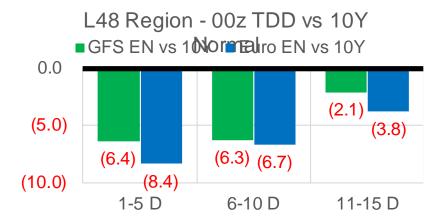


Short-term Weather Model Outlooks (00z)

L48 Region



Vs. 10Y Normal



Source: WSI, Bloomberg



Lower 48 Component Models

Daily Balances

	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	30-Sep	1-Oct	DoD	vs.7D
Lower 48 Dry Production	92.9	93.1	93.4	93.0	92.6	92.8	90.9	▼ -2.0	▼ -2.1
Canadian Imports	5.6	5.6	5.7	5.7	5.9	5.7	4.7	▼-1.0	▼-1.0
L48 Power	27.6	27.9	31.2	31.6	31.7	32.2	30.9	▼-1.3	0.5
L48 Residential & Commercial	8.6	7.4	7.3	7.8	9.0	9.4	9.1	▼-0.3	8.0
L48 Industrial	20.1	19.8	20.0	20.2	20.8	21.6	22.3	0.7	1.9
L48 Lease and Plant Fuel	5.0	5.1	5.1	5.1	5.0	5.0	4.9	▼-0.1	▼ -0.1
L48 Pipeline Distribution	2.0	1.9	2.1	2.2	2.2	2.3	2.1	▼-0.1	0.0
L48 Regional Gas Consumption	63.4	62.1	65.6	66.8	68.8	70.4	69.3	▼-1.1	3.1
Net LNG Delivered	10.80	10.48	9.75	9.52	10.57	10.42	10.02	▼ -0.4	▼ -0.2
Total Mexican Exports	6.3	6.3	6.5	6.9	6.8	6.9	6.7	▼-0.2	▲ 0.1
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	18.0	19.9	17.2	15.6	12.3	10.8	9.5		

EIA Storage Week Balances

	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	WoW	vs. 4W
Lower 48 Dry Production	92.8	90.6	90.9	91.5	92.6	92.9	0.3	1.5
Canadian Imports	5.3	5.0	4.8	5.2	5.2	5.7	0.5	0.7
L48 Power	41.9	38.1	33.8	35.0	33.2	30.1	▼-3.0	▼- 4.9
L48 Residential & Commercial	7.8	7.4	6.9	7.2	8.0	8.3	a 0.3	0.9
L48 Industrial	20.7	18.6	19.3	20.5	20.2	20.4	0.1	0.7
L48 Lease and Plant Fuel	5.0	4.9	4.9	5.0	5.0	5.0	0.0	0.1
L48 Pipeline Distribution	2.6	2.4	2.2	2.3	2.3	2.1	▼ -0.2	▼ -0.2
L48 Regional Gas Consumption	78.0	71.4	67.2	69.9	68.7	66.0	▼ -2.7	▼-3.3
Net LNG Exports	10.6	10.5	11.0	10.2	9.9	10.3	0.4	▼-0.1
Total Mexican Exports	6.8	7.0	6.7	6.6	6.8	6.6	▼ -0.2	▼-0.2
Implied Daily Storage Activity	2.8	6.7	10.9	9.8	12.3	15.7	3.4	
EIA Reported Daily Storage Activity	2.9	7.4	11.9	10.9	12.6			
Daily Model Error	-0.1	-0.8	-0.9	-1.0	-0.3			

Monthly Balances									
•	2Yr Ago	LY					MTD		
	Oct-19	Oct-20	May-21	Jun-21	Jul-21	Aug-21	Sep-21	MoM	vs. LY
Lower 48 Dry Production	95.1	88.7	92.5	93.1	93.0	92.0	90.8	▼-1.3	2.1
Canadian Imports	4.6	4.3	4.5	4.8	5.2	5.1	4.7	▼-0.4	0.5
L48 Power	30.3	30.8	26.7	35.8	39.4	40.2	34.9	▼-5.3	4.1
L48 Residential & Commercial	15.3	15.3	12.8	8.8	8.1	7.7	7.5	▼ -0.2	▼ -7.8
L48 Industrial	23.5	23.0	20.2	20.3	20.5	19.9	18.1	▼ -1.8	- 4.8
L48 Lease and Plant Fuel	5.1	4.8	5.0	5.0	5.1	5.0	4.9	▼ -0.1	0.1
L48 Pipeline Distribution	2.4	2.5	2.2	2.4	2.5	2.5	2.3	▼ -0.2	▼ -0.1
L48 Regional Gas Consumption	76.6	76.3	67.0	72.4	75.6	75.3	67.8	▼ -7.5	▼-8.5
Net LNG Exports	6.7	8.0	10.8	10.2	10.8	10.5	9.7	▼ -0.7	1.7
Total Mexican Exports	5.4	6.0	6.8	7.4	7.1	6.9	7.2	0.3	1.2
Implied Daily Storage Activity EIA Reported Daily Storage Activity Daily Model Error	11.1	2.7	12.4	8.0	4.6	4.5	10.8		



Daily Average Generation Data

Nuclear Generation Daily Average - GWh (NRC)

	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	DoD	vs. 7D
NRC Nuclear Daily Output	86.5	86.5	85.6	85.7	84.6	84.5	84.5	0.0	-1.0
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	18.4	18.4	19.3	19.2	20.2	20.4	20.4	0.0	1.0
NRC % Nuclear Cap Utilization	0.88	87.9	87.1	87.1	86.1	85.9	85.9	0.0	-1.1

Wind Generation Daily Average - MWh (EIA)

	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	DoD	vs. 7D
CALI Wind	1560	828	1682	3242	4569	4121	1907	-2214	-760
TEXAS Wind	11025	10189	7123	11806	9937	10983	11385	402	1208
US Wind	44897	45990	34443	53198	47478	46003	43222	-2782	-2113

Generation Daily Average - MWh (EIA)

	23-Sep	24-Sep	25-Sep	26-Sep	27-Sep	28-Sep	29-Sep	DoD	vs. 7D
US Wind	44897	45990	34443	53198	47478	46003	43222	-2782	-2113
US Solar	11812	12082	13080	12249	12428	11997	12614	616	339
US Petroleum	2171	1711	1835	2017	3239	3244	3279	35	910
US Other	8475	8340	8178	7506	8404	8681	9310	628	1046
US Coal	96633	91769	90430	84363	94994	97855	99622	1767	6948
US Nuke	89850	89617	89000	88851	87958	87806	87770	-36	-1077
US Hydro	26712	27136	25005	23417	26559	24475	25099	624	-452
US Gas	155000	143364	135866	129933	161274	170114	163037	-7077	13778

See National Wind and Nuclear daily charts



Storage Week Average Generation Data

Nucl	ear C	eneratio	n W	eekl	y A	verag	je -	GWh ((NRC)
------	-------	----------	-----	------	-----	-------	------	-------	------	---

	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	WoW	WoW Bcf/d Impact
NRC Nuclear Daily Output	91.9	90.2	90.3	86.7	85.9	85.1	-0.8	0.1
NRC Nuclear Max Capacity	104.9	104.9	104.9	104.9	104.9	104.9	0.0	
NRC Nuclear Outage	12.9	14.7	14.6	18.2	19.0	19.7	8.0	
NRC % Nuclear Cap Utilization	0.1	0.1	0.1	0.1	0.1	0.1	0.0	

Wind Generation Weekly Average - MWh (EIA)

	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	WoW	WoW Bcf/d Impact
CALI Wind	2052	2247	1236	2083	1936	2608	672	-0.1
TEXAS Wind	12600	7534	7327	9541	9780	10401	622	-0.1
US Wind	41912	35441	30659	42355	43173	44794	1620	-0.3
					818.5			
					2%			

Generation Weekly Average - MWh (EIA)

	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	1-Oct	WoW	WoW Bcf/d Impact
US Wind	41912	35441	30659	42355	43173	44794	1620	-0.3
US Solar	14469	13358	14254	14058	12085	12438	353	-0.1
US Petroleum	5323	3135	2072	2470	2594	2658	64	0.0
US Other	10131	9765	8934	9277	9095	8533	-563	0.1
US Coal	136177	136318	116993	115066	109063	94094	-14969	2.7
US Nuke	94358	92365	93162	89489	88789	88396	-393	0.1
US Hydro	30621	28181	26944	24140	25336	25256	-81	0.0
US Gas	216025	205503	181094	182107	175255	152375	-22880	4.1

See National Wind and Nuclear daily charts

89.8

90.1

88.5



NRC % Nuclear Cap Utilization

Monthly Average Generation Data

Nuclear Generation Monthly Average - GWh (NRC)										
	2Yr Ago LY									
	Same 30 days	Same 30 days	Jun-21	Jul-21	Aug-21	Sep-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY	
NRC Nuclear Daily Output	88.6	88.3	88.7	90.1	91.5	90.1	87.0	-1.4	-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	16.3	16.5	16.2	14.8	13.4	14.8	17.9	1.4	1.3	

91.6

93.0

91.6

90.2

Wind Generation Monthly Average - MWh (EIA)

	2Yr Ago	LY				MTD				
	Same 30 days	Same 30 days	Jun-21	Jul-21	Aug-21	Sep-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY	
CALI Wind	2243	1384	2881	2338	2442	3892	1987	1450	602	
TEXAS Wind	8815	6869	9509	7217	9901	11690	9398	1789	2529	
US Wind	34319	32171	36864	29217	35830	44352	40463	8523	8292	

Generation Monthly Average - MWh (EIA)

Concration monthly /trolage	2Yr Ago	LY				MTD			
	Same 30 days	Same 30 days	Jun-21	Jul-21	Aug-21	Sep-21	Last 30 days	MoM (MTD vs LY)	Last 30 days YoY
US Wind	34319	32171	36864	29217	35830	44352	40463	▼-3889.8	8292
US Solar	8170	9274	14515	14140	13787	12388	13242	854.1	3968
US Petroleum	4446	2925	4155	4233	4484	2314	2472	158	▼ -453
US Other	8259	8381	8205	9327	9929	9184	8967	▼ -218	586
US Coal	117484	92416	122034	137228	137655	129678	108872	▼-20805	16456
US Nuke	95152	91389	92180	92911	94062	92622	89982	-2640	▼ -1406
US Hydro	26604	26390	32566	29941	28532	29019	25503	▼ -3516	▼ -887
US Gas	190524	176856	189395	207823	210824	186834	172382	▼-30057	▼ -4473
US Total	486549	439955	500206	524834	534937	506094	462145	▼-56224	22190



See National Wind and Nuclear daily charts



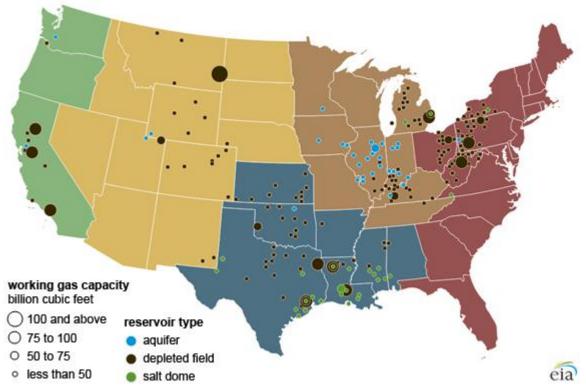
Regional S/D Models Storage Projection

Week Ending 1-Oct

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	15.4	1.0	16.4	115
East	3.3	8.0	4.1	28
Midwest	5.9	-0.8	5.1	36
Mountain	3.7	-3.4	0.3	2
South Central	1.2	5.0	6.2	43
Pacific	1.3	-0.6	0.7	5

^{*}Adjustment Factor is calcuated based on historical regional deltas

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



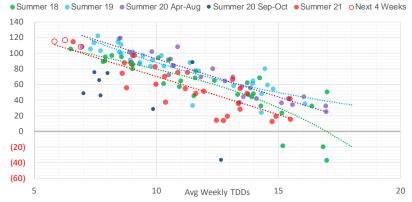


Weather Model Storage Projection

Next report and beyond

Week Ending	GWDDs	Week Storage Projection
01-Oct	5.8	115
08-Oct	6.3	116
15-Oct	6.9	108
22-Oct	9.0	87

Weather Storage Model - Next 4 Week Forecast



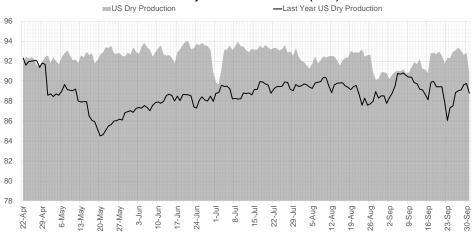
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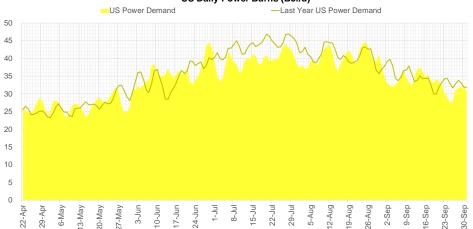


Supply - Demand Trends

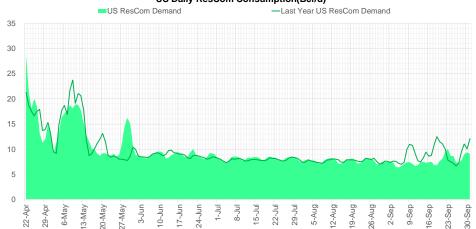
US Dry Natural Gas Production (Bcf/d)



US Daily Power Burns (Bcf/d)



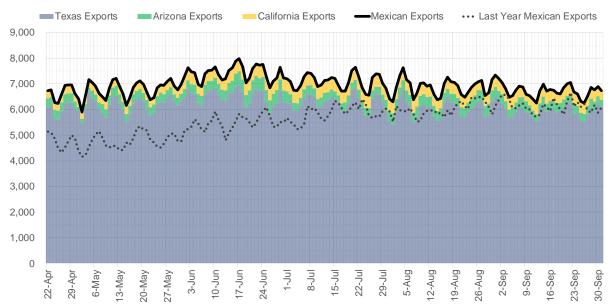
US Daily ResCom Consumption(Bcf/d)



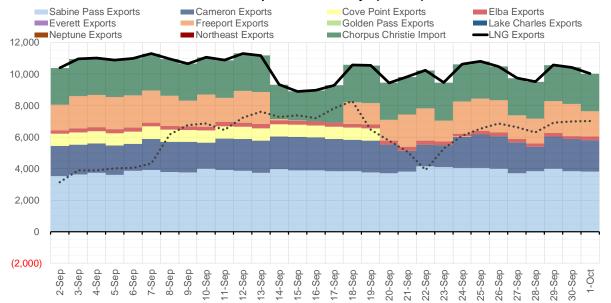
Source: Bloomberg



Mexican Exports (MMcf/d)







Source: Bloomberg



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

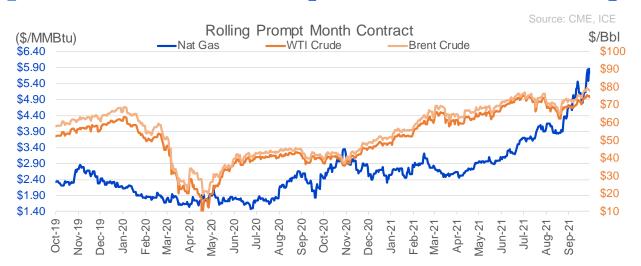
CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
							_		
11	2021	Р	5.00	5414	12	2021	P	2.75	42009
3	2022	P	3.75	3151	12	2021	P	2.50	38563
11	2021	С	6.00	2838	12	2021	P	3.00	32251
12	2021	С	15.00	2742	12	2021	P	4.00	30406
3	2022	С	9.00	2242	3	2022	С	10.00	30176
12	2021	С	6.00	2052	11 3	2021 2022	P C	3.00 8.00	30170 26691
1	2022	P	3.75	1900	3 12	2022	P	3.50	25996
3	2022	C	10.00	1835	12	2021	P	4.00	24943
11	2021	P	4.50	1735	11	2021	C	7.00	22949
11	2021	P	4.25	1669	11	2021	P	4.50	22708
11	2021	C	7.00	1654	12	2021	Ċ	4.00	22528
12	2021	P	2.75	1574	3	2022	P	3.50	20588
3	2022	С	15.00	1560	11	2022	P	3.50	20417
12	2021	С	12.00	1428	3	2022	C	5.00	20253
12	2021	С	10.00	1405	11	2022	C	4.00	20146
1	2022	С	7.00	1367	4	2022	Č	3.00	19760
1	2022	Р	3.00	1350	11	2022	C	6.00	18894
3	2022	Р	4.00	1350	2	2021	P	3.50	18344
2	2022	Р	4.00	1336	1	2022	C	5.00	18186
3	2022	Р	3.00	1276	1	2022	P	3.50	17648
3	2022	Р	4.50	1225	2	2022	C	5.00	17437
1	2022	С	6.00	1201	12	2022	C	6.00	17231
1	2022	Р	4.75	1200	3	2021	P	4.00	16480
12	2021	Р	5.00	1165	3	2022	C	4.00	16441
11	2021	С	8.00	1159	3	2022	P	2.50	16198
1	2022	Р	3.50	1154	3 11	2022	P	5.00	15836
12	2021	С	8.00	1141	12	2021	C	7.00	15766
2	2022	Р	3.25	1100	11	2021	C	5.00	15074
4	2022	С	5.00	1068	11	2021	C	4.50	15009
1	2022	С	10.00	1066	11	2021	C	5.50	14793
1	2022	С	6.50	1065	1	2021	C	4.00	14488
4	2022	Р	3.00	1013	11	2022	P	2.50	14487
5	2022	Р	3.00	1013	11	2021	C	3.75	14480
11	2021	С	10.00	1012	4	2021	C	5.00	14429
1	2022	Р	3.25	1000	12	2022	Č	5.00	14372
3	2022	С	3.75	1000	11	2022	P	3.25	14198
5	2022	С	5.00	1000	1	2022	C	6.00	14145
6	2022	C	5.00	1000	4	2022	P	2.50	14031
7	2022	C	5.00	1000	2	2022	Ċ	4.00	13918
8	2022	C	5.00	1000	12	2022	P	2.00	13885
9	2022	C	5.00	1000	2	2022	Ċ	6.00	13399
10	2022	C	5.00	1000	1	2022	P	4.00	13377
11	2021	P	5.50	925	11	2022	Ċ	4.25	13296
2	2022	C	10.00	919	3	2021	C	3.00	13127
11	2021	P	4.75	864	12	2022	C	4.50	13115
11	2021	Р	4.00	838	5	2022	C	3.00	13110
11	2021	C	6.50	835	1	2022	C	7.00	12967
1	2022	Č	9.00	831	12	2022	C	5.00	12852
2	2022	C	6.00	825	6	2021			12815
2	2022	J	0.00	020	O	2022	C Source	: CME, ICE	12010



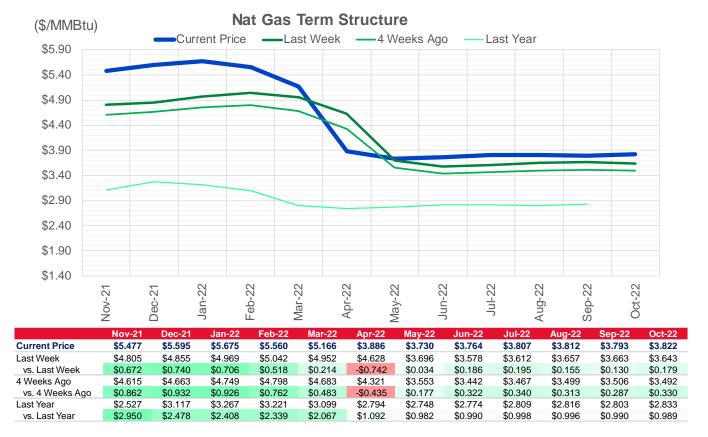
Nat Gas Futures Open Interest

CME, and ICE Combined

OWE, and TOE Combined								
CI	CME Henry Hub Futures (10,000 MMBtu)			ICE Henry Hub Futures Contract Equivalent (10,000 MM				
		Current	Prior	Daily Change		Current	Prior	Daily Change
	OV 21	261135	256978	4157	NOV 21	90025	89413	612
	C 21	101815	100568	1247	DEC 21	76121	76371	-250
	N 22	164592	161360	3232	JAN 22	94887	95377	-490
	B 22	57123	56878	245	FEB 22	70083	70284	-202
	AR 22	126051	127324	-1273	MAR 22	75141	74097	1044
AF	PR 22	125609	122839	2770	APR 22	73579	74017	-438
	AY 22	120854	120949	-95	MAY 22	70502	70574	-73
JU	IN 22	37467	38750	-1283	JUN 22	54341	54633	-292
	IL 22	35908	36479	-571	JUL 22	56662	56711	-49
AL	JG 22	32076	31841	235	AUG 22	55463	55365	98
SE	P 22	34945	35011	-66	SEP 22	56305	56213	92
	CT 22	91090	91481	-391	OCT 22	62310	62203	108
NC	OV 22	31725	32374	-649	NOV 22	48316	48284	32
	C 22	26060	25863	197	DEC 22	51656	51591	65
JA	N 23	24311	24495	-184	JAN 23	37922	37922	1
	B 23	9984	9896	88	FEB 23	31399	31256	143
	AR 23	13641	13466	175	MAR 23	33332	33184	148
	PR 23	12568	12709	-141	APR 23	32388	32253	136
	AY 23	7879	7327	552	MAY 23	31517	31339	178
JU	IN 23	6127	6131	-4	JUN 23	29349	29169	180
	IL 23	4237	4214	23	JUL 23	29608	29415	193
	JG 23	3324	3343	-19	AUG 23	29364	29170	194
	P 23	4544	4523	21	SEP 23	28562	28375	187
	CT 23	5747	5739	8	OCT 23	31626	31432	194
	OV 23	2504	2346	158	NOV 23	30203	29969	233
	C 23	2615	2565	50	DEC 23	28051	27802	249
	N 24	1477	1482	-5	JAN 24	15339	15323	16
	B 24	1082	1082	0	FEB 24	12902	12866	36
	AR 24	3364	3357	7	MAR 24	17747	17739	8
AF	PR 24	3384	3361	23	APR 24	11810	11871	-61







		Cash	Prompt	Cash to	
	Units	Settled	Settle	Prompt	
AGT Citygate	\$/MMBtu	4.75	4.71	-0.04	
TETCO M3	\$/MMBtu	4.69	3.85	-0.84	
FGT Zone 3	\$/MMBtu	4.60	5.14	0.54	
Zone 6 NY	\$/MMBtu	4.60	3.74	-0.86	
Chicago Citygate	\$/MMBtu	5.39	4.87	-0.52	
Michcon	\$/MMBtu	5.27	4.76	-0.51	
Columbia TCO Pool	\$/MMBtu	4.60	4.01	-0.59	
Ventura	\$/MMBtu	5.36	4.77	-0.59	
Rockies/Opal	\$/MMBtu	5.49	4.75	-0.74	
El Paso Permian Basin	\$/MMBtu	5.02	4.76	-0.26	
Socal Citygate	\$/MMBtu	6.31	5.70	-0.61	
Malin	\$/MMBtu	5.52	5.42	-0.10	
Houston Ship Channel	\$/MMBtu	5.29	5.03	-0.26	
Henry Hub Cash	\$/MMBtu	5.55	4.79	-0.77	
AECO Cash	C\$/GJ	2.91	3.38	0.47	
Station2 Cash	C\$/GJ	0.92	5.72	4.80	
Dawn Cash	C\$/GJ	5.26 4.71		-0.55	

Source: CME, Bloomberg



					VS	s. 4 Weeks		
	Units	Current Price	vs.	Last Week		Ago	VS	. Last Year
NatGas Jul21/Oct21	\$/MMBtu	2.224		0.865		1.200		2.200
NatGas Oct21/Nov21	\$/MMBtu	0.026	_	-0.041	▼	-0.025		-0.031
NatGas Oct21/Jan22	\$/MMBtu	0.232	•	-0.024		0.041		-0.063
NatGas Apr22/Oct22	\$/MMBtu	-0.083	_	-0.041	•	-0.053		-0.094
WTI Crude	\$/Bbl	75.03		1.730		5.040		36.310
Brent Crude	\$/BbI	78.52		1.270		5.490		37.590
Fuel Oil, NY Harbour 1%	\$/Bbl	97.18		0.000		0.000		0.000
Heating Oil	cents/Gallon	234.17		9.260		17.400		121.670
Propane, Mt. Bel	cents/Gallon	1.29		0.013		0.106		0.801
Ethane, Mt. Bel	cents/Gallon	0.39		0.007		0.031		0.201
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





